Allergy immunotherapy as simple ASIT can be...



ANNUAL REPORT

2016



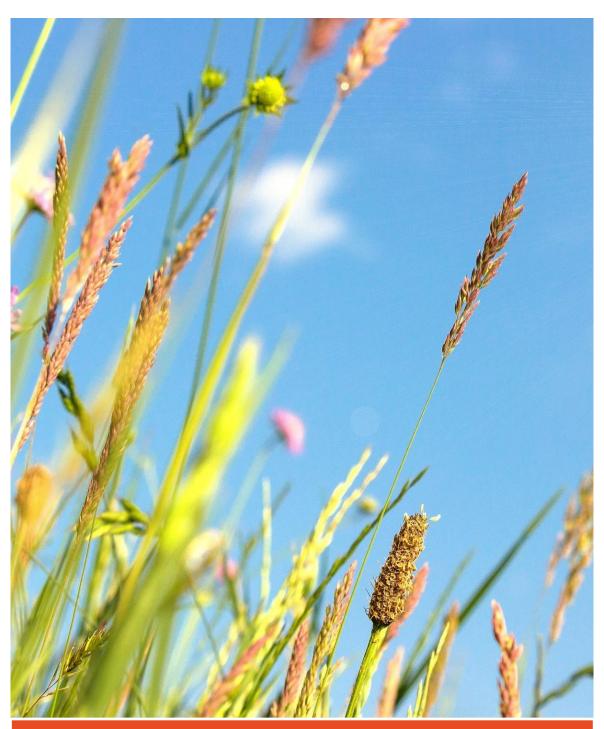


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# 1 RISK FACTORS



The risks and uncertainties that the Company believes are material are described below. However, these risks and uncertainties may not be the only ones faced by the Company and are not intended to be presented in any assumed order of priority. Additional risks and uncertainties not presently known, or that management currently believes to be immaterial, may also affect the Company's business, financial condition and results of operations. The Annual Report also contains forward-looking statements that involve risks and uncertainties.

If any of the risks described below actually occurs, the Company's business, results of operations, financial condition and prospects could be adversely affected and the Company's ability to continue as a going concern could even be endangered. In that case, the value of the Company's shares could decline and Shareholders could lose all or part of their investment. The Company has taken - and will continue to take - measures to control these risks as most efficiently as possible. However, there is no guarantee that these measures are adequate and complete to deal with all eventualities. Therefore, it cannot be completely excluded that some of these risks will occur and could affect, among others, the Company's business, turnover, financial position and results.

#### 1.1. RISKS RELATING TO THE COMPANY'S BUSINESS

The Company has a history of operating losses and an accumulated deficit and may never become profitable. Furthermore, the Company does not have sufficient working capital to meet its financial requirements under the development plan as described in the "Strategy" and fully cover its working capital needs related thereto for a period of at least 12 months as of the date of this Annual Report.

The Company has incurred significant operating losses since it was founded in 1997. Its accumulated deficit as at 31 December 2016 under IFRS rules amounts to KEUR 24,098. These losses have resulted principally from costs incurred in research and development, preclinical testing, clinical development of research programmes and product candidates and from general and administrative costs associated with the Company's operations. Consequently, the Board of Directors had to comply several times with the procedure under article 633 of the BCC. If a company's net assets have dropped below half of its share capital, article 633 of the BCC requires that a shareholders' meeting be convened within two months after the date on which the loss was (or should have been) determined. This meeting would decide on the continued existence or winding up of the company.

In the future, the Company intends to continue to conduct research and development, preclinical testing, clinical trials, regulatory compliance activities and start sales and marketing activities that, together with anticipated general and administrative expenses, will likely result in the Company incurring further significant losses for the next several years. In particular, the Company expects that the cash burn will increase since clinical studies and commercialisation efforts involve higher costs.

There can be no assurance that the Company will earn revenues or achieve profitability, which could impair the Company's ability to sustain operations or obtain any required additional funding. At the date of this registration document, the Company is of the opinion that, if the Company continues to fully implement its development plan as described under Section 7.7 "Strategy", taking into account its available cash and cash equivalents, it will probably run out of working capital as from end–2017. If, during first half 2017, the Company is not able to raise enough funds to secure its full development



plan, the Company shall reduce the scope of its development plan in order to make it fit to its financial capabilities (such reduction would probably lead to a delay in the research development plans or to a focus on specific products to the detriment of other products). However, the Company is confident that it will be capable to raise enough funds to secure its development plan, inter alia thanks to the positive preliminary results of its Phase III clinical trial with gp-ASIT<sup>+TM</sup> in grass pollen rhinitis as reported on 28 February 2017.

Based on the above, an unqualified audit opinion, with emphasis of matter, has been issued by the statutory auditors on 21 April 2017. The emphasis of matter made by the auditors is the following: "Without qualifying our opinion, we draw attention to Note 5.1 Going concern in the financial statements which describes the uncertainty with regard to the Company's ability to attract additional funding to further develop its operations in the long run and the ability of the Company's management to reassess its development plan".

If the Company achieves profitability in the future, it may not be able to sustain profitability in subsequent periods. It is likely that the Company will experience fluctuating revenues, operating results and cash flows. As a result, period-to-period comparisons of financial results are not necessarily meaningful and results of operations in prior periods should not be relied upon as an indication of future performance.

### The Company will need substantial additional funding, which may not be available on acceptable terms when needed, if at all

The level of treasury at the date of this registration document is not sufficient to finance the full completion of further phase III clinical studies (in adult or children) in Europe and/or in the United States, in particular in the event a phase II clinical study would be required by the FDA, and it will not be sufficient to finance developments beyond the matters set out in section 7 "*Industry and business overview*", such as all sales and marketing efforts associated with the commercialisation of any of its products, including gp-ASIT<sup>+TM</sup> in Germany, the United States and other European countries, as well as the performance of a likely phase IV clinical study for gp-ASIT<sup>+TM</sup> in Germany and the preparation and completion of next clinical study for hdm-ASIT<sup>+TM</sup> in Europe and in the United States.

At the date of this registration document, the Company cannot precisely estimate the costs associated with the completion of the phase III clinical study with gp-ASIT<sup>+TM</sup> in the United States (with the exception of the direct costs of subcontracted activities, which will amount to 12 million EUR), the completion of an eventual second phase III in Europe and the completion of a likely phase IV clinical study with gp-ASIT<sup>+TM</sup> in Germany (the costs of which will depend on the number of patients involved in the study and the protocol required by the Paul Ehrlich Institute, *PEI*).

As the Company expects that its product candidates will not generate revenue before a relatively long period (at least 2 years) and, as already described in the Offering prospectus, it anticipates that it will have to raise new funds before the commercialisation of its lead product candidate. The Company's ability to raise additional funds will depend on financial, economic and market conditions and other factors, over which it may have no or limited control, and the Company cannot guarantee that additional funds will be available to it when necessary on commercially acceptable terms, if at all. If the necessary funds are not available, the Company may need to seek funds through partnership arrangements that may require it to reduce or relinquish significant rights to its research programmes and product candidates, to



grant licences on its technologies to partners or third parties or enter into new types of collaboration agreements. The terms and conditions of these arrangements and agreements could be less favourable to the Company than those it might have obtained in a different context.

If adequate funds are not available on commercially acceptable terms when needed, the Company may be forced to delay, reduce or terminate the development or commercialisation of all or part of its research programmes or product candidates or it may be unable to take advantage of future business opportunities.

The Company's future commercial potential depends to a material extent on the success of its lead product candidate, gp-ASIT+<sup>TM</sup>, for the treatment of rhinoconjunctivitis induced by grass pollen. If the Company is unable to obtain marketing authorisation for gp-ASIT+<sup>TM</sup>, or experiences significant delays in doing so, this would have a material adverse effect on its business

Currently, the Company does not have marketing authorisation for any of its product candidates. The Company has invested a significant portion of its financial and other resources in the development of its lead product candidate gp-ASIT+<sup>TM</sup>. The Company has launched a phase III clinical study for gp-ASIT+<sup>TM</sup> in Europe and the preliminary results are available for this phase III clinical study since 28 February 2017.

The statistical distribution of the primary endpoint (CSMS) and related indices is extremely skewed. Therefore, in order to keep the possibility to explore a full statistical model including i.e. "treatment effect, country effect and interaction" a parametric model (ANOVA) was selected on transformed scores (square root) when preparing the statistical analysis plan. Given the fact that, even after the square root transformation, the scores were still a bit non-Gaussian, a non-parametric analysis was performed to check the first results. Both p-values of the non-parametric testing show that there is a treatment effect. The fact that the p-value of the ANOVA model did not reach the assumed threshold (p<0.05) is due to the limited number of patients enrolled in the study as opposed to the planned sample size of the protocol. As parametric testing eventually did not appear to be entirely reliable, the non-parametric testing prevails as it is valid in any circumstances. For more details see Section 7.9.2 of this report.

The results of the phase III show that gp-ASIT+TM induced a 15% to 21 % reduction in the CSMS, which is only slightly below an originally defined 20% threshold corresponding to an acceptable real-life clinical benefit as mentioned in the Offering prospectus. Furthermore, complementary analysis performed on blood cells of a subset of the patients (10 placebo and 22 gp-ASIT+TM treated patients) at the Imperial College of London elucidate a clear and consistent mechanism of action of gp-ASIT+TM.

These results are considered as positive by the Company because they confirm with a good consistency :a clinical efficacy in real life conditions, the safety and immunogenicity of gp-ASIT+<sup>TM</sup>. Moreover, these results are in line with the data reported for competing products and also with the data of the previous studies.

The very good consistency of the overall results of the Company's lead product clinical development will allow further discussions with German authorities towards regulatory approval and with US authorities regarding the clinical development strategy for this important market. The Company is currently submitting to the PEI a briefing package including the results of the Phase III for scientific advice on the sufficiency of these results to support a marketing authorization. Depending on the opinion of the PEI on the results, the



Company could be requested to proceed to a complementary Phase III clinical study in adult before the issuance of the marketing authorization. Considering the delay in the discussion with the FDA and the incertainty on the clinical development in the USA, a second phase III can be planned before 2019. Therefore, if the PEI is of the opinion that a second Phase III is needed, it would be performed in adult in several European countries in 2018.

Should the Company be authorised by the PEI to submit a marketing authorization application for its products in Germany, the next study to be performed in Europe would be a pediatric Phase III study. Such study could be used to support a Mutual Recognition Procedure in France, Spain and Italy.

Any delay in the commercialisation of gp-ASIT+TM could negatively affect the development and commercialisation of the Company's other product candidates, which in turn would have a material adverse effect on the Company's business, results of operations and/or financial condition.

### Future phase III clinical study with gp-ASIT+TM could fail to reach the required endpoints if the grass pollen season is not strong enough

The Company may have to perform further phase III clinical study with gp-ASIT+<sup>TM</sup> in Europe and /or in the USA. These studies will be highly sensitive to the severity of the pollen season. A moderate season will mean moderate symptoms, making it harder to statistically impact patient quality of life. Such a risk has already been materialized in the past during the phase III clinical study BTT009.

For these clinical studies, the Company will recruit patients from geographically dispersed areas in order to minimize the risk related to the level of the pollen season in a specific area. Selection criteria of patients will also be structured to recruit moderate to severe sensitive patients.

#### To date, none of the product candidates of the Company has been approved or commercialised

To date, none of the product candidates of the Company has been approved or commercialised. The positive preliminary results of the phase III clinical study relating to the Company's lead product candidate, gp-ASIT+TM (being the last phase of clinical studies before filing marketing authorisation applications) were released on 28 February 2017, the Company has completed the phases of required regulatory and preclinical development of its other product candidate, hdm-ASIT+TM who has completed a first phase IIa of clinical development in Germany in November and December 2016. Results of clinical studies are always uncertain and it is possible that the Company never commercialises its product candidates.

The Company has a pipeline of three product candidates focused on respiratory allergies. If the Company is unable to obtain marketing authorisation for such product candidates, or experiences significant delays in doing so, this would have a material adverse effect on its business

The Company has a pipeline consisting of three product candidates currently targeting respiratory allergies and one product candidate targeting food allergies. If the Company does not achieve one or more of the objectives related to its product pipeline development in a timely manner, or at all, it could experience significant delays in obtaining a marketing authorisation, resulting in an inability to successfully commercialise its product candidates, which would materially harm its business.



The Company's lead product candidate, gp-ASIT+TM, is finalising its phase III clinical study first half 2017, being the ultimate clinical study phase before the filing of a marketing authorisation application, the Company has completed a first phase (Phase IIa) of clinical development of hdm-ASIT+TM in Germany in December 2016. It has also completed all preclinical development on its third product candidate rag-ASIT+TM in order to be able to start clinical studies in Europe in 2018.

Clinical studies are highly uncertain and any failure or delay in completing such studies for any of the Company's product candidates may prevent it from obtaining regulatory marketing authorisation or commercialising product candidates on a timely basis, or at all, which would require the Company to incur additional costs and would delay the generation of any product revenue

Preclinical tests and clinical trials are expensive and time-consuming and their results are highly uncertain. The Company, its collaborative partners or other third parties may not successfully complete the product candidates development and, in particular, the manufacturing, the preclinical development and clinical development of the product candidates.

Several factors could result in the failure or delay in completion of a clinical study, or require amendments to the initially designed clinical study protocol, including, but not limited to,

- (i) delays in obtaining regulatory approval to launch clinical studies for its rag-ASIT+TM product candidate,
- (ii) delays in reaching agreement on acceptable terms with prospective contract research organisations and contract manufacturing organisations,
- (iii) delays in securing clinical trial sites,
- (iv) inability to monitor patients adequately during or after treatments,
- (v) problems with investigators or patient compliance with study protocol,
- (vi) difficulties in obtaining sufficient supplies of clinical trial materials, including skin prick test and conjunctival provocation test solutions,
- (vii) delay in recruiting patients participating in the study before the natural exposure to allergens and.
- (viii) difficulties in obtaining appropriate clinical trial insurances.

In particular, additional risk factors specific to clinical studies in the field of respiratory allergy indications could result in the failure or delay in completion of a clinical study, such as (i) difficulty in predicting real life effectiveness from individual provocation tests used in early stage clinical development, (ii) difficulty to recruit patients participating in the study before the natural exposure to allergens and (iii) variability of the patients' natural exposure to allergens during late stage clinical development of product candidates.

In addition, Competent Regulatory Authorities may in certain circumstances impose to the Company to



conduct additional clinical trials before obtaining registration of a product.

Such delays and difficulties could result in increased costs and delay or jeopardise the Company's ability to obtain regulatory approval and commence product sales as currently contemplated.

Facing delays is intrinsically linked to scientific researches and clinical studies. The Company experienced recently this risk in the framework of gp-ASIT<sup>+TM</sup> (analysis of the phase III results) and of hdm-ASIT<sup>+TM</sup> (postponement of further clinical trials).

#### The Company relies on one supplier for certain clinical trial testing materials

The Company relies on third party suppliers for its clinical trial testing materials. Regarding some of the clinical trial testing materials, including the skin prick test and conjunctival provocation test (*CPT*) solutions which have been used thus far throughout the clinical development of its product candidates, the Company is dependent upon a limited number of suppliers and with regards to the CPT solution, upon only one major supplier.

The Company faces risks inherent in relying on a single supplier, as any disruption, such as a fire, natural hazards, vandalism at the supplier or any change of control or disruption in the management of the supplier. Any such disruption could significantly impair the clinical trials of the Company's product candidates. The Company may also experience an unexpected loss of, or shortage in, supply, especially if any supplier were unable to meet the Company's demand for the adequate clinical trial testing materials. As a result hereof, the Company could experience delays in its research or planned clinical trials, or even be forced to amend the design of its clinical study protocols, which could result in undesirable consequences for the clinical development of its product candidates, such as the lack of comparability of test results across the various phases of the clinical development or even abandoning such skin prick test or CPT in the further execution of clinical trials.

### The commercial success of the Company's product candidates could be negatively affected if the allergy immunotherapy market does not develop as foreseen by the Company

Epidemiology studies for allergic rhinitis are well documented and support the premise of a sizable, and expanding chronic condition across global markets. Across the key developed countries being targeted by the Company, established treatment algorithms suggest a clear role for allergy immunotherapy following earlier line attempts at avoidance or treatment via symptomatic therapies first. A material change in either the addressable patient population as candidates for allergy immunotherapy or in the treatment/intervention approach for immunotherapy could introduce an element of uncertainty or even result in a candidate pool for ASIT+TM products that is lower than the Company's conservative projections. This could negatively affect the commercial success of the Company.

While the allergy immunotherapy market is well-established, starting with the continued use of legacy allergen extracts that date back to 1911, the evolving treatment approaches and anticipated use of innovative new agents such as the novel ASIT+TM products may not garner physician preference share as conveyed through extensive market research. The commercial success of the Company's product candidates could be impaired if the Subcutaneous Immunotherapy (*SCIT*) market does not develop well compared to the Sub-



lingual Immunotherapy (*SLIT*) market or if the Company's product candidates do not find its place within the SCIT market. In the event that physician prescribing patterns do not materially evolve or if payers amend reimbursement/market access decision making to the detriment of new SCIT approaches, then the commercial opportunity and ASIT+TM sales potential would be negatively impacted.

The commercial success of the Company's product candidates will depend on the degree of market acceptance of its products among physicians, patients, healthcare payers and the medical community

Once commercialised, the Company's products need to be accepted by the physicians, patients, healthcare payers and the medical community. Physicians may not prescribe the Company's products once these will be available on the market, which would prevent the Company from generating significant revenues or becoming profitable. Market acceptance of the Company's future products by physicians, patients and healthcare payers will depend on a number of factors, many of which are beyond the Company's control, including, but not limited to:

- the wording of the product label;
- acceptance by physicians, patients and healthcare payers of each product as safe, effective and costeffective;
- relative convenience, ease of use, ease of administration and other perceived advantages over alternative products;
- prevalence and severity of side effects;
- limitations, precautions or warnings listed in the summary of product characteristics, patient information leaflet, package labelling or instructions for use;
- the cost of treatment with the Company's products compared to alternative treatments and the extent to which the Company's products are approved for inclusion and reimbursed by managed care organisation; and
- whether products are designated in the label and/or under physician treatment guidelines and/or under reimbursement guidelines as a first-line therapy, or as a second-line, or third-line or last-line therapy;
- the slow implementation by the Member States other than Germany of 2001/83/EC on the Community code relating to medicinal products for human use (the *Medicinal Products Directive*), organising the shift of industrially manufactured AIT products from named patient products (*NPPs*) to products authorised on the basis of a marketing authorisation based on a fully documented file (see Section 7.3.3);
- the market acceptance of the Company's product candidates could be reduced in countries where sublingual administration is dominating the market, as it is the case in France and Italy;
- with regard to the US market, the US allergists' habit to sell to the patients self-mixed solutions; the



shift from self-prepared products to approved ones that need less injections could be perceived as a potential loss of profit for US allergists, hampering the acceptance of the Company's product candidates by the US allergists. The preference of the US allergists to mix several bulk allergens to treat polysensitised allergic patients (ie. patients who demonstrate sensitivity to multiple non-related allergen sources) with a cocktail of multiple allergen extracts may also further impede the market acceptance in the United States of the Company's product candidates, which desensitize to one allergen only. The Company will not position gp-ASIT+TM on the US market as a substitute to classical (multi-allergen) SCIT but rather as a complement to it. The marketing strategy is to convince US allergists to prescribe gp-ASIT+TM to their patients who refuse to commit to a 3-year course of classical SCIT and to patients who have dropped out of a classical SCIT course of therapy. Accordingly, using a short-course treatment such as gp-ASIT+TM would generate additional visits and income for US allergists, and hopefully result in a significantly higher number of successfully treated patients.

The Company currently relies on one CMO to supply and manufacture its product candidates at a single manufacturing facility, and could consider relying on further third parties to manufacture its products. The development and commercialisation of such product candidates could be stopped or delayed if such third party fails to provide the Company with sufficient quantities of product candidates or fails to do so at acceptable quality levels or prices or fails to maintain or achieve satisfactory regulatory compliance

The Company does not currently have the infrastructure or internal capability to manufacture its product candidates for use in the conduct of its clinical studies or for future commercial supply, if its products are approved. Instead, the Company relies on, and expects to continue to rely on a CMO. The Company has limited control on the manufacturing processes of such CMO and is dependent on it for the production of its product candidates in accordance with relevant regulations (such as GMP).

The Company faces risks inherent in relying on a single CMO, as any disruption, such as a fire, natural hazards, vandalism at the CMO or any change of control or disruption in the management of the CMO. Any such disruption could significantly impair the Company's manufacturing capability. The Company may also experience an unexpected loss of supply, and if any supplier were unable to meet its demand for any of its product candidates, it could experience delays in its research or planned clinical studies or commercialisation.

The Company currently does not have alternative production plans in place or disaster-recovery facilities available.

The Company may not be able to purchase specific raw material and process media such as natural sources of allergens provided by third party suppliers for the manufacturing of the product candidates

Access to raw materials and process media necessary for active ingredients manufacturing is essential for sustainability and profitability of the Company's operations. Failure to obtain access to such raw materials and process media could have a negative impact on the development of the Company's activities.

The Company is dependent on its suppliers to secure the supply of the required raw materials and process media. No long-term renewable contracts and framework agreements have at this stage been executed with the suppliers. Should the Company's existing suppliers cease operations or reduce or eliminate production



of these raw materials or process media, access to these materials may became impossible.

The Company relies upon collaborative partners for the execution of most aspects of its development programmes. Failure of these third parties to provide services of a suitable quality and within acceptable timeframes may cause the delay or failure of its development programmes

The Company is and expects to continue to be dependent on collaborations with partners relating to the further development of its existing and future product candidates. If the Company fails to enter into or maintain collaborative agreements on reasonable terms or at all, the Company's ability to develop its existing or future research programmes and product candidates could be delayed, the commercial potential of its products could change and its costs of development and commercialisation could increase.

The Company's dependence on collaborative partners exposes it to the following risks:

- the Company relies on the information and data received from third parties regarding its research programmes and product candidates and will not have control of the process conducted by the third party in gathering and composing such data and information. The Company may not have formal or appropriate guarantees from its contract parties with respect to the quality and the completeness of such data;
- any collaboration agreement into which the Company may enter may call for licensing or cross-licensing of potentially blocking patents, know-how or other intellectual property. Due to the potential overlap of data, know-how and intellectual property rights, there can be no assurance that one of the Company's partners will not dispute its right to use, license or distribute such data, know-how or other intellectual property rights, and this may potentially lead to disputes, liability or termination of the collaboration. In addition, the Company may also be restricted under future licence agreements from entering into agreements on certain terms with potential partners;
- a collaborative partner may develop a competing product either by itself or in collaboration with others, including one or more of the Company's competitors; and
- the Company's collaborative partners' willingness or ability to complete their obligations under the Company's collaboration arrangements may be adversely affected by business combinations or significant changes in a collaborative partner's business strategy.

The Company could need to rely on partners for the commercialisation and distribution of its products in certain or all regions

The Company's product candidates are being developed with the intention of a commercial launch in a number of key countries. The Company currently has no commercial, marketing and sales organisation in place and has never marketed a product and has therefore limited experience in the fields of sales, marketing and distribution. The Company does currently study the possibility to deploy itself a sales and distribution organisation in its key markets. However it might be possible that the Company will need to rely for the commercial launch and distribution of its products on license and/or supply deals with partners in certain regions. Such partners have currently not yet been identified and there can be



no assurance that the Company will ever identify such partners or find a profitable agreement with such partners. Therefore its products might not be commercialised in all the markets the Company currently targets. When the selected partners are not successful in commercialising the Company's products or the Company is not successful in collaborating with the appropriate partner, it will suffer from a reduction in volumes sold, revenues and cashflows from the relevant product in the relevant market.

The Company's dependence on partners for the commercialisation of its products in certain or all the regions results in a number of risks, including, but not limited to, the following:

- The Company may not be able to control the amount or timing of resources that partners devote to the Company's products;
- The Company's partners' willingness or ability to complete their obligations under the Company's collaboration arrangements may be adversely affected by business combinations or significant changes in a partner's business strategy; and/or
- The Company may experience delays in, or increases in the costs of, the marketing of the Company's products due to the termination or expiration of collaborative arrangements.

If any of these risks were to materialise the Company's ability to commercialise one or more of its products could be impaired and its business, prospects, financial condition and results of operations could be adversely affected.

If serious adverse side effects are identified for any product candidate, the Company may need to abandon or limit its development of that product candidate, which may delay or prevent marketing approval, or, if approval is received for the product candidate, require it to be taken off the market, require it to include safety warnings or otherwise limit its sales

Serious rare unforeseen side effects from any of the Company's product candidates could arise either during clinical development or, if approved by Competent Regulatory Authorities, after commercialising the products. All of the Company's product candidates are still in clinical or preclinical development or discovery. While the Company's preclinical and clinical studies for its gp-ASIT+TM product candidates to date have demonstrated an acceptable safety profile, the results from future trials or from trials with other product candidates may not support this conclusion. The results of future clinical studies may show that the Company's product candidates cause undesirable or unacceptable side effects or even death, which could interrupt, delay or halt clinical studies, and result in delay, or failure to obtain, marketing approval from Competent Regulatory Authorities, or result in marketing authorisation from Competent Regulatory Authorities with restrictive label warnings impacting sales and increasing risk of potential product liability claims. Moreover, as larger numbers of patients are enrolled in late-stage clinical studies for the Company's product candidates, the risk that uncommon or low frequency but significant side effects are identified may exist. Finally, it cannot be excluded that side-effects that have not materialised at the moment of the study arise upon commercialisation of the Company's product candidate and affect such commercialisation.

If any of the Company's product candidates receive marketing approval and the Company or others identi-



fy undesirable or unacceptable side effects caused by such products afterwards:

- Competent Regulatory Authorities may require the Company to take its approved product off the market:
- Competent Regulatory Authorities may require the addition of labelling statements, specific warnings, a contraindication or field alerts to physicians and pharmacies;
- the Company may be required to conduct additional clinical studies or change the labelling of the product;
- the Company may be subject to limitations on how it may promote the product;
- sales of the product may decrease significantly;
- the Company may be subject to litigation or product liability claims; and
- the Company's reputation may be impaired.

Any of these events could prevent the Company or any potential future partners from achieving or maintaining market acceptance of the relevant product or could substantially increase commercialisation costs and expenses, which in turn could delay or prevent the Company from generating significant revenue from the sale of its products.

Failure to successfully identify, develop and commercialise additional products could impair the Company's ability to grow. In particular, the Company may not be successful in its efforts to use and expand its technology platform, ASIT+TM, to build a pipeline of product candidates and develop marketable products

A key element of the Company's long-term growth strategy is the capacity to develop and market additional products arising out of the same ASIT+TM technology platform. The success of this strategy depends partly upon the Company's ability to develop promising product candidates.

The Company believes its ASIT+TM technology would allow it to develop new product candidates for various allergies. The Company has at this stage:

- one product candidate for grass pollen allergic rhinoconjonctivitis in late stage clinical study;
- one product candidate for house dust mite allergic rhinoconjonctivitis in early stage clinical development;
- one product candidate for ragweed allergic rhinoconjonctivitis in late stage preclinical development; and
- several products for food allergy (peanut, cow milk and egg white) in early stage preclinical development.

The Company may not be successful in its efforts to use and expand ASIT+TM to build a pipeline of product candidates and develop approved or marketable products. In addition, all product candidates are prone to risks of failure typical of pharmaceutical product development, including the possibility that a product candidate may not be suitable for clinical development as a result of its harmful



side effects, limited efficacy or other characteristics that indicate that it is unlikely to be a product that will receive approval by Competent Regulatory Authorities and achieve market acceptance.

If the Company does not successfully develop and commercialise product candidates based upon its ASIT+TM technology platform, the Company may not be able to create or market a product or generate revenues in the future, which would adversely affect its business, prospects, financial condition and results of operations.

### If the Company experiences delays or difficulties in the enrolment of patients in clinical studies, its receipt of necessary regulatory approvals could be delayed or prevented

The Company may not be able to initiate or continue clinical studies for its product candidates if it is unable to enrol a sufficient number of eligible patients to participate in these studies. In addition, some of the Company's competitors may have ongoing clinical studies for product candidates that treat the same indications as the Company's product candidates, and patients who would otherwise be eligible for its clinical studies may instead enrol in clinical studies of its competitors' product candidates

Patient enrolment is affected by other factors including (i) the size and nature of the patient population, (ii) the severity of the disease under investigation, (iii) the patient eligibility criteria for the study in question, (iv) the perceived risks and benefits of the product candidates under the study, (v) whether the clinical trial design involves comparison to placebo or standard of care, (vi) the Company's payments to participants and third-parties for conducting clinical studies, (vii) the referral practices of physicians, (viii) the ability to monitor patients adequately during and after treatment, and (ix) the proximity and availability of clinical study sites for prospective patients.

Any difficulties in enrolling a sufficient number of patients for any of its clinical studies could result in significant delays and additional costs and could require the Company to abandon one or more clinical studies altogether. If any of these factors materialise, the Company's business, results of operations or financial condition could be materially adversely affected.

### The Company may face significant competition and technological change which could limit or eliminate the market opportunity for its product candidates

The market for pharmaceutical products is highly competitive. The Company may amongst others face the following competition challenges:

the fields in which the Company operates are characterised by technological change and innovation; competitors of the Company include established pharmaceutical companies like ALK-Abello, Stallergènes, Allergopharma or Allergy Therapeutics (with its Pollinex Quattro already commercialised in Europe, under a transitional status in Germany, but under further clinical development in the United States) and biotechnology companies like Biomay (no start date yet announced for the phase III clinical study with its BM32 product targeting grass pollen rhinitis), Amergis, Aimmune, Allergen Research Corporation, which are currently developing technologies and products that can be equally or more effective and/or more economical as any current or future product candidates of the Company; for example, it cannot be exclud-



ed that technological advances such as new active ingredients like synthetic peptides or recombinant allergens or new administration routes like sublingual tablets or transdermal patches could have a higher market penetration;

- some of the Company's competitors have substantially greater financial, research and development resources than the Company and greater marketing and business power allowing them to accelerate the discovery and development of product candidates that could make the Company's product candidates less competitive;
- any new product that competes with an approved product must demonstrate at the end of the clinical development compelling results in terms of efficacy, convenience, tolerability and safety in order to be commercially successful; accordingly, the competitors of the Company may succeed in receiving before the Company Competent Regulatory Authorities' approvals for commercialising competing pharmaceutical products such as drugs including new active ingredients like synthetic peptides or recombinant allergens or drugs based on new administration routes like sublingual tablets or transfermal patches; competitive advantages of competitors' products could limit the demand and the price of the Company's product candidates;
- the Company will not achieve its business plan if the acceptance of the Company's products is limited by price competition. The launch of competitive pharmaceutical products, particularly after the Company's intellectual property protection or data exclusivity period expires, may result in reductions in sales volumes or sales prices for the Company's products, which could materially adversely affect its business, prospects, financial condition and results of operations.

The price setting and the availability and level of adequate reimbursement by third parties, such as insurance companies, governmental and other healthcare payers is uncertain and may impede on the Company's ability to generate sufficient operating margins to offset operating expenses

The Company's commercial performance will depend in part on the conditions for setting the sales price of its products by the relevant public commissions and bodies and the conditions of their reimbursement by the health agencies or insurance companies in the countries where the Company intends to market its products. The current context of healthcare cost control and economic and financial crisis that most countries are currently facing, coupled with the increase in health care budgets caused by the aging population in developed countries creates extra pressure on health care spending in most if not all countries. Consequently, pressure on sales prices and reimbursement levels is intensifying owing in particular to: (i) price controls imposed by many countries, (ii) the increasing reimbursement limitations of some products under budgetary policies, and (iii) the heightened difficulty in obtaining and maintaining a satisfactory reimbursement rate for medicines.

Obtaining adequate pricing decisions that would generate return on the investment incurred for the development of product candidates developed by the Company is therefore uncertain. The Company's ability to manage its expenses and cost structure to adapt to increased pricing pressure is untested and uncertain. All of these factors will have a direct impact on the Company's ability to make profits on the products in question.



The partial/no reimbursement policy of medicines could have a material adverse effect on the business, prospects, financial situation, earnings and growth of the Company. In particular, reimbursement of the Company's products is subject to the following factors:

- the Company's products may not be reimbursed if they lack sufficient efficacy, or the level of reimbursement of the Company's products may be less favourable than that of other products having equivalent clinical results; which would lead physicians to limit their prescriptions of the Company's products; and
- new entrants in the market or development of generic pharmaceuticals could lead to a decrease of the reimbursement level for the Company's products.

With regard to SCIT therapies in particular, their management by payers appears to be favourable in the countries targeted by the Company. They are typically reimbursed in all major markets in Europe (the only exceptions the Company is aware of being Belgium, Poland and Portugal). SCIT products are reimbursed at a rate of 65% in France, and of 50-60% in most regions of Italy and Spain (though sometimes subject to a prior authorisation). In Germany, allergy immunotherapy is adequately covered by health insurance, and the Company's key competitors (Pollinex Quattro and the ALK-Depot SQ's from ALK-Abelló) are fully reimbursed.

Similarly in the United States, all major commercial plans cover SCIT as part of their medical benefit, but have placed significant restrictions on the SLIT-tablets from Grastek, Ragwitek and Oralair, which are managed through the pharmacy benefit. The physician administering the subcutaneous shot charges the insurance company for the administration as well as the cost of the immunotherapy shot itself. Accordingly, economic factors influence AIT treatment selection in two important ways.

First, unlike pharmaceutical products which are managed as part of the pharmacy benefit (such as symptomatic treatments and the new oral SLIT-tablets), payers typically do not outsource the management of their medical benefit to third-party administrators. Conversely, most drug reimbursement is closely supervised by Pharmacy Benefit Managers (*PBMs*) who have implemented strict cost control measures such as tiering (higher patient co-pays for expensive drugs), prior authorisation or restrictive formularies. Even when newer oral treatments (such as the SLIT-tablets) are reimbursed (i.e. included in the plan's formulary), most US payers insist on the patient trying SCIT first: for example United Healthcare, one of the largest national insurance carriers in the US, covers Grastek, Oralair and Ragwitek on Tier 3 formulary (i.e. with a high patient co-pay) but subject to a prior authorisation that requires the prior use of SCIT and care administered only by an allergy/immunology specialist.

Since traditional AIT (subcutaneous AIT administered in the allergist's office) is considered as providing the patient with a clear medical benefit, payers have managed SCIT in a less restrictive manner than oral products such as SLIT-tablets.

The Company has limited experience in sales, marketing and distribution



Since its inception, the Company's activities have mainly been limited to staffing, business planning, raising capital, developing products and technologies, identifying potential product candidates and undertaking preclinical studies and clinical studies. All of the Company's product candidates are still in research, preclinical and clinical development and the Company's sales activities have been limited to diagnostic tests for systemic lupus erythematosus. The Company has not yet demonstrated its ability to obtain marketing authorisation for its products or conduct sales and marketing activities necessary for successful product commercialisation and no clear price strategy has yet been determined. In addition, given its limited operating history, the Company may encounter unforeseen expenses, difficulties, complications, delays and other known and unknown factors.

The Company has currently neither marketing nor sales capacity. The Company is considering the possibility to set up its own marketing and contract sales force when clinical results confirm the possibility that a first product candidate can be marketed. In such a case, the Company would have to acquire marketing skills and develop its own sales and marketing infrastructure and would need to incur additional expenses, mobilise management resources, implement new skills and take the time necessary to set up the appropriate organisation and structure to market the relevant product(s), in accordance with applicable laws. In this framework, the Company has appointed François Meurgey as Chief Marketing Director of the Company. He has extensive experience in the sales and marketing in the biopharmaceutical industry. In addition, several managers of the Company have experience in commercialising and launching high technology medical products. There can however be no assurance that the experience from François Meurgey and other managers would be sufficient to effectively commercialise any or all of the Company's product candidates. The Company may not be able to attract qualified sales and marketing personnel on acceptable terms in the future and therefore may experience constraints that will impede the achievement of its commercial objectives.

If the Company is not successful in transitioning its current research and development to the commercialisation of product candidates or incurs greater costs than expected in this respect, the Company's business, prospects, financial condition and results of operation could be materially adversely affected.

### The Company could fail to achieve or maintain high standards of manufacturing in accordance with Good Manufacturing Practices and other manufacturing regulations

The Company and key third-party suppliers on which it relies currently or in the future must continuously adhere to (current) Good Manufacturing Practices and corresponding manufacturing regulations of Competent Regulatory Authorities. In complying with these regulations, the Company and its third-party suppliers must expend significant time, money and effort in the areas of design and development, testing, production, record-keeping and quality control to assure that the products meet applicable specifications and other regulatory requirements. The Company may also be compelled to look for alternative suppliers that comply with such requirements. The failure to comply with these requirements could result in an enforcement action against the Company, including the seizure of products need to be expressed for sub-contracted manufacturing. Any of these third-party suppliers and the Company also may be subject to audits by the Competent Regulatory Authorities.

The Company has obtained significant funding from the Brussels-Capital and Walloon Regions. The terms of the agreements signed with the Regions may hamper the Company to



partner part or all its products and restrict the Company's ability to determine the location of its premises

The Company has entered into funding agreements with the Brussels-Capital Region (the *Brussels Grants*) and the Walloon Region (the *Walloon Grants*) to finance its research and development programmes.

According to the terms of the Brussels Grants, the Company would be required to ensure the industrial and commercial development is in the interest of the economy, employment and the environment in the Brussels-Capital Region. The sale of patents or know-how and licensing to companies located outside the Brussels-Capital Region must meet the same recovery goals. The Brussels-Capital Region may request the Company for partial or total repayment of subsidies received if the Company breached its commitment. The Company may not be able to reimburse these grants pursuant to the terms of these contracts, or such repayment could affect the funding of its clinical and scientific activities. The Company agreed to pursue activity on the territory of the Brussels-Capital Region in the 10 years following the end date of the agreements granting subsidies (*i.e.*, until March 2018).

The Company has also decided to partially finance some of its development program of its house dust mite product candidate as well as food allergy product candidates with funding from the Walloon Region, and as a result, the Company is bound by the terms and conditions of the Walloon Grants. The Walloon Grants are dedicated to support specific research projects, and their terms may limit the Company's ability to conduct research with third parties in the field of such research projects and prohibit the granting of any other rights relating to the Company's findings of such research projects to third parties. Also, the Company needs to obtain the consent of the Walloon Region for any transfer, out-licensing or sale to a third party of any or all of the research projects related results, which may reduce the Company's ability to partner or sell part or all of its products.

Furthermore, when research projects partially funded by the Walloon Region will enter into their phase of use (meaning the phase following the research phase and during which the Company will use the results of the research projects for commercial purposes), the Company will have to start reimbursing the funding received on an annual basis. Such phase of use of the results arising from the research project regarding house dust mite allergy has started in 2017. The reimbursement will be divided into a fixed part (for an amount of EUR 13,000 for 2017) and a variable part dependent upon the Company's turnover. The Company may not be able to reimburse such funding under the terms of the agreements or such reimbursement may jeopardise the funding of its clinical and scientific activities.

In addition, if the Company decides not to enter into the phase of use with respect to the research projects, it must transfer all property rights relating to the findings of the research projects to the Walloon Region. In such case, the Company would also be prohibited from conducting any research for any third party relating to the research projects for a period of 72 months following the Company's decision not to enter into the phase of use.

The above commitments are binding contractual undertakings of the Company. If the Company does not respect its contractual undertakings, the Company could be held liable for breach of contract.

Failure to attract and retain senior management and skilled personnel could impair the Company's de-



#### velopment and commercialisation efforts

The Company is highly dependent on its current management team, which has a limited size. The services of the Company's management team are critical to the successful implementation of its business, research, product development and regulatory strategies. In that respect, the role played by the CEO, M. Thierry Legon, is central and critical for the successful development of the activities of the Company. Members of the Company's management team may terminate their employment or services with the Company at any time. The loss of the services of any of the Company's management team, and especially of the CEO, and its inability to find suitable replacements could harm its business, financial condition, prospects and ability to achieve the successful development or commercialisation of its product candidates.

The Company's success depends in part on its continued ability to attract, retain and motivate highly qualified clinical and scientific personnel and on its ability to develop and maintain important relationships with leading academic institutions, clinicians and scientists. If the Company loses the services of certain clinical and scientific personnel or members of its management team, its research and development efforts may be seriously and adversely affected. Although the Company generally has not experienced substantial problems retaining key employees, its employees can terminate their employment with the Company at any time with relatively short notice. It has to be noted that M. Thierry Legon (CEO) can terminate its services agreement at any time without indemnification but subject to a prior notice of 12 months. There can be no assurance that the Company will be able to retain personnel, enforce non-competition undertakings or, where necessary, attract such personnel on acceptable terms, given the competition for experienced people from numerous specialised biotechnology firms and pharmaceutical companies. The Company's anticipated growth and expansion into areas and activities requiring additional expertise such as clinical trials in the Unites States of America, registration, manufacturing and marketing, are expected to place increased demands on the Company's resources. These demands are expected to require the addition of new personnel and/or managers and the development of additional expertise by current personnel and/or managers. The failure to attract the needed personnel or to develop such needed expertise could have a materially adverse effect on the Company's prospects for success.

Many of the other biotechnology and pharmaceutical companies and academic institutions that the Company competes against for qualified personnel have greater financial and other resources, different risk profiles and a longer history in the industry than the Company does. Therefore, the Company might not be able to attract or retain these key persons on conditions that are economically acceptable. Furthermore, the Company will need to recruit new managers and qualified scientific personnel to develop its business if the Company expands into fields that will require additional skills. The inability of the Company to attract and retain these key persons could prevent it from achieving its objectives overall and thus could have a material adverse effect on its business, prospects, financial condition and results of operations.

#### Growth may trigger significant demands on the Company's management and resources

The Company expects to experience future growth in the number of its employees and the scope of its operations in connection with the continued development and commercialisation of its current and potential new product candidates. If the Company is unable to integrate successfully such additional employees or operations, or to hire the necessary additional qualified employees in a sufficient number and in a timely



manner, this may have a material adverse effect on the Company's business, results of operations or financial condition.

### The Company's employees, principal investigators, consultants and collaborative partners may engage in misconduct or other improper activities, including non-compliance with regulatory standards

The Company is exposed to the risk of employees, independent contractors, principal investigators, consultants, collaborative partners or vendors engaging in fraud or other misconduct. Misconduct by employees, independent contractors, principal investigators, consultants, collaborative partners and vendors could include intentional failures to comply with Competent Regulatory Authorities' regulations, to provide accurate information to Competent Regulatory Authorities or to comply with manufacturing standards the Company has established.

In particular, sales, marketing and business arrangements in the healthcare industry are subject to extensive laws and regulations intended to prevent fraud, misconduct, kickbacks, self-dealing and other abusive practices. These laws and regulations may restrict or prohibit a wide range of pricing, discounting, marketing and promotion, sales commission, customer incentive programs and other business arrangements.

Misconduct could also involve scientific data fraud or the improper use of information obtained in the course of clinical studies, which could result in regulatory sanctions and serious harm to the Company's reputation. It is not always possible to identify and deter misconduct, and the precautions the Company takes to detect and prevent this activity may not be effective in controlling unknown or unmanaged risks or losses or in protecting the Company from governmental investigations or other actions or lawsuits stemming from a failure to be in compliance with such laws or regulations. If any such actions are instituted against the Company and the Company is not successful in defending itself or asserting its rights, those actions could have a significant impact on its business, including the imposition of significant fines or other sanctions, and its reputation.

### The Company may not be able to obtain, maintain, defend or enforce the intellectual property rights covering its product candidates, which could adversely affect its ability to compete effectively

The Company's commercial success depends, to a large extent, on its ability to obtain, maintain, defend and enforce its patents and other intellectual property rights covering its product candidates. The Company's research programmes and product candidates are covered by several patents and patent applications, which are owned by the Company. The Company cannot guarantee that it will be in a position in the future to develop new patentable inventions or that the Company will be able to obtain patent rights from patent offices or maintain these patent rights against third-party challenges to their validity, scope and/or enforceability.

The Company cannot guarantee that it is or has been the first to conceive an invention and to file a patent or a patent application, notably given the fact that patent applications are not published in most countries before an 18-months period from the date of the filing. Because patent law in the biopharmaceutical industry is highly uncertain, there can be no assurance that the technologies used in the Company's research programmes and product candidates are patentable, that patents will be granted from pending or future applications, or that patents will be broad enough to provide adequate and commercially meaningful pro-



tection against competitors with similar technologies or products, or that patents granted will not be successfully challenged, circumvented, invalidated or rendered unenforceable by third parties, hence enabling competitors to circumvent or use them and depriving the Company from the protection it may expect against competitors. If the Company does not obtain patents in respect of its technologies or if the patents of the Company are invalidated (for example, as a result of the discovery of prior art), third parties may use the technologies without payment to the Company. In addition, a third party's ability to use unpatented technologies is enhanced by the fact that the published patent application contains a detailed description of the relevant technology. The Company cannot guarantee that third parties, contract parties or employees will not claim ownership rights over the patents or other intellectual property rights owned or held by the Company.

Finally, the enforcement of patents and other intellectual property is costly, time consuming and highly uncertain. The Company cannot guarantee that it will be successful in preventing the misappropriation of its patented inventions, know-how and other intellectual property rights, and failure to do so could significantly impair the ability of the Company to effectively compete.

#### The Company may not be able to protect and/or enforce its intellectual property rights in all jurisdictions

Filing, prosecuting and defending patents on all of the Company's product candidates throughout the world would be prohibitively expensive to the Company. Competitors may use the Company's technologies in jurisdictions where the Company has not obtained patent protection to develop their own products and, further, may export otherwise infringing products to territories where the Company has patent protection but where enforcement is not as well developed as in the United States or the European Union. These products may compete with the Company's products in jurisdictions where the Company does not have any issued patents and the Company's patent claims or other intellectual property rights may not be effective or sufficient to prevent them from so competing. Proceedings to enforce the Company's patent rights in foreign jurisdictions could result in substantial cost and divert the Company's efforts and attention from other aspects of its business. The inability of the Company to protect and/or enforce its intellectual property rights throughout the world could have a material adverse effect on its business, prospects, financial condition and results of operations.

### Intellectual property rights do not necessarily address all potential threats to the Company's competitive advantage

The degree of future protection afforded by the Company's intellectual property rights is uncertain because intellectual property rights have limitations, and may not adequately protect the Company's business or permit it to maintain its competitive advantage. The following examples are illustrative:

• the Company relies on proprietary know-how to protect its research programmes, product candidates and ASIT+TM platform; know-how does not benefit from intellectual property rights protection and is difficult to maintain; the Company uses reasonable efforts to maintain its know-how, but it cannot assure that its partners, employees, consultants, advisors or other third parties will not wilfully or unintentionally disclose proprietary information to competitors;



- others may be able to make products that are similar to the Company's product candidates but that are not covered by the claims of the Company's patents;
- others may independently develop similar or alternative technologies or duplicate any of the Company's technologies without infringing the Company's intellectual property rights;
- pending patent applications may not lead to issued patents;
- issued patents may not provide the Company with any competitive advantages, or may be held invalid or unenforceable, as a result of legal challenges by the Company's competitors;
- the Company's competitors might conduct research and development activities in countries where the Company does not have patent rights and then use the information learned from such activities to develop competitive products for sale in its major commercial markets;
- the Company may not develop or in-license additional proprietary technologies that are patentable; and
- the patents of others may have an adverse effect on the Company's business.

Should any of these events occur, they could significantly harm the Company's business, prospects, financial condition and results of operation.

Intellectual property infringement claims from third parties would be time-consuming and costly to defend and may result in liability for damages, or prevent the Company from commercialising its products

The Company's success will depend in part on its ability to operate without infringing on or misappropriating the intellectual property rights of others. The Company cannot guarantee that its activities will not infringe on the patents or other intellectual property rights owned by others. The Company may expend significant time and effort and may incur substantial costs in litigation if it is required to defend against patent or other intellectual property right suits brought against the Company regardless of whether the claims have any merit. If the Company is found to infringe on the patents or other intellectual property rights of others, it may be subject to substantial claims for damages, which could materially impact the Company's cash flow and financial position. The Company may also be required to cease development, use or sale of the relevant research programme, product candidate or process or it may be required to obtain a licence on the disputed rights, which may not be available on commercially reasonable terms, if at all. Even if the Company is able to obtain a licence, it could be non-exclusive, thereby giving its competitors access to the same technologies licensed to the Company, and could require the Company to make substantial royalty payments. The Company may be unable to develop or commercialise a product, product candidate or research programme, or may cease some of its operations, which may have a material adverse effect on the Company's business.

There can be no assurance that the Company's efforts to search for existing proprietary rights before embarking on a research and development programme with respect to a particular product candidate, method, process or technology will uncover all relevant third party rights relating to such product, method, process or technology. The Company may spend significant time and effort and may incur



substantial costs if required to defend against any infringement claims or to assert its intellectual property rights against third parties. The risk of such a procedure by a third party may increase in view of the Company making public announcements regarding one or more of its research programmes and product candidates. The Company may not be successful in defending its rights against such procedures or claims and may incur as a consequence thereof significant losses, costs or delays in its intended commercialisation plans as a result thereof.

### If the Company is not able to prevent disclosure of its trade secrets, know-how or other proprietary information, the value of its technology and product candidates could be significantly diminished

The Company relies on trade secret protection to protect its interests in its know-how or other proprietary information and processes for which patents are difficult to obtain or enforce or which are difficult to reverse engineer, all of which constitute confidential information. The Company may not be able to protect its confidential information adequately. The Company has a policy of requiring its consultants, employees, contract personnel, advisers and third-party partners to enter into invention transfer, non-disclosure and non-compete agreements. In particular, the Company has entered into a confidentiality and non-compete agreement with its CMO pursuant to which the CMO is prohibited to perform any project in the Company's field until 31 December 2027. However, no assurance can be given that the Company has entered into appropriate agreements with all of its consultants, contract personnel, advisers, third-party partners or other parties that have had access to the Company's confidential information. There is also no assurance that such agreements will provide for a meaningful protection of confidential information in the event of any unauthorised use or disclosure of information. Furthermore, the Company cannot provide assurance that any of its employees, consultants, contract personnel or third-party partners, either accidentally or through wilful misconduct, will not cause serious damage to its programs and/or its strategy, by, for example, disclosing confidential information to its competitors. It is also possible that confidential information could be obtained by third parties as a result of breaches of physical or electronic security systems of the Company, its consultants, advisers, third-party partners or other parties that have had access to its confidential information. Any disclosure of confidential data into the public domain or to third parties could allow the Company's competitors to learn confidential information and use it in competition against the Company. In addition, others may independently discover the Company's confidential information. Any action to enforce the Company's rights against any misappropriation or unauthorised use and/or disclosure of confidential information is likely to be time-consuming and expensive, and may ultimately be unsuccessful, or may result in a remedy that is not commercially valuable.

## If any product liability lawsuits are successfully brought against the Company or any of its partners, the Company may incur substantial liabilities and may be required to limit commercialisation of its product candidates

The Company could face the risk of substantial liability for damages if its product candidates were to cause adverse side effects in clinical trials or once they are on the market. The Company may not be able to accurately predict the possible side effects that may result from the use of its product candidates. Product liability claims may be brought against the Company or its partners by participants enrolled in clinical trials, practitioners, researchers and other health/research professionals or others using, administering or selling any of the Company's future approved products. If the Company cannot successfully defend itself against



any such claims, it may incur substantial liabilities. Regardless of their merit or eventual outcome, liability claims may result in:

- decreased demand for the Company's future approved products;
- injury to the Company's reputation;
- withdrawal of clinical trial participants;
- termination of clinical trial sites or entire trial programs;
- increased regulatory scrutiny;
- significant litigation costs;
- substantial monetary awards to or costly settlement with patients or other claimants;
- product recalls or a change in the indications for which they may be used;
- loss of revenue:
- diversion of management and scientific resources from the Company's business operations; and
- the inability to commercialise product candidates.

#### 1.2. RISKS RELATING TO THE REGULATORY ENVIRONMENT

Nearly all aspects of the Company's activities are subject to substantial regulation. No assurance can be given that any of the Company's product candidates will fulfil regulatory compliance. Failure to comply with such regulations could result in delays, suspension, refusals, fines and withdrawal of approvals

The international pharmaceutical and medical technology industry is highly regulated by government bodies (the *Competent Regulatory Authorities*) that impose substantial requirements covering nearly all aspects of the Company's activities: research and development, manufacturing, preclinical tests and clinical trials, labelling, marketing, sales, storage, record keeping, promotion and pricing of its research programmes and product candidates. Compliance with standards laid down by local Competent Regulatory Authorities is required in each country where the Company, or any of its partners or licensees, conducts said activities in whole or in part. The Competent Regulatory Authorities notably include the European Medicine Agency (*EMA*) and all national Competent Authorities in the European Union, the Food and Drug Administration (*FDA*) in the United States, and other Competent Authorities in other relevant markets.

There can be no assurance that product candidates of the Company will fulfil the criteria required to obtain necessary regulatory clearance to access the market. Also, at this time, the Company cannot guarantee or know the exact nature, precise timing and detailed costs of the efforts that will be necessary to complete the remainder of the development of its research programmes and product candidates. The specific regulations and laws, as well as the time required to obtain Competent Regulatory Authorities approvals, may vary from country to country, but the general regulatory procedures are similar in the European Union and the United States. Each Competent Regulatory Authority may impose its own requirements, may discontinue an approval, may refuse to grant approval, or may require additional data before granting approval, not-withstanding that approval may have been granted by one or more other Competent



Regulatory Authorities. Competent Regulatory Authority approval may be delayed, limited or denied for a number of reasons, most of which are beyond the Company's control. Such reasons include the production process or site not meeting the applicable requirements for the manufacture of regulated products, or the products not meeting applicable requirements for safety or efficacy during the clinical development stage or after marketing. No assurance can be given that clinical trials will be approved by Competent Regulatory Authorities or that products will be approved for marketing by Competent Regulatory Authorities in any pre-determined indication or intended use. Competent Regulatory Authorities may disagree with the Company's interpretation of data submitted for their review. Even after obtaining approval for clinical trials or marketing, products will be subject to ongoing regulation and evaluation of their benefit/safety or risk/performance ratio.

Considering the relatively limited number of treated patients randomized for the first phase III clinical study with gp-ASIT+TM, it is likely, if commercialisation is authorized on the basis of one single phase III, that the German regulatory authorities will require a phase IV clinical study after the commercialisation of the product. A negative evaluation of the benefit/safety or risk/performance ratio following such study could result in a potential use restriction and/or withdrawal of the marketing authorisation for gp-ASIT+TM.

At any time Competent Regulatory Authorities may require discontinuation or holding of clinical trials or require additional data prior to completing their review or may issue restricted authorisation or authorise products for clinical trials or marketing for narrower indications than requested or require further data or studies be conducted and submitted for their review. There can be no guarantee that such additional data or studies, if required, will corroborate earlier data.

Even if the Company completes the necessary preclinical and clinical studies, it cannot predict when or if it will obtain regulatory approval to commercialise any of its product candidates or if the conditions attached to such approval may be more stringent than the Company expects

The Company cannot commercialise a product candidate for sale in a jurisdiction until the appropriate Competent Regulatory Authorities have reviewed and approved it. Even if the product candidates demonstrate safety and efficacy in clinical studies, such regulatory agencies may not complete their review processes in a timely manner, or the Company may not be able to obtain regulatory approval. Additional delays may arise if any Competent Regulatory Authority recommends non-approval or restrictions on approval. In addition, the Company may experience delays or rejections based upon additional government regulation from future legislation or administrative action, or changes in regulatory agency policy during the period of product development, clinical studies and the review process. Regulatory agencies also may approve a treatment candidate for fewer or more limited indications than requested or may grant approval subject to the performance of post-marketing studies. In addition, regulatory agencies may not approve the labelling claims that are necessary or desirable for the successful commercialisation of the Company's product candidates. If the Company does not obtain regulatory approval to commercialise a product candidate, or if such approval is delayed, the Company's business, results of operations and/or financial condition could be materially adversely affected.

If the Company obtains regulatory approval for a product candidate, the product will remain subject to on-going regulatory obligations



If the Company obtains regulatory approval in a jurisdiction for a product, it will remain subject to ongoing regulatory obligations. In addition, Competent Regulatory Authorities may still impose significant restrictions on the indicated uses or marketing of the product, or impose on-going requirements for potentially costly post-approval studies or post-market surveillance. There can be no guarantee that such additional data or studies, if required, will corroborate earlier data. Post-approval manufacturing and marketing of the Company's products may show different safety and efficacy profiles to those demonstrated in the data on which approval to test or market said products was based. If the Company would conduct clinical tests of its products with other therapeutic products (combination therapy), the Company's products would be exposed to any risk identified in relation to such other therapeutic products. Such circumstances could lead to the withdrawal, restriction on use or suspension of approval, which could have a material adverse effect on the Company's business, financial condition, operating results or cash flows. Advertising and promotional materials must comply with Competent Regulatory Authorities or other applicable rules and are subject to Competent Regulatory Authorities review, in addition to other potentially applicable laws and legislation globally. In addition, Competent Regulatory Authorities may not approve the labelling claims or advertisements that are necessary or desirable for the successful commercialisation of the Company's products.

The costs of compliance with applicable on-going regulations, requirements, guidelines or restrictions could be substantial, and failure to comply could result in sanctions, including fines, injunctions, civil penalties, denial of applications for marketing authorisation of its products, delays, suspension or withdrawal of approvals, licence revocation, seizures or recalls of products, operating restrictions and criminal prosecutions, any of which could significantly increase the Company's or its collaborative partners' costs or delay the development and commercialisation of its product candidates.

The occurrence of any event or penalty described above may delay commercialisation of the Company's products, increase costs and materially adversely affect the Company's business, prospects, financial condition and results of operation.

The Company is subject to inspection and shall be subject to market surveillance by Competent Regulatory Authorities for compliance with regulations that prohibit the promotion of the Company's products for a purpose or indication other than those for which approval has been granted

While a product manufacturer may not promote a product for such "off label" use, doctors are allowed, in the exercise of their professional judgment in the practice of medicine, to use a product in ways not approved by Competent Regulatory Authorities. Off-label marketing regulations are subject to varying evolving interpretations. Post-approval manufacturing and marketing of Company's products may show different safety and efficacy profiles to those demonstrated in the data on which approval to test or market said products was based. Such circumstances could lead to the withdrawal or suspension of approval, which could have a material adverse effect on the Company's business, financial condition, operating results or cash flows. In addition, Competent Regulatory Authorities may not approve the labelling claims or advertisements that are necessary or desirable for the successful commercialisation of the Company's products. Competent Regulatory Authorities have broad enforcement power, and a failure by the Company or its collaboration partners to comply with applicable regulatory requirements can, among other things, result in recalls or seizures of products, operating and production restrictions, withdrawals of previously approved marketing applications, total or partial suspension of regulatory approvals, refusal



#### 1 RISK FACTORS

to approve pending applications, warning letters, injunctions, penalties, fines, civil proceedings, criminal prosecutions and imprisonment.



# INTRODUCTION



#### 2.1 ANNUAL REPORT 2016

This annual report of ASIT biotech SA (also referred to herein as the "Company") is a registration document in accordance with article 28 of the Belgian Act of 16 June 2006 relating to public offerings of securities and the admission for trading on a regulated market. The English version of this annual report has been approved by the Financial Services and Markets Authority on 24 avril 2017 according to article 23 of the aforementioned Act. The FSMA's approval of this registration document does not imply any judgment on the situation of the Company.

This registration document has not been submitted for approval to any supervisory body or governmental authority outside Belgium.

#### 2.2 LANGUAGE OF THIS ANNUAL REPORT

ASIT biotech SA has prepared its annual report in English. ASIT biotech SA has also prepared a French translation of this annual report and is responsible for the consistency between the French and English version of this annual report.

In the event of differences of interpretation between English and French versions of the document, the English version shall prevail, without prejudice to the responsibility of the Company for inconsistencies between the different language versions of the document.

#### 2.3 AVAILABILITY OF THE ANNUAL REPORT

To obtain a copy of the annual report free of charge, please contact:

ASIT biotech SA Attn. Grégory Nihon 5 avenue Ariane 1200 Brussels

Phone: +32.2.264.03.90 Fax: +32.2.264.03.99

E-mail: <u>investors@asitbiotech.com</u>

This annual report is also available from the website of ASIT biotech (www.asitbiotech.com).

#### 2.4 FORWARD LOOKING STATEMENTS

This registration document contains forward-looking statements and estimates made by the Company with respect to the anticipated future performance of ASIT biotech and the market in which it operates. Certain of these statements, forecasts and estimates can be recognized by the use of words such as, without limitation, "believes", "anticipates", "expects", "intends", "plans", "seeks", "estimates", "may", "will", "predicts", "projects" and "continue" and similar expressions. They include all matters that are not historical facts. Such statements, forecasts and estimates are based on various assumptions and assessments of known and unknown risks, uncertainties and other factors, which were deemed reasonable when made but may or may not prove to be correct. Actual events are difficult to predict and may depend upon factors that are beyond the Company's control. Therefore, actual results, the financial condition, performance or achieve-



ments of ASIT biotech, or industry results, may turn out to be materially different from any future results, performance or achievements expressed or implied by such statements, forecasts and estimates. Factors that might cause such a difference include, but are not limited to, those discussed in the section "Risk Factors". Furthermore, forward-looking statements, forecasts and estimates only speak as of the date of the publication of this registration document. ASIT biotech SA disclaims any obligation to update any such forward-looking statement, forecast or estimates to reflect any change in the Company's expectations with regard thereto, or any change in events, conditions or circumstances on which any such statement, forecast or estimate is based, except to the extent required by Belgian law.

All statements are made and all information is provided as of the date of this registration document, except when explicitly mentioned otherwise.

#### 2.5 MARKET AND INDUSTRY INFORMATION

Information relating to markets and other industry data pertaining to the Company's business included in this annual report has been obtained from internal surveys, scientific publications, section association studies and government statistics. The Company accepts responsibility for having correctly reproduced information obtained from publications or public sources, and, in so far as the Company is aware and has been able to ascertain from information published by those industry publications or public sources, no facts have been omitted which would render the reproduced information inaccurate or misleading. However, the Company has not independently verified information obtained from industry and public sources. Certain other information in this annual report regarding the industry reflects the Company's best estimates based on information obtained from industry and public sources. Information from Company's internal estimates and surveys has not been verified by any independent sources.

#### 2.6 OTHER AVAILABLE INFORMATION

The Company has filed its deed of incorporation and must file its restated Articles of Association and all other deeds and resolutions that are to be published in the Belgian Official Gazette (*Moniteur belge*) with the clerk's office of the commercial court of Brussels (Belgium), where such documents are available to the public. The Company is registered with the register of legal entities of Charleroi under company number 0460.798.795. A copy of the most recent restated Articles of Association, the reports of the Board of Directors and the minutes of the shareholders' meeting are also available on the Company's website (<a href="https://www.asitbiotech.com">www.asitbiotech.com</a>).

The Company prepares annual audited and consolidated financial statements. All financial statements, together with the reports of the Board of Directors and the statutory auditors are filed with the National Bank of Belgium, where they are available to the public. Furthermore, as a company with shares listed and admitted to trading on Euronext Brussels and Paris, the Company published an annual financial report (including its financials statements and the reports of the Board of Directors and the statutory auditors) and an annual announcement prior to the publication of the annual financial report, as well as a half-yearly financial report on the first six months of its financial year. Copies of these documents are available on the Company's website (<a href="www.asitbiotech.com">www.asitbiotech.com</a>) and STORI, the Belgian central storage platform which is operated by the FSMA and can be accessed via its website (<a href="www.stsma.be">www.stsma.be</a>).

The Company must also disclose price sensitive information and certain other information relating to the



#### 2 INTRODUCTION

public. In accordance with the Belgian Royal Decree of 14 November 2007 relating to the obligations of issuers of financial instruments admitted to trading on a Belgian regulated market such information and documentation will be made available through the Company's website, press release and the communication channels of Euronext Brussels.



# PERSONS RESPONSIBLE FOR THE CONTENT OF THIS REGISTRATION DOCUMENT

### 3 PERSONS RESPONSIBLE FOR THE CONTENT OF THIS REGISTRATION DOCUMENT

The Board of Directors of the Company assumes responsibility for the content of this registration document. The Board of Directors declares that, having taken all reasonable care to ensure that such is the case, the information contained in this registration document is, to the best of its knowledge, in accordance with the facts and contains no omission likely to affect its content.

On behalf of the Board of Directors

Thierry Legon

Chief Executive Officer

Everard van der Straten

Director



### 4 STATUTORY AUDITORS

The Company has a College of Statutory Auditors composed of two Auditors:

- Mazars-Réviseur d'Entreprises SCRL, a civil company, having the form of a cooperative company with limited liability (société cooperative à responsabilité limitée / coöperatieve vennootschap met beperkte aansprakelijkheid) organized and existing under the laws of Belgium, with registered office at 77/4 avenue Marcel Thiry, 1200 Brussels, registered with the Crossroads Bank for Enterprises under number 428.837.889 and registered with the Institute of Statutory Auditors (Institut des Réviseurs d'Entreprises / Instituut van de Bedrijfsrevisoren) under number B00021, represented by Xavier Doyen, has been appointed on 11 June 2015 for a term of 3 years, ending immediately after the closing of the shareholder's meeting to be held in 2018, that will have deliberated and resolved on the financial statements for the financial year ended on 31 December 2017:
- RSM Réviseurs d'Entreprises SCRL, a civil company, having the form of a cooperative company with limited liability (société cooperative à responsabilité limitée / coöperatieve vennootschap met beperkte aansprakelijkheid) organized and existing under the laws of Belgium, with registered office at 1151 chaussée de Waterloo, 1180 Brussels, registered with the Crossroads Bank for Enterprises under number 429.471.656 and registered with the Institute of Statutory Auditors (Institut des Réviseurs d'Entreprises / Instituut van de Bedrijfsrevisoren) under number B00033, represented by Luis Laperal, has been appointed on 30 June 2016 for a term of 3 years, ending immediately after the closing of the shareholder's meeting to be held in 2019, that will have deliberated and resolved on the financial statements for the financial year ended on 31 December 2018.

On 30 June 2016, the shareholders' meeting of the Company acknowledged the resignation of RSM Interaudit SCRL, represented by Luis Laperal, as Statutory Auditor. This resignation was justified by RSM Interaudit to the shareholders' meeting in accordance with Article 135 of the BCC. This resignation occurred for administrative and internal reason to the RSM Network in Belgium, where mandates of Statutory Auditors for listed companies are exercised by RSM Réviseur d'Entreprises SCRL and not by RSM Interaudit SCRL (the latter exercising mandates of Statutory Auditors only for non-listed companies).



# 5 SELECTED FINANCIAL INFORMATION

### **Consolidated statement of financial position (in EUR 000)**

	31 December		
	2016	2015	2014
ASSETS			
Non-current assets			
Intangible assets		-	-
Property, plant and equipment	736	494	202
Other long term receivables	1.034	12	13
Current assets	1.770	506	215
Inventories		11	14
Trade receivables	3	2	18
Other receivables	323	277	84
Other current assets	72	57	8
Cash and cash equivalents	13,387	4,621	8,441
	13,785	4,968	8,565
Total assets	15,555	5,474	8,780
EQUITY AND LIABILITIES			
Capital and reserves			
Capital	17,506	11,625	11,625
Share premium	21,957	-	-
Cost of capital increase	(2,102)	(593)	
Share based payment reserve	216	591	573
Accumulated deficit	(24,445)	(12,481)	(4,766)
Total equity attributable to shareholders	13,132	(858)	7,432
A AA DAY KENTEG			
LIABILITIES			
Non-current liabilities	410		
Financial debt	419	-	70
Other non-current liabilities			70
	419		70
Current liabilities			
Financial debt	12	4,232	
Trade payables	1,707	1,611	858
Other payables	285	489	421
	2,004	6,332	1,279
Total liabilities	2,423	6,332	1,349
Total equity and liabilities	15,555	5,474	8,780



### **Consolidated income statement and other comprehensive income (in EUR 000)**

	3	1 December	
	2016	2015	2014
Revenue	-	4	5
Other operating income / (expenses)	1,667	(3)	3
Cost of goods sold	-	(3)	-
Research and development expenses	(12,123)	(6,691)	(3,541)
General and administrative expenses	(1,822)	(947)	(785)
Operating loss for the period	(12,278)	(7,640)	(4,318)
Financial income	42	33	6
Financial income	42	33	0
Financial expense	(102)	(108)	(117)
Loss for the period before taxes	(12,338)	(7,715)	(4,429)
Taxes	(1)	-	-
Loss for the period	(12,339)	(7,715)	(4,429)
Other comprehensive income			
Comprehensive loss for the period	(12,339)	(7,715)	(4,429)
Loss for the year			
Attributable to owners of the Company	(12,399)	(7,715)	(4,429)

### **Statement of cash flows (in EUR 000)**

		31 December	
	2016	2015	2014
Cash flow from operating activities	(13,697)	(7,921)	(3,377)
Cash flow from investing activities	(389)	(371)	(192)
Cash flow from financing activities	22,852	4,471	10,765
Net increase / (decrease) in cash and cash equivalents	8,766	(3,820)	7,196
Cash and cash equivalents at the end of the period	13,387	4,621	8,441

## 6 INFORMATION ABOUT THE COMPANY

### 6.1 GENERAL

The Company has the legal form of a corporation with limited liability (*société anonyme/naamloze ven-nootschap*) organised under the laws of Belgium. The Company was incorporated on 23 May 1997 for an indefinite duration. Pursuant to the provisions of the BCC, the liability of the Shareholders of the Company is in principle limited to the amount of their respective committed contribution to the capital of the Company. The Company is registered with the Crossroads Bank for Enterprises under number 460.798.795 RLE (Brussels). The Company registered office is located at avenue Ariane 5, 1200 Brussels, Belgium and its telephone number is + 32 2 264 03 90. The Company's legal and commercial name was Biotech Tools until 5 August 2015. Since that date the legal and commercial name of the Company is ASIT biotech.

This section summarises information relating to the Company's share capital, the Articles of Association, certain material rights of its Shareholders under Belgian law. The contents of this section are derived primarily from the Articles of Association, that have last been amended on 28 December 2016.

The description provided hereafter is only a summary and does not support to provide a complete overview of the Articles of Association or the relevant provisions of Belgian law. Neither should it be considered as legal advice regarding these matters.

### 6.2 CORPORATE PURPOSE

The corporate purpose of the Company is set forth in Article 3 of its Articles of Association. The corporate purpose reads (in translation from the French original text) as follows:

"The purpose of the Company is, as well in Belgium as abroad, as well in its own name and for its own accounts as in the name or for the account of third parties:

- to develop new medical technologies, including researches and development of products and process in the pharmaceutic and biotechnology fields, including immunotherapy, allergy and autoimmune diseases;
- the production and manufacturing of the results obtained by the researches and development activities;
- the marketing of products and process in the above mentioned fields;
- the development, sale, exploitation, use of results, marketing, license grant, licensing and management of all intellectual rights directly or indirectly related to the activities of the Company;
- training, information, publication, communication and edition on any supports relating to the above mentioned activities.

The Company can perform all so-called financial, movable and immovable transactions that, directly or indirectly, relate to the Company's corporate purpose or which may benefit this corporate purpose.



The Company can participate directly or indirectly to any business, company, association or institutions with a similar or related purpose or which may benefit this corporate purpose or the development of its operations.

The Company can grant guarantees to any related company or event to third parties."

### 6.3 ORGANISATIONAL STRUCTURE

The Company is not part to a group of companies and does not have ownership stake in a subsidiary. The Company incorporated the subsidiary Biotech Tools Factory SA in 2009 but this subsidiary was liquidated on 26 June 2015.

### 6.4 SHARE CAPITAL AND SHARES

### 6.4.1 SHARE CAPITAL AND SHARES

On the date of this registration document, the share capital of the Company amounts to EUR 17,505,986.09 and is fully paid-up. It is represented by 12,806,100 Shares without nominal value and representing the same pro rata fraction of the share capital.

The changes in the Company's share capital since its incorporation can be summarised as follows:

Date	Transaction	Increase or reduction of share capital (EUR)	Resulting share capital (EUR)	Outstanding shares
23 May 1997	Incorporation	29,747.22	29,747.22	1,200
30 September 1998	Capital increase through contribution in cash	278,880	308,627.43	5,460
24 October 2000	Capital increase through contribution in cash	2,032,736.82	2,341,364.26	12,529
20 May 2005	Capital increase through conversion of bonds	123,936.85	2,465,301.11	12,960
20 May 2005	Capital increase through contribution in cash	1,107,272.73	3,572,573.87	16,545
8 June 2006	Capital increase through contribution in cash	664,502.00	4,237,075.84	18,698
31 May 2007	Capital increase through contribution in cash	5,210,000.00	9,447,075.84	38,212
19 November 2009	Capital increase through contribution in cash	1,417,110.82 + 1,583,017.98 (issue premium)	10,864,186.66 + 1,583,017.98 (issue premium)	43,944
7 March 2011	Capital increase through contribution in cash	2,082,393.02 + 2,326,205.18 (issue premium)	12,946,579.68 + 3,909,391.84 (issue premium)	52,367
18 January 2012	Capital increase through contribution in cash	1,346,167.35 + 1,503,745.65 (issue premium)	14,292,747.03 + 5,412,968.81 (issue premium)	57,812
23 December 2014	Capital increase through incorporation of the issue premiums	5,412,968.81	19,705,715.84	57,812
23 December 2014	Capital reduction by way of absorbing carried forward losses	19,699,539.49	6,176.35	57,812
23 December 2014	Capital increase through contribution in cash	7,086,960.00	7,093,136.35	70,936



Date	Transaction	Increase or reduction of share capital (EUR)	Resulting share capital (EUR)	Outstanding shares
23 December 2014	Capital increase through conversion of 3,275 bonds issued on 28 April 2013	854,100.00	7,947,236.35	74,211
23 December 2014	Capital increase through conversion of 7,648 bonds issued on 23 May 2014	2,596,800.00	10,544,036.35	81,859
23 December 2014	Capital increase through conversion of 3,182 bonds issued on 15 October 2014	1,081,100.00	11,625,135.35	85,041
8 January 2016	Stock-split	-	-	8,504,100
12 May 2016	Capital increase through contribution in cash	4,579,462.46	16,204,598.81	11,854,100
		+ 18,870,537.54 (issue premium)		
12 May 2016	Capital increase through conversion of 413 bonds issued on 5 August 2015	1,233,994 + 2,896,006 (issue premium)	17,438,592.81	12,756,800
28 December 2016	Capital increase through the exercise 493 subscription rights	67,393.28 + 190,642.92 (issue	17,505,986.09	12,806,100

### 6.4.2 CHANGES TO THE SHARE CAPITAL

### ➤ Changes to the share capital decided by the Shareholders

In principle, changes to the share capital are decided by the Shareholders. The Shareholders' Meeting may at any time decide to increase or reduce the share capital of the Company. Such resolution must satisfy the quorum and majority requirements that apply to an amendment of the Articles of Association.

### Capital increases decided by the Board of Directors

Subject to the same quorum and majority requirements, the Shareholders' Meeting may authorise the Board of Directors, within certain limits, to increase the Company's share capital without any further approval of the Shareholders. This is the so-called authorised capital. This authorisation needs to be limited in time (i.e., it can only be granted for a renewable period of maximum five years) and in scope (i.e., the authorised capital may not exceed the amount of the registered capital at the time of the authorisation).

On 26 June 2015, the Company's Shareholders' Meeting authorised the Board of Directors to increase the share capital of the Company within the framework of the authorised capital with a maximum of EUR 11,625,000.

The Company's Shareholders' Meeting decided that the Board of Directors, when exercising its powers under the authorised capital, will be authorised to restrict or cancel the statutory preferential subscription rights of the Shareholders (within the meaning of article 592 and following of the BCC). This authorisation



includes the restriction or suppression of preferential subscription rights for the benefit of one or more specific persons (whether or not employees of the Company). The authorisation is valid for a term of five years as from the date of the publication of the authorisation in the Annexes to the Belgian State Gazette (Moniteur belge/Belgisch Staatsblad).

### > Preferential subscription right

In the event of a capital increase for cash with the issue of new Shares, or in the event of an issue of convertible bonds or warrants, the existing Shareholders have a preferential right to subscribe, pro rata, to the new Shares, convertible bonds or warrants. These preferential subscription rights are transferable during the subscription period.

The Shareholders' Meeting may decide to limit or cancel this preferential subscription right, subject to special reporting requirements. Such decision by the Shareholders' Meeting needs to satisfy the same quorum and majority requirements as the decision to increase the Company's share capital.

The Shareholders may also decide to authorise the Board of Directors to limit or cancel the preferential subscription right within the framework of the authorised capital, subject to the terms and conditions set forth in the BCC. On 26 June 2015, the Company's Shareholders' Meeting decided that, when exercising its powers under the authorised capital, the Board of Directors will be authorised to restrict or cancel the statutory preferential subscription rights of the Shareholders (within the meaning of article 592 and following of the BCC) (see also "—Capital increases decided by the Board of Directors" above).

Generally, unless expressly authorised in advance by the Shareholders' Meeting, the authorisation of the Board of Directors to increase the share capital of the Company through contributions in cash with cancellation or limitation of the preferential subscription right of the existing Shareholders is suspended as of the notification to the Company by the FSMA of a public takeover bid on the financial instruments of the Company. The Company's Shareholders' Meeting did not grant such express authorisation to the Board of Directors.

### 6.5 DESCRIPTION OF RIGHTS AND BENEFITS ATTATCHED TO SHARES

### 6.5.1 PREFERENTIAL SUBSCRIPTION RIGHTS

In the event of a capital increase in cash with issue of new Shares, or in the event of an issue of convertible bonds or warrants exercisable in cash, the Shareholders have a preferential right to subscribe for the new Shares, convertible bonds or warrants, pro rata to the part of the share capital represented by the Shares that they already hold. The Shareholders' Meeting may decide to limit or cancel such preferential subscription right, subject to specific substantive and reporting requirements. Such decision must satisfy the same quorum and majority requirements as the decision to increase the Company's share capital.

The Shareholders can also decide to authorise the Board of Directors to limit or cancel the preferential subscription right within the framework of the authorised capital, subject to the terms and conditions set forth in the BCC. In principle, the authorisation of the Board of Directors to increase the share capital of the Company through contributions in cash with cancellation or limitation of the preferential right of the existing Shareholders is suspended as of the notification to the Company by the FSMA of a public takeover



bid on the Shares. The Shareholders' Meeting can, however, authorise the Board of Directors to increase the share capital by issuing further Shares, not representing more than 10% of the Shares of the Company at the time of such a public takeover bid.

### 6.5.2 VOTING RIGHTS ATTACHED TO SHARES

Each Shareholder of the Company is entitled to one vote per Share. Shareholders may vote by proxy, subject to the rules described below in "—Right to attend and vote at Shareholders' Meetings—Voting by proxy or remote voting".

Voting rights can be mainly suspended in relation to Shares:

- which are not fully paid up, notwithstanding the request thereto of the Board of Directors of the Company;
- to which more than one person is entitled, except in the event a single representative is appointed for the exercise of the voting right;
- which entitle their holder to voting rights above the threshold of 5%, 10%, 15%, 20% and any further multiple of 5% of the total number of voting rights attached to the outstanding financial instruments of the Company on the date of the relevant Shareholders' Meeting, in the event that the relevant Shareholder has not notified the Company and the FSMA at least 20 days prior to the date of the Shareholders' Meeting in accordance with the applicable rules on disclosure of major shareholdings; and
- of which the voting right was suspended by a competent court or the FSMA.

Pursuant to the BCC, the voting rights attached to Shares owned by the Company, as the case may be, are suspended.

Generally, the Shareholders' Meeting has sole authority with respect to:

- the approval of the annual financial statements of the Company;
- the distribution of profits (except interim dividends (see "Rights attached to the Shares—Dividends");
- the appointment and dismissal of directors and the statutory auditor of the Company;
- the granting of release from liability to the directors and the statutory auditor of the Company;
- the determination of the remuneration of the directors and of the statutory auditor for the exercise of their mandate;
- the approval of the remuneration report included in the annual report of the Board of Directors and the determination of the following features of the remuneration or compensation of directors, members of the executive management and certain other executives (as the case may be): (i) in



relation to the remuneration of executive and non-executive directors, members of the executive management and other executives, an exemption from the rule that share based awards can only vest during a period of at least three years as of the grant of the awards, (ii) in relation to the remuneration of executive directors, members of the executive management and other executives, an exemption from the rule that (unless the variable remuneration is less than a quarter of the annual remuneration) at least one quarter of the variable remuneration must be based on performance criteria that have been determined in advance and that can be measured objectively over a period of at least two years and that at least another quarter of the variable remuneration must be based on performance criteria that have been determined in advance and that can be measured objectively over a period of at least three years, (iii) in relation to the remuneration of independent directors, any variable part of the remuneration, and (iv) any provisions of service agreements to be entered into with executive directors, members of the executive management and other executives providing for severance payments exceeding twelve months' remuneration (or, subject to a motivated opinion by the Remuneration and Nomination Committee, 18 months' remuneration);

- the filing of a claim for liability against directors;
- the decisions relating to the dissolution, merger and certain other reorganisations of the Company; and
- the approval of amendments to the Articles of Association.

### 6.5.3 Right to attend and vote at Shareholders' Meetings

### > Annual meetings of Shareholders

The annual Shareholders' Meeting is held at the registered office of the Company or at the place determined in the notice convening the Shareholders' Meeting. The meeting is held every year on the second Thursday of the month June at 3 p.m. (Brussels time). If this date is a legal holiday the meeting is held the next business day at the same time. At the annual Shareholders' Meeting, the Board of Directors submits the audited annual financial statements and the reports of the Board of Directors and of the statutory auditor with respect thereto to the Shareholders.

The Shareholders' Meeting then decides on the approval of the statutory annual financial statements, the proposed allocation of the Company's profit or loss, the release from liability of the directors and the statutory auditor, the approval of the remuneration report included in the annual report of the Board of Directors and, when applicable, the (re-)appointment or dismissal of the Statutory Auditor and/or of all or certain directors. In addition, as relevant, the Shareholders' Meeting must also decide on the approval of the remuneration of the Directors and Statutory Auditors for the exercise of their mandate, and on the approval of provisions of service agreements to be entered into with executive directors, members of the executive management and other executives providing (as the case may be) for severance payments exceeding twelve months' remuneration (or, subject to a motivated opinion by the Remuneration and Nomination Committee, 18 months' remuneration) (see also "—Rights attached to the Shares").



### > Special and extraordinary Shareholders' Meetings

The Board of Directors or the Statutory Auditors (or the liquidators, if appropriate) may, whenever the interest of the Company so requires, convene a special or extraordinary Shareholders' Meeting. Such Shareholders' Meeting must also be convened every time one or more Shareholders holding, alone or together, at least 20% of the Company's share capital so request. Shareholders that do not hold at least 20% of the Company's share capital do not have the right to have the Shareholders' Meeting convened.

### > Right to put items on the agenda of the Shareholders' Meeting and to table draft resolutions

Shareholders who hold alone or together with other Shareholders at least 3% of the Company's share capital have the right to put additional items on the agenda of a Shareholders' Meeting that has been convened and to table draft resolutions in relation to items that have been or are to be included in the agenda. This right does not apply to Shareholders' Meetings that are being convened on the grounds that the quorum was not met at the first duly convened meeting (see "—Quorum and majorities"). Shareholders wishing to exercise this right must prove on the date of their request that they own at least 3% of the outstanding share capital. The ownership must be based, for dematerialised shares, on a certificate issued by the applicable settlement institution for the shares concerned, or by a certified account holder, confirming the number of Shares that have been registered in the name of the relevant Shareholders and, for registered Shares, on a certificate of registration of the relevant Shares in the share register book of the Company. In addition, the Shareholder concerned must register for the meeting concerned with at least 3% of the outstanding share capital (see also "-Formalities to attend the general shareholders' meeting"). A request to put additional items on the agenda and/or to table draft resolutions must be submitted in writing, and must contain, in the event of an additional agenda item, the text of the agenda item concerned and, in the event of a new draft resolution, the text of the draft resolution. The request must reach the Company at the latest on the twenty second day preceding the date of the Shareholders' Meeting concerned. If the Company receives a request, it will have to publish at the latest on the fifteenth day preceding the Shareholders' Meeting an update of the agenda of the meeting with the additional agenda items and draft resolutions.

### Notices convening the Shareholders' Meeting

The notice convening the Shareholders' Meeting must state the place, date and hour of the meeting and must include an agenda indicating the items to be discussed. The notice needs to contain a description of the formalities that Shareholders must fulfil in order to be admitted to the Shareholders' Meeting and exercise their voting right, information on the manner in which Shareholders can put additional items on the agenda and table draft resolutions, information on the manner in which Shareholders can ask questions during the Shareholders' Meeting, information on the procedure to participate to the Shareholders' Meeting by means of a proxy or to vote by means of a remote vote, and, as applicable, the registration date for the Shareholders' Meeting. The notice must also mention where Shareholders can obtain a copy of the documentation that will be submitted to the Shareholders' Meeting, the agenda with the proposed resolutions or, if no resolutions are proposed, a commentary by the Board of Directors, updates of the agenda if Shareholders have put additional items or draft resolutions on the agenda, the forms to vote by proxy or by means of a remote vote, and the address of the webpage on which the documentation and information relating to the Shareholders' Meeting will be made available. This documentation and



information, together with the notice and the total number of outstanding voting rights, must also be made available on the Company's website at the same time as the publication of the notice convening the meeting, for a period of five years after the relevant Shareholders' Meeting.

The notice convening the Shareholders' Meeting has to be published at least 30 days prior to the Shareholders' Meeting in the Belgian Official Gazette (Moniteur Belge/Belgisch Staatsblad) and in a newspaper that is published nation-wide in Belgium and in media that can be reasonably relied upon for the dissemination of information within the EEA in a manner ensuring fast access to such information on a non-discriminatory basis. A publication in a nation—wide newspaper is not needed for annual Shareholders' Meetings taking place on the date, hour and place indicated in the Articles of Association of the Company if the agenda is limited to the treatment of the financial statements, the annual report of the Board of Directors, the remuneration report and the report of the statutory auditor, the discharge from liability of the directors and statutory auditor, and the remuneration of directors. (See also "-Rights attached to the Shares-Voting Rights attached to the Shares"). In addition to this publication, the notice has to be distributed at least 30 days prior to the meeting via the normal publication means that the Company uses for the publication of press releases and regulated information. The term of 30 days prior to the Shareholders' Meeting for the publication and distribution of the convening notice can be reduced to 17 days for a second meeting if, as the case may be, the applicable quorum for the meeting is not reached at the first meeting, the date of the second meeting was mentioned in the notice for the first meeting and no new item is put on the agenda of the second meeting.

At the same time as its publication, the convening notice must also be sent to the holders of registered Shares, holders of registered bonds, holders of registered warrants, holders of registered certificates issued with the co-operation of the Company (if any), and, as the case may be, to the directors and statutory auditor of the Company. This communication needs to be made by letter unless the addressees have individually and expressly accepted in writing to receive the notice by another form of communication.

### > Formalities to attend the Shareholders' Meeting

All holders of Shares, warrants, profit-sharing certificates, non-voting Shares, bonds, subscription rights or other securities issued by the Company, as the case may be, and all holders of certificates issued with the co-operation of the Company (if any) can attend the Shareholders' Meetings insofar as the law or the Articles of Association entitles them to do so and, as the case may be, gives them the right to participate in voting.

In order to be able to attend a Shareholders' Meeting, a holder of securities issued by the Company must satisfy two criteria: being registered as holder of securities on the registration date for the meeting, and notify the Company:

• Firstly, the right to attend Shareholders' Meetings applies only to persons who are registered as owning securities on the fourteenth day prior to the Shareholders' Meeting at midnight (Central European Time) via registration, in the applicable register book for the securities concerned (for registered securities) or in the accounts of a certified account holder or relevant settlement institution for the securities concerned (for dematerialised securities or securities in book-entry form).



• Secondly, in order to be admitted to the Shareholders' Meeting, securities holders must notify the Company at the latest on the sixth day prior to the Shareholders' Meeting whether they intend to attend the meeting and indicate the number of Shares in respect of which they intend to do so. For the holders of dematerialised securities or securities in book-entry form, the notice should include a certificate confirming the number of securities that have been registered in their name on the record date. The certificate can be obtained by the holder of the dematerialised securities or securities in book-entry form with the certified account holder or the applicable settlement institution for the securities concerned.

The formalities for the registration of securities holders, and the notification of the Company must be further described in the notice convening the Shareholders' Meeting.

### Voting by proxy or remote voting

Each Shareholder has, subject to compliance with the requirements set forth above under "—Formalities to attend the Shareholders' Meeting", the right to attend a Shareholders' Meeting and to vote at the Shareholders' Meeting in person or through a proxy holder, who does not need to be a Shareholder. A Shareholder may designate, for a given meeting, only one person as proxy holder, except in circumstances where Belgian law allows the designation of multiple proxy holders. The appointment of a proxy holder may take place in paper form or electronically (in which case the form shall be signed by means of an electronic signature in accordance with applicable Belgian law), through a form which shall be made available by the Company. The signed original paper or electronic form must be received by the Company at the latest on the sixth calendar day preceding the meeting. The appointment of a proxy holder must be made in accordance with the applicable rules of Belgian law, including in relation to conflicts of interest and the keeping of a register.

The notice convening the meeting may allow Shareholders to vote remotely in relation to the Shareholders' Meeting, by sending a paper form or, if specifically allowed in the notice convening the meeting, by sending a form electronically (in which case the form shall be signed by means of an electronic signature in accordance with applicable Belgian law). These forms shall be made available by the Company. The original signed paper form must be received by the Company at the latest on the sixth calendar day preceding the date of the meeting. Voting through the signed electronic form may occur until the last calendar day before the meeting.

The Company may also organise a remote vote in relation to the Shareholders' Meeting through other electronic communication methods, such as, among others, through one or several websites. The Company shall specify the practical terms of any such remote vote in the convening notice.

Holders of securities who wish to be represented by proxy or vote remotely must, in any case comply with the formalities to attend the meeting, as explained under "—Formalities to attend the Shareholders' Meeting".

### > Quorum and majorities

In general, there is no attendance quorum requirement for a Shareholders' Meeting and decisions are generally passed with a simple majority of the votes of the Shares present or represented. However, capital



increases (other than those decided by the Board of Directors pursuant to the authorised capital), decisions with respect to the Company's dissolution, mergers, de-mergers and certain other reorganisations of the Company, amendments to the Articles of Association (other than an amendment of the corporate purpose), and certain other matters referred to in the BCC do not only require the presence or representation of at least 50% of the share capital of the Company but also a majority of at least 75% of the votes cast. An amendment of the Company's corporate purpose requires the approval of at least 80% of the votes cast at a Shareholders' Meeting, which can only validly pass such resolution if at least 50% of the share capital of the Company and at least 50% of the profit certificates, if any, are present or represented. In the event where the required quorum is not present or represented at the first meeting, a second meeting needs to be convened through a new notice. The second Shareholders' Meeting may validly deliberate and decide regardless of the number of Shares present or represented. The special majority requirements, however, remain applicable.

### > Right to ask questions

Within the limits of article 540 of the BCC, Shareholders have a right to ask questions to the directors in connection with the report of the Board of Directors or the items on the agenda of such Shareholders' Meeting. Shareholders can also ask questions to the statutory auditor in connection with its report. Such questions can be submitted in writing prior to the meeting or can be asked at the meeting. Written questions must be received by the Company no later than the sixth day prior to the meeting. Written and oral questions will be answered during the meeting concerned in accordance with applicable law. In addition, in order for written questions to be considered, the Shareholders who submitted the written questions concerned must comply with the formalities to attend the meeting, as explained under "—Formalities to attend the Shareholders' Meeting".

### 6.5.4 DIVIDEND RIGHTS

All Shares, including the Shares offered in the Offering, entitle the holder thereof to an equal right to participate in the Company's profits (if any). Pursuant to the BCC, the Shareholders can in principle decide on the distribution of profits with a simple majority vote at the occasion of the annual Shareholders' Meeting, based on the most recent statutory audited financial statements, prepared in accordance with the generally accepted accounting principles in Belgium and based on a (non-binding) proposal of the Company's Board of Directors. The Company's Articles of Association also authorise the Board of Directors to declare interim dividends without Shareholder approval subject to the terms and conditions of the BCC.

The Company's ability to distribute dividends is subject to availability of sufficient distributable profits as defined under Belgian law on the basis of the Company's statutory financial statements. In particular, dividends can only be distributed if following the declaration and issuance of the dividends the amount of the Company's net assets on the date of the closing of the last financial year as follows from the statutory financial statements (i.e., summarised, the amount of the assets as shown in the balance sheet, decreased with provisions and liabilities, all in accordance with Belgian accounting rules), decreased with the non-amortised costs of incorporation and extension and the non-amortised costs for research and development, does not fall below the amount of the paid-up capital (or, if higher, the issued capital), increased with the

amount of non-distributable reserves. In addition, prior to distributing dividends, 5% of the net profits must be allotted to a legal reserve, until the legal reserve amounts to 10% of the Company's share capital.

### 6.5.5 RIGHTS REGARDING LIQUIDATION

In the event of dissolution of the Company, for any reason or at any time, the liquidation shall be effected by liquidators appointed by the Shareholders' Meeting, and in the absence of such appointment, the liquidation shall be effected by the Board of Directors, acting as a liquidation committee. Unless decided otherwise, the liquidators shall act jointly. To this end, the liquidators have the broadest powers under articles 186 and following of the BCC, subject to restrictions imposed by the Shareholders' Meeting. The Shareholders' Meeting determines the remuneration of the liquidators.

After settlement of all debts, charges and expenses, the net assets are first used to, in cash or in kind, repay the fully paid and not yet repaid amount of the Shares. Any surplus shall be divided equally among all Shares.

If the net proceeds are not sufficient to repay all the Shares, the liquidators shall pay the Shares that have been paid to a greater extent until they are on a par with the Shares paid up to a lesser extent or they make an additional call for capital at the expense of the latter.

### 6.6 ACQUISITION OF OWN SHARES

In accordance with the Articles of Association and the BCC, the Company can, on or outside the stock market, purchase and sell its own Shares, profit certificates or associated certificates by virtue of a special shareholders' resolution approved by at least 80% of the votes validly cast at a Shareholders' Meeting where at least 50% of the share capital and at least 50% of the profit certificates, if any, are present or represented. The prior approval by the Shareholders is not required if the Company purchases the shares to offer them to the Company's personnel.

In accordance with the BCC, an offer to purchase Shares must be made by way of an offer to all Shareholders under the same conditions. Shares can also be acquired by the Company without offer to all Shareholders under the same conditions, provided that the acquisition of the Shares is effected in the central order book of the regulated market of Euronext Brussels and Euronext Paris or, if the transaction is not effected via the central order book, provided that the price offered for the Shares is lower than or equal to the highest independent bid price in the central order book of the regulated market of Euronext Brussels and Euronext Paris at that time. Shares can only be acquired with funds that would otherwise be available for distribution as a dividend to the Shareholders. The total amount of Shares held by the Company can at no time be more than 20% of its share capital. Voting rights attached to Shares held by the Company as treasury Shares are suspended.

The Shareholders' Meeting can authorise the Board of Directors to acquire on or outside the stock exchange a number of the Company's Shares representing a maximum of 20% of the subscribed capital, determining the minimum and maximum price that the Board of Directors can pay for the Shares. This authorisation can also cover the acquisition on or outside the stock exchange by a direct subsidiary of the Company and can be valid for a term of up to five years as of the date of the approval of the proposed resolution.



The Board of Directors may, without prior authorisation by the Shareholders' Meeting, in accordance with article 622, §2 of the BCC, dispose of the Company's own Shares, profit certificates or associated certificates at a price it determines, on or outside the stock market or in the framework of its remuneration policy to employees, directors or consultants of the Company. This authorisation is valid without any restriction in time. This authorisation can also cover the disposal of the Company's Shares on or outside the stock market by a direct subsidiary of the Company within the meaning of article 627 of the BCC.

At the date of this Registration Document, the Shareholders' Meeting of the Company has not decided to proceed to an acquisition of its own shares and has not authorised the Board of Directors to proceed to such acquisition.

### 6.7 WARRANTS

The Company has currently three outstanding stock based incentive plans, namely (i) the 2014 stock option plan (the **2014 Plan**), (ii) the 2015 stock option plan (the **2015 Plan**) and (iii) the 2016 stock option plan (the **2016 Plan**) (collectively the **Stock Based Plans**).

### 6.7.1 2014 PLAN

On 15 October 2014 the Shareholders' Meeting of the Company approved the issuance of 5,300 warrants. These warrants are valid until 30 October 2024. The Shareholders' Meeting granted a special proxy to the Board of Directors of the Company in order to (i) identify the beneficiaries, (ii) offer the issued warrants to workers of the Company (employees, managers or directors) and (iii) to determine the exercise price of the concerned warrants before each offer with the approval of the auditor. It being understood that the beneficiaries shall be workers of the Company, the exercise price shall be equal to the real value of the underlying shares at the time of the offer and that a maximum of 2,000 warrants will be offered to beneficiaries who are not employees of the Company but exercise their services as self-employed people.

On 15 October 2014 the Board of Directors decided to offer 2,400 warrants to beneficiaries, and approved a warrants plan.

The exercise price of each warrant is EUR 300.

The key features of the warrants granted under the 2014 Plan are as follows (i) each warrant could be exercised for one share, it being understood that further to the stock-split approved on 8 January 2016 the exercise of a warrant will give right to one hundred shares instead of one share, the conversion price of the warrant remaining unchanged, (ii) the warrants are granted for free, i.e. no consideration is due upon the grant of the warrants, (iii) the warrants have a term of five years since the grant, (iv) no vesting conditions, and (v) the warrants can be exercised between 1 November 2014 and 30 October 2019.

At the date of this Registration Document, 2,145 warrants are still outstanding under the 2014 Plan entitling the holders to subscribe 214,500 Shares of the Company.

### 6.7.2 2015 PLAN

On 10 March 2015, 14 April 2015 and 19 May 2015 the Board of Directors decided to offer a total of 1,700 warrants (issued on 15 October 2014) to beneficiaries and approved a warrants plan.



The exercise price of each warrant is EUR 540.

The key features of the warrants granted under the 2015 Plan are as follows (i) each warrant could be exercised for one share, it being understood that further to the stock-split approved on 8 January 2016 the exercise of a warrant will give right to one hundred shares instead of one share, the conversion price of the warrant remaining unchanged, (ii) the warrants are granted for free, i.e., no consideration is due upon the grant of the warrants, (iii) the warrants have a term of five years since the grant, (iv) the warrants can only be exercised if the holder still exercise his professional activity in favour of the Company, and (v) the warrants can be exercised between 1st June 2017 and 30 April 2020.

At the date of this Registration Document 360 warrants are still outstanding under the 2015 Plan, entitling the holders to acquire 36,000 Shares of the Company.

### 6.7.3 2016 PLAN

On 7 November 2016 the Board of Directors decided to offer a total 800 warrants (issued on 15 October 2014) to beneficiaries and approved a warants plan.

The exercice price of each warrant is EUR 577.5.

The key features of the warrants granted under the 2016 Plan are as follows (i) each warrant could be exercised for one hundred shares, (ii) the warrants are granted for free, i.e., no consideration is due upon the grant of the warrants, (iii) the warrants have a term of six years since the grant, (iv) the warrants can only be exercised if the holder still exercise his professional activity in favour of the Company, if the holder does not exercise his professional activity in favour of the Company but is qualified as "good leaver" a vesting of 33 % per year applies, and (v) the warrants can be exercised between 1st January 2020 and 16 November 2022.

	Number of outstanding warrants	Exercise price (EUR)*	Date of expiration
2014 Plan	2,145	300	30/10/2019
2015 Plan	360	540	01/06/2020
2016 Plan	765	577.5	16/11/2022

<sup>\*</sup> It being understood that pursuant to the stock split, the exercise of a warrant will give right to 100 shares instead of one share, the conversion price of the warrant remaining unchanged.

### 6.8 CONVERTIBLE BONDS

On 5 August 2015, the Company issued 413 convertible bonds with a nominal value of EUR 10,000 each (the *Convertible Bonds*). The Convertible Bonds were in registered form and bear an interest of 6% p.a.. The maturity date of the Convertible Bonds was 15 May 2016. The Convertible Bonds were not transferrable.

The conversion of the Convertible Bonds into Shares took place automatically on 12 May 2016 through the issuance of 902,700 new Shares of the Company.

At the date of the present Registration Document there is no oustanding Convertible Bonds issued by the Company.



### 6.9 RELEVANT LEGISLATION

### 6.9.1 NOTIFICATION OF SIGNIFICANT SHAREHOLDINGS

Pursuant to the Belgian Law of 2 May 2007 on the disclosure of significant shareholdings in issuers whose securities are admitted to trading on a regulated market and containing various provisions (*Loi relative à la publicité des participations importantes dans des émetteurs dont les actions sont admises à la négotiation sur un marché règlementé et portant dispositions diverses/Wet op de openbaarmaking van belangrijke deelnemingen in emittenten waarvan aandelen zijn toegelaten to de verhandeling op een gereglementeerde markt en houdende diverse bepalingen) (the <i>Transparency Law*), implementing in Belgian law Directive 2004/109/EC, a notification to the Company and to the FSMA is required by all natural and legal persons in the following instances:

- an acquisition or disposal of voting securities, voting rights or financial instruments that are treated as voting securities;
- the holding of voting securities upon first admission of them to trading on a regulated market;
- the passive reaching of a threshold;
- the reaching of a threshold by persons acting in concert or a change in the nature of an agreement to act in concert;
- where a previous notification concerning the voting securities is updated;
- the acquisition or disposal of the control of an entity that holds the voting securities; and
- where the Company introduces additional notification thresholds in its Articles of Association, in each case where the percentage of voting rights attached to the securities held by such persons reaches, exceeds or falls below the legal threshold, set at 5% of the total voting rights, and 10%, 15%, 20% and so on at intervals of 5% or, as the case may be, the additional thresholds provided in the Articles of Association.

The notification must be made as soon as possible and at the latest within four trading days following the acquisition or disposal of the voting rights triggering the reaching of the threshold. Where the Company receives a notification of information regarding the reaching of a threshold, it has to publish such information within three trading days following receipt of the notification. No shareholder may cast a greater number of votes at a Shareholders' Meeting of the Company than those attached to the rights or securities it has notified in accordance with the Transparency Law at least 20 days before the date of the Shareholders' Meeting, subject to certain exceptions.

The form on which such notifications must be made, as well as further explanations, can be found on the website of the FSMA (www.fsma.be).

### 6.9.2 SHORT POSITIONS DISCLOSURE OBLIGATIONS



Pursuant to EU Regulation No 236/2012, each person holding a net short position attaining 0.2% of the issued share capital of the Company must report it to the FSMA. Each subsequent increase of this position by 0.1% above 0.2% will also have to be reported. Each net short position equal to 0.5% of the issued share capital of the Company and any subsequent increase of that position by 0.1% will be made public via the FSMA short selling register. To calculate whether a natural person or legal person has a net short position, their short positions and long positions must be set off. A short transaction in a share can only be contracted if a reasonable case can be made that the shares sold can actually be delivered, which requires confirmation of a third party that the shares have been located.

### 6.9.3 PUBLIC TAKEOVER BIDS

Public takeover bids on the Shares and other securities giving access to voting rights (such as subscription rights or convertible bonds, if any) are subject to supervision by the FSMA. Any public takeover bids must be extended to all of the Company's voting securities, as well as all other securities giving access to voting rights. Prior to making a bid, a bidder must publish a prospectus which has been approved by the FSMA prior to publication.

Belgium has implemented the Thirteenth Company Law Directive (European Directive 2004/25/EC of 21 April 2004) in the Belgian law of 1 April 2007 relating to public tender offers (*Loi relative aux offres publiques d'acquisition/Wet op de openbare overnamebiedingen*) (*Takeover Law*) and the Belgian Royal Decree of 27 April 2007 on public takeover bids (*Arrêté royal sur les offres publiques d'acquisition/Koninklijk besluit op de openbare overnamebiedingen*) (the *Takeover Royal Decree*). The Takeover Law provides that a mandatory bid must be launched if a person, as a result of its own acquisition or the acquisition by persons acting in concert with it or by persons acting for its account, directly or indirectly holds more than 30% of the voting securities in a company having its registered office in Belgium and of which at least part of the voting securities are traded on a regulated market or on a multilateral trading facility designated by the Takeover Royal Decree.

The mere fact of exceeding the relevant threshold through the acquisition of Shares will give rise to a mandatory bid, irrespective of whether the price paid in the relevant transaction exceeds the current market price. The duty to launch a mandatory bid does not apply in case of an acquisition if it can be shown that a third party exercises control over the Company or that such party holds a larger stake than the person holding 30% of the voting securities.

There are several provisions of Belgian company law and certain other provisions of Belgian law, such as the obligations to disclose significant shareholdings and merger control, that may apply to the Company and which may make an unsolicited tender offer, merger, change in management or other change in control, more difficult. These provisions could discourage potential takeover attempts that other Shareholders may consider to be in their best interest and could adversely affect the market price of the Shares. These provisions may also have the effect of depriving the Shareholders of the opportunity to sell their Shares at a premium.

In addition, the board of directors of Belgian companies may in certain instances, and subject to prior authorisation by the Shareholders, deter or frustrate public takeover bids through dilutive issuances of



equity securities (pursuant to the authorised capital) or through share buy-backs (i.e., purchase of own shares).

### 6.9.4 SQUEEZE-OUTS

Pursuant to article 513 of the BCC or the regulations promulgated thereunder, a person or legal entity, or different persons or legal entities acting alone or in concert, who, together with the company, own 95% of the securities with voting rights in a listed company, are entitled to acquire the totality of the securities with voting rights in that company following a squeeze-out offer. The securities that are not voluntarily tendered in response to such an offer are deemed to be automatically transferred to the bidder at the end of the procedure. At the end of the squeeze-out procedure, the company is no longer deemed a listed company, unless bonds issued by the company are still distributed amongst the public. The consideration for the securities must be in cash and must represent the fair value (verified by an independent expert) as to safeguard the interests of the transferring Shareholders.

A squeeze-out offer is also possible upon completion of a public takeover, provided that the bidder holds 95% of the voting capital and 95% of the voting securities of the listed company. In such case, the bidder may require that all remaining Shareholders sell their securities to the bidder at the offer price of the takeover bid, provided that, in case of a voluntary takeover offer, the bidder has also acquired 90% of the voting capital to which the offer relates. The shares that are not voluntarily tendered in response to any such offer are deemed to be automatically transferred to the bidder at the end of the procedure. The bidder needs to reopen his/her public takeover offer within three months following the expiration of the offer period.

### 6.9.5 SELL-OUT RIGHTS

Within three months following the expiration of an offer period, holders of voting securities or of securities giving access to voting rights may require the offeror, acting alone or in concert, who owns 95% of the voting capital and 95% of the voting securities in a listed company following a takeover bid, to buy its securities from it at the price of the bid, on the condition that, in case of a voluntary takeover offer, the offeror has acquired, through the acceptance of the bid, securities representing at least 90% of the voting capital subject to the takeover bid.



### INDUSTRY AND BUSINESS OVER-VIEW

### A. INDUSTRY

### 7.1 ALLERGY: CLINICAL PICTURE AND EPIDEMIOLOGY

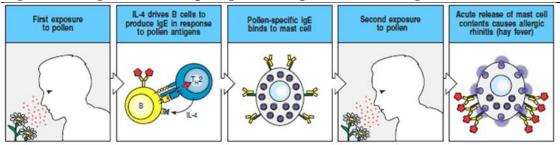
### 7.1.1 THE MECHANISM OF THE ALLERGIC REACTION

Allergy is one of the most important diseases in the world and represents a major public health problem in terms of quality of life, days of work or of school missed, drug-related costs, and even mortality (WAO, White book on Allergy, Update 2013). According to the World Allergy Organization (WAO), approximately 30 to 40% of the world's population suffers from allergic diseases (World Allergy Organization, World Allergy Week 16-22 April 2012).

Allergy is the immune system's excessive sensitivity and over-response to exposure to a normally harmless foreign substance, named allergen, such as plant pollens, house dust mites, animal hair or certain food, as if it was a real threat.

The physiological mechanism of the sensitisation is similar for different allergens. This mechanism is detailed in Figure 1, where it is illustrated for pollen allergens. The first exposure to pollen induces the production of anti-pollen IgE antibodies. These IgE antibodies bind to mast cells (immune cells involved in the response to allergens) that release pro-inflammatory molecules at the time of a new exposure to the same allergens. The bridging of several mast cell loaded IgE leads to the release of histamine and other pro-inflammatory mediators responsible for the allergic reactions.

Figure 1: Allergic reactions require previous exposure to the allergen



Source: Geha R, Rosen F. 'Case studies in immunology'. 5th ed. Garland Science P. 200, 2007

The clinical manifestations of allergy that are of inflammatory origin can be either restricted to specific organs, such as the nose, the eyes, the larynx, the bronchial tubes, the lungs, the digestive tube, and the skin, or be systemic (e.g. Quincke's oedema and anaphylactic shock).

Allergies are classified in respiratory allergies (allergic rhino-conjunctivitis and allergic asthma), skin allergies (dermatitis and contact dermatitis) and other allergies (food allergies and insect venom). Common sources of allergens are pollens, house dust mites, pets, fungal or mould spores, food (particularly milk, eggs, wheat, soya, seafood, fruit and nuts), wasp and bee's stings, some medicines, latex and household chemicals. More than one-third of allergic patients are sensitised to several allergens (Bauchau et al., Eur. Respir. J. 2004; 24: 758-764).



### 7.1.2 RESPIRATORY ALLERGIES

Allergic rhinitis, representing a USD 10 billion market (Visiongain allergic rhinitis drugs market forecast 2015-2025) is a common inflammatory condition affecting the upper airways and the membranes of the nose and eyes, caused by an allergic reaction to an allergen. Conjunctivitis often accompanies this condition. Blocked or running nose, sneezing, itching and watering eyes and inflamed eyelids are its most common symptoms, which may be seasonal (hay fever) or permanent. Allergic rhinitis is often associated with asthma.

Although there are differences among countries, the incidence and prevalence of respiratory allergies is increasing worldwide (Pawankar et al, WAO, White Book on Allergy (Update 2013)). According to 2012 figures from the WAO, allergic rhinitis affects annually approximately 400 million individuals worldwide (World Allergy Organization, World Allergy Week 16 – 22 April 2012).

In Europe, the overall prevalence of patients with clinically confirmable allergic rhinitis is 23%, ranging from 17% in Italy to 29% in Belgium (Bauchau et al., Eur. Respir. J. 2004; 24: 758-64). These figures were recently confirmed by The European Federation of Allergy and Airways Diseases Patient's Association (EFA), (EFA Book on Respiratory Allergies, 2012). The use of medication for allergic rhinitis in the European population is 11.3% (Bauchau et al., Eur. Respir. J. 2004; 24: 758-764).

The most frequently detected allergen in European allergic rhinitis patients is grass pollen (60% of the patients with clinical diagnosis of allergic rhinitis), followed by house dust mite (52%) tree pollen (40%), weed pollen (34%), animal danders (31%) and mould spores (10%). The proportion of patients sensitised to at least one outdoor allergen (grass, tree, weed) is 63%, the proportion of patients sensitised to at least one indoor allergen is 55%; and a total of 34% patients are sensitised to at least one indoor and one outdoor allergen (Bauchau et al., Eur. Respir. J. 2004; 24: 758-764).

The prevalence of allergic rhinitis in the United States is estimated at 22% (Nathan et al., Allergy Asthma Proc. 2008; 29: 600-8). The use of medication for allergic rhinitis in the American population is 7.5% (U.S. Department of Health and Human Services - Centers for Disease Control and Prevention National Center for Health Statistics: Summary Health Statistics for US Adults: National Health Interview Survey, 2012).

The most frequently detected allergen in allergic rhinitis patients in the United States is grass pollen (56%) followed by ragweed (49%), house dust mite (45%) and tree (23%) (ALK-Abelló Investors' Briefing on December 6 2012).

Allergic asthma is a form of asthma caused by the exposure of the bronchial mucosa to an inhaled allergen. Asthma is a commonly occurring and potentially life-threatening illness where the respiratory airways become inflamed and swollen. This inflammation also causes an increase in airway responsiveness to a variety of stimuli such as sensibility to smoke, sensibility to environmental pollution, exposure to chemicals, etc. Shortness of breath, tight chest, cough or bronchospasm and wheezing are the most common symptoms. These are usually associated with widespread but variable airflow limitation that is at least partly reversible with medication. Allergic asthma is the most common type of asthma. About 90% of children with childhood asthma have allergies, compared to about 50% of adults with asthma. The symptoms that go



along with allergic asthma show up after breathing allergens like pollen, dust mites or mould (www.webmd.com/asthma/guide/allergic-asthma#3).

A growing body of evidence points to the frequent coexistence of allergic rhinitis and allergic asthma. This has led to the concept that these seemingly separate disorders are the same disease, with symptoms occurring to a greater or lesser extent in the upper airways (rhinitis) or lower airways (asthma). As such, the relationships between rhinitis and asthma can be viewed under the concept that the two conditions are manifestations of one disease, in two parts of the respiratory tract. At the first step of the disease severity, rhinitis appears to be the sole manifestation, although pathologic abnormalities in the lower airways are already present. At the second step of disease severity, rhinitis is worse, and the lower airways disease becomes clinically evident. Successful management of the allergic respiratory disease requires an integrated view of the airways and an understanding of their interactions.

Up to now, there are two types of drugs of respiratory allergy, antihistamines and intra-nasal corticosteroids for rhinitis and, mainly, inhaled corticosteroids for asthma. New therapeutical options allowing for the simultaneous control of allergic rhinitis and asthma would offer advantages related both to costs and disease management. The Allergy Immunotherapy (*AIT*) is the only treatment demonstrated to prevent the onset of allergic asthma (Polosa 2004, Möller 2002, Jacobsen 2007). On 31 August 2015 ALK-Abelló was the first company to obtain an allergic asthma registration with the European Medicines Agency (*EMA*) for its house-dust mite SLIT tablet.

The prevalence of patients with asthma in Europe ranges from 2.3% in Switzerland to 11% in Ireland, (EFA Book on Respiratory Allergies 2012). Nearly 30 million people in Europe have asthma, and rates tend to increase (GINA 2004, European Lung White Book 2003).

Asthma prevalence in the United States increased from 7.3% in 2001 to 8.4% in 2010 (or 25.9 million Americans) (Akinbami et al., Centers for Disease Control and Prevention, National Center Health Statistics Data Brief No. 94, 2012).

According to estimations from the WAO, the prevalence of patients with asthma is much higher, with worldwide an estimated 300 million individuals suffering from asthma (World Allergy Organization, World Allergy Week 16-22 April 2012).

### 7.1.3 FOOD ALLERGY

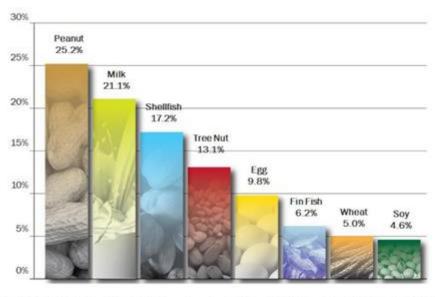
Food allergy is an abnormal immune response to certain food substances that the body reacts to as harmful. Eight foods account for about 90% of all food-allergy reactions: cow's milk, eggs, peanuts, tree nuts (such as walnuts, pecans, almonds, and cashews), fish, shellfish, soybeans, and wheat (www.aaaai.org/conditions-and-treatments/allergies/food-allerie-aspx).

The Food Allergy Research & Resource Program (FARRP) currently estimates the prevalence of IgE-mediated food allergies in the United States at 3.5 - 4.0% of the overall population, or at least 15 million people: 9 million adults (3 - 4% of the adult population) and 6 million children (8% of the US population under the age of 18) are estimated to suffer from food allergies (Gupta RS et al, Pediatrics. 2011;128(1):e9-17)

Ruchi Gupta and colleagues conducted a randomized, cross-sectional survey in a representative sample of



US households with children from June 2009 to February 2010. Data were collected for 38,380 children: food allergy prevalence was 8.0% (95% confidence interval [CI]: 7.6 - 8.3). Among children with food allergy, prevalence was highest for peanut (25.2%), followed by milk (21.1%), shellfish (17.2%), tree nut (13.1%) and egg (9.8) (Gupta RS et al, Pediatrics. 2011;128(1):e9-17).



Gupta RS. Springston EE, Warrier MR, Smith B, Kumar R, Pongrack J. Holl JL. The prevalence, severity, and distribution of childhood food allergy in the United States. Pediatrics 2011 July 12Mill #9-s17

The prevalence of food allergies also varies per age, with milk and egg allergies most prevalent in toddlers (0-2 years of age) whereas shellfish and tree nut increasing with age. Peanut and wheat allergies are relatively constant with age: see Fig below allergies (Gupta RS et al, Pediatrics. 2011;128(1):e9-17).

	Peanut	Shell-fish	Tree Nut	Milk	Egg	Wheat
					288	
0 – 2 years (n=5429)	22%	7%	5%	31%	15%	4%
<b>3 - 5 years</b> (n=5910)	30%	12%	14%	22%	13%	5%
<b>6 - 10 years</b> (n=9911)	25%	17%	14%	19%	11%	5%
<b>11 - 13 years</b> (n=6716)	28%	20%	15%	17%	6%	8%
≥ <b>14 years</b> (n=10 514)	20%	23%	13%	18%	4%	3%

Gupta RS, Springston EE, Warrier MR, Smith B, Kumar R, Pongracic J, Holl JL. The prevalence, severity, and distribution of childhood food allergy in the United States. Pediatrics 2011 Jul; 128(1):e9-e17.

In Europe, around 11 to 26 million people are estimated to suffer from food allergy (Mills et al., Allergy. 2007; 62:717-22). According to the WAO White Book on Allergy (Update 2013), if this prevalence is projected onto the world's population of 7 billion, it translates into 240-550 million potential food-allergic people, a huge global health burden.



Clinical symptoms of food allergy include a wide range of immunoglobulin IgE- and non-IgE mediated clinical syndromes. IgE-mediated reactions generally tend to occur immediately or within 1-2 hours of ingestion of a food, whereas non-IgE-mediated reactions present later. Allergic reactions are triggered following ingestion, inhalation or contact with foods, particularly during cooking and can occur at the level of skin, gastrointestinal tract and respiratory tract.

The most severe manifestation of food allergy is anaphylaxis. With an increasing frequency, it greatly adds to the burden of food allergy. In the USA, it has been estimated that food allergy is responsible for 30,000 anaphylactic episodes per year, resulting in 3,000 hospitalisations and 100 deaths per year (Sampson, N. Eng. J. Med. 2002: 346; 1294-9). The main treatment of these unpredictable reactions is the auto-administration of epinephrine intramuscularly.

### 7.2 SOCIO-ECONOMIC IMPACT OF ALLERGIES

There has been a dramatic increase in allergic disease prevalence worldwide. Allergic diseases are a common cause of chronic illness in developed countries, and the prevalence of allergic diseases is steadily rising in developing countries (Pawankar et al. WAO White Book on Allergy, 2013).

### 7.2.1 ALLERGIC RHINITIS

Allergic rhinitis has a significant socio-economic impact on the patient, the patient's family and the society. It affects multiple parameters including quality of life, physical, psychological and social functioning and has important financial consequences (Pawankar et al. WAO White Book on Allergy, 2013).

In 2010, Americans with allergic rhinitis spent approximately USD 17.5 billion on health-related costs, lost more than 6 million work and school-days and made 16 million doctor office visits (Lindner. Fortune, July 26 2010). Out-of-pocket patient costs of USD 1,000 to 2,000 each year are not uncommon. On any given day, about ten thousand children are absent from school in the United States because of allergic rhinitis (WAO, White Book on Allergy: Update 2013). According to a study carried out in the United States in 2005, the burden of allergic rhinitis in terms of mean productivity loss per year is higher than the mean of productivity loss due to high stress, migraine, depression, rheumatism, anxiety, respiratory illness, hypertension, diabetes, asthma and coronary heart disease (Lamb et al. Curr Med Res Opin 22:1203; 2006). Direct medical and indirect societal costs amounted in 2005 to approx. USD 21 billion in the United States (WAO White book on Allergy 2011, Member Societies Survey Report pp. 234-236).

According to statistics published in 2000, direct costs for allergic rhinitis in Germany were EUR 220 million per year of which EUR 179 million for medication and EUR 41 million for doctor and hospital visits (Statistisches Bundesamt 2000, EFA BOOK on Respiratory Allergies, 2013).

A recent study on Swedish patients suffering from allergic rhinitis reported that the mean productivity loss was 5.1 days or EUR 653 per worker per / a year, resulting in a total productivity loss of EUR 2.7 billion per / a year (Hellgren et al., Allergy 2010; 65: 776-783). The study calculated the cost of rhinitis in Sweden at EUR 2.7 billion a year in terms of lost productivity. A reduction in lost productivity of 1 day per individual per year would potentially save EUR 528 million.

Despite abundant treatment options, 60% of all allergic rhinitis patients responded in an Asthma and Aller-



gy Foundation of America survey that they are "very interested" in finding a new medication and 25% are "constantly" trying different medications to find one that "works" (Marple, Otolarynol Head Neck Surgery, 2007; June; 136 (6 Suppl): S107-24).

### **7.2.2 ASTHMA**

Similarly, the monetary costs of asthma are substantial and include both direct medical costs (hospitalisation, emergency room treatment, doctors medical practitioner visits and medication) and indirect costs (time lost from work or school, decreased productivity at work or school and premature deaths). Asthma is the leading cause of children's' hospitalisation and school absenteeism. Despite high diagnosis rates and effective management of episodic attacks, there is still a large unmet medical need for disease-modifying therapies that can reduce inflammation and prevent the irreversible airway remodelling, whilst promoting high compliance (Asthma Facts, CDC's National Asthma Control Program Grantees, 2013).

From both the patient's and the society's point of view, the cost to control allergic asthma is high. However, the cost of not treating asthma correctly would be higher due to a high number of emergency department visits, hospitalisations and deaths. The social impact of asthma in the United States in 2010 is described in the table below (CDC "National Surveillance of Asthma: United States, 2001–2010", Vital and Health Statistics Series 3, 2012).

### Asthma impact on the US population

In 2010,

18.7 million adults and 7 million children were diagnosed with asthma

13.9 million people experienced an asthma attack within the previous year

asthma costs USD 56 billion

In 2010, asthma accounted for

10.6 million physician office visits

1.2 million hospital outpatient visits

2.1 million emergency department visits

479,300 hospitalisations

3,388 deaths

Source: CDC "National Surveillance of Asthma: United States, 2001–2010", Vital and Health Statistics Series 3, Number 35 (November 2012)

The situation in Europe is similar, although centralised data on this topic is limited. In Finland, the total direct costs for asthma (including loss of productivity) at the beginning of the Finnish Asthma Programme in 1993 were EUR 218 million and increased to EUR 230 million at the end of the programme in 2005 (EFA BOOK on Respiratory Allergies, 2012).

### 7.2.3 FOOD ALLERGY

Food allergy represents a heavy burden for patients. It reduces self-esteem, influences the perception of social and emotional roles, influences behaviour of children, inhibits family activities, and reduces family cohesion (Cummings et al., Allergy. 2010; 65: 933-953). Parents with food-allergic children are more likely to reduce their work hours.



The prevalence of food allergy is increasing. Due to allergic reactions to food, about 30,000 Americans require emergency room treatment, and 100 deaths are reported each year (Arch Intern Med/Vol 161, Jan 8, 2001). At present, there is no cure for food allergies. The best method for managing food allergies is prevention by way of strict avoidance of any food that triggers a reaction. This is hampered by the presence of increasingly large hidden food.

In 2013, Gupta R et al (*JAMA Pediatr*. 2013;167:1026-1031) conducted a cross-sectional survey to evaluate the cost food allergies in the US: they concluded that the overall economic cost of food allergy could be estimated at \$24.8 billion annually (\$4,184 per year per child). Direct medical costs were \$4.3 billion annually, including clinician visits, emergency department visits, and hospitalizations. Costs borne by the family totalled \$20.5 billion annually, including lost labour productivity, out-of-pocket, and opportunity costs. Lost labour productivity costs totalled \$0.77 billion annually, accounting for caregiver time off work for medical visits. Out-of-pocket costs were \$5.5 billion annually, with 31% stemming from the cost of special foods. Opportunity costs totalled \$14.2 billion annually, relating to a caregiver needing to leave or change jobs. Caregivers reported a willingness-to-pay of \$20.8 billion annually (\$3,504 per year per child) for food allergy treatment.

In, Europe, the average annual cost of healthcare was \$2,016 for food-allergic adults and \$1,089 for controls, a difference of \$927. A similar result was found for adults in each country and for children, and was not sensitive to baseline demographic differences (Fox M, Mugford M, Voordouw J et al, *Eur J Public Health* 2013;23(5):757-762). Another study found a significant difference of \$8,164 in overall annual total costs at the household level among adults with food allergy compared with controls, mainly driven by significantly higher household healthcare costs and costs for medicines, as well as indirect costs for households with food-allergic adults vs. households without food-allergic adults (Jansson SA, Protudjer JLP, Arnlind H et al, *Allergy* 2014;69:1241–1247).

In the UK, the total cost of managing cow's milk allergy over the first 12 months following initial diagnosis was estimated to be GBP 1,318 per patient (Sladkevicius et al., Journal of Medical Economics, 2010; 13: 119-28).

The pharmacoeconomic impact of food allergy can be assessed by a comparison of the Health-Related Quality of Life (HRQL) of patients with food allergies with the HRQL of the general population and with the HRQL of patients suffering from other diseases. Patients with food allergies reported poorer HRQL than patients with chronic disease such as diabetes mellitus but better HRQL than patients with rheumatoid arthritis, asthma and irritable bowel syndrome (Flokstra-de Blok et al., Allergy, 2010; 65: 238-244). This suggests that allergy is perceived by the patients as more disabling than diabetes.

### 7.3 AVAILABLE TREATMENTS

The current treatments available to persons suffering from allergy are (i) allergen avoidance, (ii) symptomatic drugs, and (iii) AIT treatments.

### 7.3.1 ALLERGEN AVOIDANCE



Allergen avoidance, when feasible, represents the first stage of treatment. However, in most cases avoidance of the relevant allergen is impracticable. In the context of food allergies, the only way to prevent an allergic reaction is to avoid the food and food proteins. However, strict avoidance of food allergen is very difficult to achieve, especially for children. Some foods can contain hidden traces of allergens, labelling is often deceptive and contamination of allergen-free foods occurs regularly. While most reactions to food allergen are not life-threatening, some people can have a severe anaphylactic reaction, requiring an emergency injection of adrenaline (epinephrine) and a visit to the emergency room.

### 7.3.2 SYMPTOMATIC DRUGS

Symptomatic drugs alleviate the allergy symptoms without addressing the underlying cause of the disease. Symptomatic treatments reduce the severity of symptoms and reduce the inflammation caused by allergic reactions.

Symptomatic treatments are prescribed as a first line therapy for respiratory allergies, but for food allergies, there are no approved symptomatic or disease-modifying allergy treatments available. The treatment for allergic rhinitis consists mainly in antihistamines and intranasal corticosteroids, while the treatment for asthma consists mainly of corticosteroids, leukotriene modifiers and combined drugs, (ARIA Guidelines, Management of Allergic Rhinitis and its Impact on Asthma, 2007). Most of those drugs have been used for many years and are now either OTC or generic.

The effect of the symptomatic drugs is brief, and to obtain relief these must be taken throughout the period of exposure to allergens, and in some cases even prior to such exposure. Side-effects of anti-histamines and decongestants can include drowsiness and sedation impacting patients' quality of life and productivity.

Absence of compliance due to the necessity of daily administration and poor comfort of use result in acute exacerbations, emergency room visits, use of rescue medication and limitation of productivity and quality of life. Finally, symptomatic treatments have not been shown to prevent the progression from rhinitis to asthma as they do not tackle the roots of the disease.

The market of symptomatic treatment for allergic rhinitis is estimated at USD 10 billion in the seven major markets (Visiongain allergic rhinitis drugs market forecast 2015-2025). However, the market has recently been affected by the patent expiry of most major symptomatic drugs, resulting in an increased generic competition and a decrease in prices. Total symptomatic allergic rhinitis sales are forecasted to remain flat until 2025 (Visiongain allergic rhinitis drugs market forecast 2015-2025).

According to IMS Health, sales of bronchodilators and asthma products reached USD 36 billion in 2010 and USD 39.4 billion in 2011, making these drugs the second largest therapy class in the world, just behind oncology drugs and ahead of anti-diabetic medications or lipid regulators. The recent entry of generics as *Montelukast* and *LABA/ICS* combinations will similarly erode this market.

### 7.3.3 CURRENT IMMUNOTHERAPY TREATMENTS

Desensitisation or allergy immunotherapy is the only treatment that seeks to restore the normal functioning of the immune system, switching the immune response against allergens from "abnormal" to "normal". This treatment consists of the administration of multiple doses of allergens in an effort to build tolerance of



the immune system and to reduce the severity of allergy symptoms over time (see Section 9.5.1 for more details).

In 1998, the World Health Organisation recognised immunotherapy as being of therapeutic value and issued the first position paper on immunotherapy (Bousquet et al, J Allergy Clin Immunol. 1998 102:558-62). Currently, AIT is well established, and its indications, contraindications, limits and practical aspects are well defined in numerous guidelines.

### > Cost-effectiveness of AIT products

Several studies on AIT have shown that immunotherapy is cost-effective or even cost-saving for a healthcare system: it either delivers additional clinical benefits for a minor incremental cost or it generates a better clinical outcome at a reduced overall treatment cost when compared to a standard therapy alone (Hankin, Cox and Bronstone, Immunol. Allergy Clin. N. Am. 2011; 31: 325-41; Lockey and Hankin, J. Allergy Clin. Immunol. 2010; 127: 39-43; Pokladnikova, Krcmova and Vlcek. Ann. Allergy Asthma Immunol. 2008; 100: 482–89).

### > Current AIT products

Current AIT products are classified according to their administration route:

- subcutaneous immunotherapy (SCIT) consists in the injection of the drug under the skin.
   SCIT generally involves a lengthy and inconvenient administration schedule. The administration schedule typically comprises an initial course of treatment of up to two injections twice per week for four to six months followed by monthly injections for up to three to five years; or
- sublingual immunotherapy (*SLIT*) consists of the administration of the active principle on the oral mucosa. SLIT generally requires taking a daily dose for a minimum period of six months starting three months prior to the allergen exposure season (for seasonal allergies) or all year long treatment for up to three years. There are two types of SLIT-products:
- The SLIT-drops are liquid solutions containing the active ingredients that need to be stored at 4°C, what represents an added difficulty for the patient;
- The SLIT-tablets contain the active ingredients in a solid form, without the need for a 4°C storage.

All these products contain the same type of active ingredients based on whole allergens extracted from natural sources or obtained via recombinant techniques. The use of whole allergens entails the risk of induction of local and systemic allergic reactions normally mild to moderate but which, in extreme cases, could lead to anaphylaxis, hospitalisation and death.

Because of the risk of systemic allergic reactions at the time of the administration, the doses must be very low and therefore current immunotherapy is a long and expensive treatment with multiple doctor visits (in the case of SCIT) or daily administration (in the case of SLIT).



### > Regulatory framework of the current AIT products

Traditionally, allergen products have been marketed in Europe and in the United States as NPPs, that are vials being theoretically manufactured for a specific patient on purpose, in a "non-industrial" way and labelled with the patient's name.

Three types of NPPs can theoretically be distinguished on the basis of their degree of personalisation (May and Haustein, Bundesgesundheitsbl 2001, 44:719-723):

- Type 1. Both the drug substance and the drug product are prepared not using an industrial
  process, but are being prepared on purpose for a given small subset of patients (the "true
  NPPs");
- Type 2. The drug substance is industrially manufactured (bulk) and it is subsequently used to prepare personalised drug product following a "named patient" process including the labelling step; and
- Type 3. Both the drug substance and the drug product are industrially manufactured. The
  drug product can be labelled at the level of the final primary container with the name of the
  patient.

In the case of true NPPs, since both the drug product and the drug substance are prepared specifically for a small number of patients, their immunotherapy efficacy, quality and safety can only be determined on the basis of subjective assessments that rely on patient reporting. In addition, no requirement for independent evaluation of quality, efficacy and safety applies to such NPPs and the manufacturer does not have to notify adverse events.

In the case of type 2 NPPs as well, the safety and efficacy of the drug product cannot easily be assessed, due to the "personalisation" step and the virtual absence of a batch of the drug product. The drug substance of type 2 NPPs must however be manufactured in accordance with Good Manufacturing Practice requirements.

In practice, many AIT products marketed as NPPs are industrially manufactured and provided in accordance with an individual medical prescription (A.R. Lorenz, D. Lüttkopf, R. Seitz and S. Vieths, "The Regulatory System in Europe with Special Emphasis on Allergen Products", Int Arch Allergy Immunol, 2008, 271), with almost no personalisation, making the delineation between type 2 and type 3 NPPs very unclear.

The poorly structured pharmacovigilance system for NPPs generated both scepticism on the efficacy of AIT products and an excessive alarm on their safety, particularly in England (S. Bonini, WAO Journal, 2012, 120). A change was expected to occur with the introduction of the Medicinal Products Directive.

According to the Medicinal Products Directive, AIT products that are "prepared industrially or manufactured by a method involving an industrial process" are considered as classical medicinal products and can therefore only be marketed in the EU subject to a marketing authorisation. The marketing of type 3 NPPs and of some type 2 NPPs, depending on their concrete degree of personalisation, should therefore be subject to a marketing authorisation based on a fully documented file including the quality, safety and efficacy



modules of common technical document (CTD) as is the case for products that are not NPP.

The implementation of the Medicinal Products Directive has however led to different behaviours between the member states with regard to the marketing authorisation of NPPs. As the Medicinal Products Directive itself states that it is not applicable to medicinal products prepared in pharmacy in accordance with an individual medical prescription, the national legislation of many member states still allows that most of the AIT products remain marketed as NPPs, without the need for a marketing authorisation based on a fully documented CTD application.

The European allergy immunotherapy market is nevertheless under progressive regulatory transformation under the lead of the German regulatory authorities (the PEI), which issued in 2009 the Regulation for Therapy Allergens. Germany has decided that any AIT product "prepared industrially or manufactured by a method involving an industrial process" needs an authorisation based on a fully documented CTD application to be marketed in Germany.

Several AIT products have received a marketing authorisation in Germany prior to 2000. These products are listed on the website of the PEI. The Therapy Allergens Regulation however provides for a transitional period. Products for which a marketing authorisation application was submitted by December 2010 are allowed to remain marketed as NPPs until a final decision has been made on their marketing authorization application. Today, the clinical studies required for the marketing authorisation application of several AIT products are planned or ongoing. The regulation does not set a deadline for the final decision on these clinical studies or the marketing authorisation application. As a consequence, several AIT products, including products of the Pollinex Quattro and the Avanz groups, are still marketed under the NPP status in Germany. The clinical development of Pollinex Quattro is still ongoing in the United States. With respect to Avanz, only safety results arising out of clinical trials have been published so far.

Over recent years, other European countries have furthermore restricted the pricing and reimbursement of NPPs, including AIT products. In 2014, new reimbursement reductions were introduced in Switzerland, while Italy saw a general decrease of NPPs' reimbursement in several regions and the Netherlands continued its phase out of (NPP) AIT products not authorised on the basis of marketing authorisation based on a fully documented file (ALK-Abello, Annual Report 2014).

Figures however still demonstrate the pre-eminence of the NPPs, which still represent more than 90% of the sales in Europe (see Section 7.3.3). SCIT-products and SLIT-drops are commonly administered on a 'Named Patient' basis by allergy specialists. Only SLIT-tablets are approved on the basis of a marketing authorisation based on a fully documented file.

The European regulatory framework is moving away, though at a slow pace, from AIT products marketed under the NPP status. The Company believes that the more stringent regulatory framework for NPPs (in Germany at least) will result in less AIT products on the market. On the other side, any AIT product for which a marketing authorisation will be successfully obtained in accordance with the Medicinal Products Directive is likely to be preferred by payers, medical doctors and patients because of their clear quality, efficacy and safety demonstration.

In the United States, the market is dominated by SCIT with NPPs self-prepared by the allergists before their injection (type 2 NPPs) representing more than 95% of the prescriptions. The Company believes that



the regulatory move from NPPs to authorised products on the basis of a marketing authorisation based on a fully documented file will also start in the United States given that, in any case, payers are more likely to reimburse products for which clinical safety and efficacy have been demonstrated. Provided that AIT products are authorised on the basis of a full Biologics License Application (*BLA*) file, it will likely become necessary for US allergists to demonstrate efficacy of their current AIT practices (Cox et al., Ann Allergy Asthma Immunol., 107(4): 289-99, 2011).

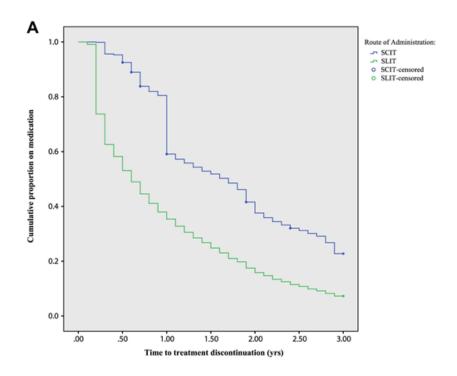
### > Acceptance and compliance to AIT products

The above mentioned drawbacks of the current AIT products (risk of induction of allergic reactions and cumbersome aspects of the treatment) lead to low patient acceptance and low treatment compliance. Only 50% of the patients with poorly controlled allergy are accepting current immunotherapy treatments (ALK-Abelló IR presentation 6 December 2014).

Figure 2 shows the patients drop out during the SLIT and SCIT treatment (Menno A. et al, J. Allergy Clin. Immunol. August 2013). As shown in panel A, SLIT treatments have a reduced compliance compared to SCIT treatments. The real-life compliance to AIT is very low: only 7% of the patients initiating SLIT and 23% of the patients initiating SCIT complete the three years treatment. However, it is important to note that about 25% of the patient starting SLIT treatment have dropped-out after 3 months while all the patient starting SCIT treatment are following it after the same period of time (Menno A. et al J. Allergy Clin. Immunol. August 2013). The two most prevailing reasons for this poor compliance are the length of the treatment and the low medical benefit as perceived by the patient (see the GfK report, in Circassia' prospectus for its initial public offering, 2014). Low patient acceptance and low patient compliance results in low market penetration.

Figure 2: Time to treatment discontinuation for SCIT and SLIT patients





### > Current AIT products market

The worldwide AIT market reached a value of EUR 1 Billion (Stallergènes, annual report 2015) and its annual growth rates is expected to amount to 10% (Visiongain allergic rhinitis drugs market forecast 2015-2025).

The current AIT market is mainly European with EUR 730 million representing 73% of the world market. Germany represents about 39% of the European AIT market in terms of sales, followed by France (31%), Spain (10%) and Italy (10%) (ALK-Abelló IR presentation 6 December 2014).

The industry revenue in the United States amounts to EUR 150 million, representing 15% of the worldwide market sales of immunotherapy products (Stallergènes, Document de Référence 2015). However, the US market is the first market in terms of treated patients: circa 3 million patients are currently treated in the United States versus about 1.3 million patients in Europe.

The rest of the world represents the remaining 12% of the worldwide market sales (Stallergènes, Document de Référence 2015).

Figure 3: AIT market evolution during the three last years (figures in EUR million)



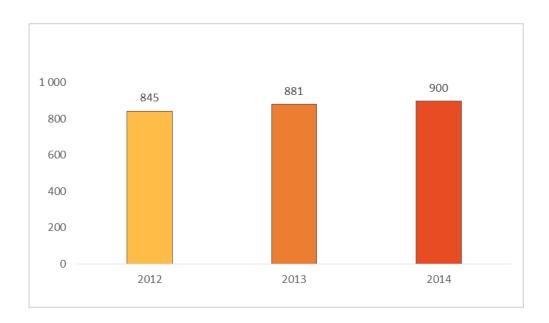
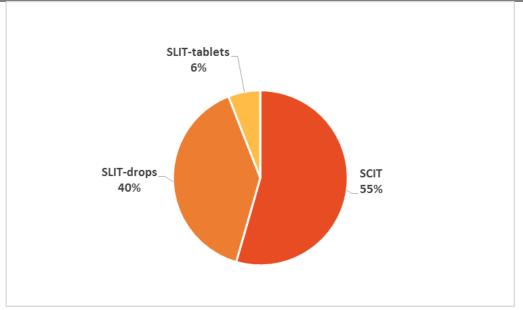


Figure 4: global market share according to the route of administration in 2014



In 2014, sales of SCIT products, including the sales of bulk allergen solutions, represented 55% of the global AIT market, SLIT-drops 40% (almost exclusively in Europe) and SLIT-tablets 6% (Stallergènes, Document de Référence 2014). No major market changes occurred in 2015 and 2016.

In the United States, the subcutaneous injections represent today 95% of treatments administered by allergists (ALK-Abelló, 2014, IR presentation and Annual Results) and the remaining 5% represent sales of SLIT-drops. SCIT is practised mainly by 5,500 allergy immunotherapy practitioners (ALK-Abelló, company presentation, January 2014) using bulk allergen solutions supplied by manufacturers that have been approved by the US Food and Drug Administration (*FDA*) such as Hollister Stier, Greer and ALK-Abelló, which explains the very low industry revenue of AIT products in the United States. These bulk allergen solutions are diluted and mixed by the allergists just before their injection to the allergic patients. Accord-

ing to the allergy immunotherapy practitioners, this practise allows the desensitisation to several allergens at the same time. To date, no authorised SCIT product is currently available in the United States. Despite very low industry revenue of EUR 100 million, the US market has a considerable potential with 3 million treated patients each year.

In Europe, SLIT has gained market shares at the expense of SCIT since 2000, mainly in France and Italy, where SLIT products represent 80% and 85% respectively of the sales of AIT products (VacZine Analytics 2011). In Germany SLIT products only represent 20% of the sales of AIT products (VacZine Analytics 2011).

The first SLIT products were the SLIT-drops. Based on the idea that sublingual administration is more convenient than subcutaneous administration and offers the same efficacy, major companies (ALK-Abelló and Stallergènes) have initiated the clinical development of SLIT-tablets to obtain marketing authorisation on the basis of a marketing authorisation based on a fully documented file and increase the market size thanks to an alleged higher acceptance and compliance rate by the patients.

To date, SLIT-tablets are the only AIT products that have been authorised in Europe following a full and complete registration procedure. Their introduction was expected to change drastically the treatment paradigm and to remove SCIT products from the AIT market. However, figures show that this has not happened after numerous years on the market in Europe:

- the first SLIT-tablet, Grazax, developed by ALK-Abelló for grass pollen allergy, is authorised in Europe since 2006 and its sales in Europe amounted to approximately EUR 30 million (ALK-Abelló Annual report 2014);
- the second product, Oralair, developed by Stallergènes, is authorized in Europe since 2008. The sales of Oralair were approximately EUR 22 million in 2013 (Stallergènes press release, 5 March 2014).

After more than six years on the market, SLIT-tablets represented only 6% of the European AIT market in 2011. SLIT-drops had at this date a high market share in France and in Italy, where SLIT-drops represented about 85% in France and about 75% in Italy in 2011 (ALK-Abelló, Investors' presentation, 2012). In 2014, sales of SLIT-tablets have only slightly increased, amounting to 8% of the European AIT market. The explanation for the absence of significant sales growth for SLIT-tablets is likely the lower price of SLIT-drops compared to the price of SLIT-tablets (see for further details Section 9.7.4 "ASIT+TM pricing", figure 22).

Strikingly, after almost 10 years on the market (Grazax was first approved in Europe in Sept. 2006), SLIT-tablets still represented only 17% of ALK-Abelló's 2015 sales, vs. 72% for SCIT and SLIT-drops. Even this percentage was inflated by milestone payments from partners in North America, Japan and Australia, since sales of SLIT-tablets in Europe only represented DKK 253M (less than EUR 35M) or about 10% of ALK-Abelló's total revenue, and only about 5% of the European AIT market in value (ALK-Abelló, 2015 Annual Report).

In the United States, on 14 April 2014, Merck & Co, ALK-Abelló's North American partner, announced approval by the FDA of their grass pollen SLIT-tablet, where it is sold under the name Grastek. On 17



April 2014, Merck & Co announced a further approval for their ragweed SLIT-tablet, also licensed from ALK-Abelló, and marketed under the name *Ragwitek*. *Grastek* and *Ragwitek* have also been launched by Merck & Co in Canada. In parallel, Stallergènes/Greer obtained the approval and launched their grass pollen SLIT tablet *Oralair*. As of September 2015, sales and prescription uptake of all these SLIT tablet products have been marginal: approximately 500 prescriptions per week for *Grastek* and 300 for *Ragwitek*, and fewer than 100 per week for *Oralair* (ALK-Abelló Investors Relations presentation Sep-2015).

As a result, SCIT remains the dominantly used administration form in the market though current treatments have drawbacks, such as low acceptance and low compliance due to the long duration of the treament. The Company believes that safe and efficacious short-course treatment still represents a major market opportunity that would improve acceptance, ease of administration and compliance, resulting in better real-life efficacy and cost-effectiveness.

### 7.3.4 CONCLUSION

The socioeconomic burden of allergic diseases is rising in countries worldwide because allergy is exacerbated by many environmental factors such as pollutants, infections, lifestyle and diet. As a consequence, allergies are escalating to epidemic proportion and becoming more severe and complex to be handled.

Despite significant consumption of predominantly symptomatic medications, there is an important unmet medical need in the allergic patient population (Pawankar, White Book of Allergy, 2011). In this context, there is a real need for increased disease awareness, improved patient care, better healthcare delivery innovative medicines and change in treatment paradigm.

In conclusion, any AIT product with improved compliance rate (unlike current treatments) resulting in a good real-life effectiveness is likely to satisfy the unmet medical need in the allergy market and to quickly gain important market share.

### **B. BUSINESS OVERVIEW**

### 7.4 KEY INFORMATION

ASIT biotech is a clinical-stage biopharmaceutical company, focused on the development and future commercialisation of a range of immunotherapy products for the treatment of allergies, but has no product approved or commercialised to date.

The Company is finalizing during H1 2017 a first phase III clinical study with gp-ASIT+<sup>TM</sup> in Europe after successful results in phases I and II. The preliminary results of this phase III have been released during Q1 2017. The study demonstrated that the treatment consistently improved clinical symptoms and reduced medication use in allergic rhinitis patients by between 15 and 21 % compared to placebo, depending on the type of analyses performed (peak vs. entire pollen season, intention-to-treat (ITT) vs. per protocol population). More specifically, the statistical significance of the primary endpoint, the mean combined clinical symptom and medication score (CSMS) during the peak pollen period, reached p<0.041 using non-parametric testing (Mann-Whitney) and p<0.078 using parametric testing (ANOVA using square root transformation of the scores) on the ITT population. Similar results were obtained when assessing the entire pollen period. Furthermore, these results (i) confirm the use of the Conjunctival Provocation Test (CPT) as



a surrogate marker of clinical efficacy and the reduction in the reactivity score to this test induced by gp-ASIT<sup>+TM</sup> (p<0.01), (ii) confirm the induction by gp-ASIT<sup>+TM</sup> of grass pollen allergen-specific IgG4 and blocking antibodies (assessed on a subset of 32 patients) and (iii) confirm the overall good tolerability of gp-ASIT<sup>+TM</sup> as demonstrated by the occurrence of mostly mild adverse reactions and the absence of new or unexpected safety findings. The phase III is the last clinical stage before the filing of the marketing authorisation application (Nature Biotechnology, 32, 40–5, (2014) Clinical development success rates for investigational drug, Michael Hay et al).

The Company believes that its breakthrough immunotherapy product candidates, based on the Company's innovative technology, ASIT+TM, have the potential to address the risks and limitations of current allergy immunotherapy treatments. Whole allergen immunotherapy is the only current therapy available on the market that targets the cause of allergy. However, it causes significant side-effects and requires a lengthy and inconvenient course of treatment resulting in limited real life effectiveness. The Company therefore believes that there is a large and attractive market for its immunotherapy product candidates.

### ASIT+TM platform

The ASIT+<sup>TM</sup> platform allows the production, characterisation and quality control of truly new active ingredients consisting of highly purified natural allergen fragments, in an optimal size selection. In the framework of phase I, III and phase III clinical studies, it has been demonstrated that the grass pollen ASIT+<sup>TM</sup>:

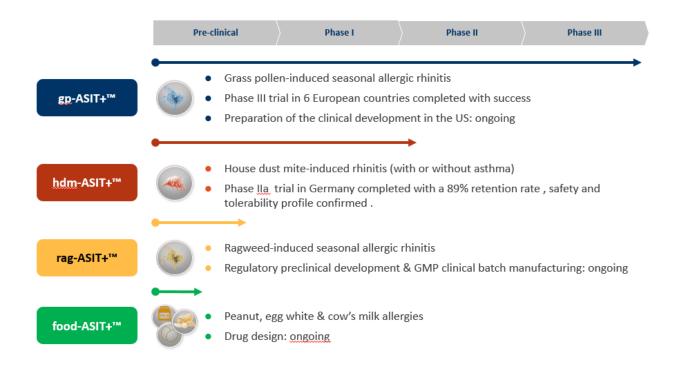
- triggers a rapid immune response without the need for an adjuvant, leading to the potential for at least one-year protection;
- induces minimal side-effects;
- reduces the reactivity to an artificial allergen challenge; and
- allows for a faster injection regimen of higher doses, compared to treatments with whole allergens, resulting in a reduced course of treatment with four doctor visits over 3 weeks.

Therefore, the Company believes that:

- the absence of an adjuvant improves the overall safety profile and represents a real advantage with respect to long-term safety; and
- the reduced course of treatment will improve patient compliance and, therefore, real-life clinical effectiveness.

Overview of the Company's portfolio





The Company has demonstrated clinical proof-of-concept for **gp-ASIT+**<sup>TM</sup> with compelling and statistically significant phase IIa, phase IIb and phase III clinical study results.

The study was performed in 57 centers in Belgium, the Czech Republic, France, Germany, Italy and Spain. Of the 554 patients enrolled in the study, 517 received the entire course of treatment and were followed-up during the grass pollen season. Out of the 517 treated patients, 510 attended the last visit planned in the study protocol, giving a global retention rate of 93% between enrolment and last visit.

The objective of this first phase III clinical study was to demonstrate the clinical efficacy of gp-ASIT+TM during one grass pollen season when administered subcutaneously prior that season in patients suffering from hay fever. The primary endpoint is the reduction (in the treated group compared with the placebo group) of the Combined Symptom and Medication Score (CSMS) taking into account the daily Rhinoconjunctivitis Total Symptom Score (RTSS) and the daily Rescue Medication Score (RMS) over the peak of the grass pollen season subsequent to treatment.

Based on the phase III results, the Company intends to submit by the end of Q2 2017 a marketing authorisation application to the Paul Ehrlich Institute for commercialisation of gp-ASIT+<sup>TM</sup> in Germany.

The Company intends to start clinical development in the United States as soon as possible. Contact has been initiated with the FDA in H2 2016. ASIT biotech has received the FDA's initial comments regarding the gp-ASIT+<sup>TM</sup> Master File. These include very useful recommendations regarding the product's quality and the launch of a first clinical trial in the United States. On the basis of the phase III results, ASIT biotech interacts with the FDA in order to submit, in 2017, an approval application for a clinical trial whose phase will depend on the conclusion of the Company's interaction with the FDA.

Moreover, ASIT biotech has reached an agreement with SynteractHCR, a CRO (Contract Research Organization) acknowledged for its expertise in running clinical trials in the field of respiratory disorders. This



agreement foresees, in compliance with the budget presented at the time of the Offering, the preparation and execution of the next clinical trials, from the choice and auditing of sites through to the analysis of clinical data. ASIT biotech is therefore ready – subject to the FDA's definitive approval – to initiate its first clinical trials in the United States.

Lastly, in order to address the specificities of North American clinical developments, ASIT biotech has set up a Committee of experts notably comprising Dr. Linda Cox, Past President of the American Academy of Allergy, Asthma & Immunology (AAAAI) and of the immunotherapy and allergy diagnostics committees of both the AAAAI and the ACAAI (American College of Allergy, Asthma & Immunology), and Dr. Peter Creticos, former Director of the Division of Allergy and Clinical Immunology of the Johns Hopkins University School of Medicine, and now clinical Director of research for his own entity and who has worked with governmental agencies and industry to design, develop, and conduct clinical research on the therapeutic efficacy of new drugs or underlying mechanisms of allergen immunotherapy. These recognized leaders in the field of allergy and immunology will contribute their extensive expertise to the preparation and monitoring of the clinical trials undertaken by ASIT biotech in the United States.

In addition, the Company's first house dust mite clinical study "<a href="https://hdmASIT-001">hdmASIT-001</a>" was initiated at the Carl-Gustav-Carus University Hospital in Dresden in September 2016, following the approval of the German Competent Authority (Paul Ehrlich Institute) and the Ethical Committee of the Technical University of Dresden. The patients' recruitment was successfully completed as per the planned schedule. A total of 40 patients have been screened, out of whom 36 were eligible to enter the study. Out of the 36 randomized patients, 27 were treated with hdm-ASIT+TM whilst the other 9 received placebo.

The study's main objectives were to assess the safety and the highest tolerated cumulative dose of hdm-ASIT+TM in patients diagnosed with house mite allergy. The study protocol requires patients to undergo eight treatment. Other study's objectives include assessment of the impact of hdm-ASIT+TM on:

- the immune system and
- the reactivity to a conjunctival provocation test.

The safety of the participating patients was monitored by a Data Safety Monitoring Board composed of independent German experts who have not expressed any concern about the safety of the patients so far.

The last patient last visit occurred in January 2017, followed by database cleaning and publication of the preliminary Results, which provided a first insight on immunogenicity and potential clinical effect of this second ASIT+TM product candidate.

The Company announced on 4 April 2017 that it has achieved the primary endpoint of the phase I/IIa clinical trial with its hdm-ASIT $^{+TM}$  product candidate for house dust mite rhinitis. The trial's primary endpoint was achieved, insofar as hdm-ASIT $^{+TM}$  showed, at this stage, a good safety and tolerability profile for the product candidate. No serious or unexpected adverse treatment-related event was observed during the trial, even at the highest allergen dose of 200  $\mu$ g, which was 200 times greater than the first dose administered. The two groups were comparable at baseline for all the tested parameters, with the exception of house dust mite allergen-specific IgE antibodies, which were substantially lower in the treated group than in the place-bo group.



Assessing hdm-ASIT<sup>+TM</sup>'s impact on the immune system and on the reduction in reactivity to a conjunctival provocation test (CPT) were amongst the secondary objectives. An effect was observed on the immune system in a limited number of patients. However, there was no difference overall between the treated group and the placebo group with regard to immunogenicity parameters. Lastly, the trial showed a somewhat stronger reduction in CPT reactivity in the treated group compared to the placebo group. The study was not empowered to show statistical significance. The absence of a larger reduction can be explained by a substantial response to placebo (55%), the limited number of patients, the short observation period in this perennial disease and/or the nature of the product.

The Company is also developing a third product candidate for the treatment of **Ragweed** respiratory allergies. Immunogenicity and toxicity study in animals are completed and the company has filed the CTD to start a Phase I clinical study in Hungary. This study is expected to start in Q4 2017.

Finally, the Company has launched an ambitious development programme to develop new ASIT+<sup>TM</sup> drugs for the main **food allergies** (peanut, cow's milk and egg white). The food allergen drug will be designed in collaboration with Dr M. H. Shamji (Senior Lecturer in Immunology and Allergy) who has established the Immunomodulation and Tolerance Group established by within Allergy and Clinical Immunology at Imperial College lead by Professor Stephen Durham. The objective of this collaboration is to test the allergenicity and antigenicity of its product candidates on human ex-vivo allergy model and optimize the safety/efficacy ratio of its new product candidates.

Afterwards, the selected product candidates will be tested in the frame of clinical trials that will be performed in the framework of a collaboration with Dr Stephen Till who is one of few specialist doctors accredited in Adult Allergy by the General Medical Council His current research interests include immunotherapy (desensitisation) and food allergy. The objective of this collaboration is to assess the safety and clinical impact of the product candidates on a food allergen provocation test.

The company has received a recoverable cash advance of about €6 million from the Walloon Region to cofinance on a 50/50 basis the food allergy drug development program.

#### Commercialisation

The Company believes that, if approved, the attractive product profile of its immunotherapy product candidates will increase the number of patients (i) to whom the treatment is offered, (ii) accepting treatment and (iii) completing the course of therapy. The Company has retained all commercial rights to its product candidates.

Germany is currently the first worldwide market in terms of sales of subcutaneous immunotherapy products and the United States are currently the first worldwide market in terms of patients treated with subcutaneous immunotherapy products. Therefore, these two markets are the first markets targeted by the Company. Given the limited number of allergists in these first target markets, the Company is studying the possibility to build or acquire its own sales and marketing infrastructure to commercialise these product candidates. The Company also considers alternative ways of commercialising its product candidates in these countries, including collaborating with or acquiring other companies that have the requisite infrastructure. In the rest of the world, the Company plans to market its product candidates via licensing or other forms of partner-



ship.

### 7.5 KEY MILESTONES

Year	Key milestones		
1997	Foundation of the Company (formerly Biotech Tools)		
1997 – 2007	The Company's main activity is to furnish diagnostics to biotech companies, and to start a drug discovery phase, with a very limited level of funding (mean yearly total budget of EUR 420,000)		
2007	New strategy supported by new Shareholders: creation of the ASIT <sup>TM</sup> platform and filing of a number of key patents		
2010	BTT-gpASIT004 Phase I study: Demonstration of safety and immunogenicity of subcutaneous injection of gp-ASIT+TM		
2013	BTT-gpASIT006 Phase IIa study: First data on long-term effect of subcutaneous injections gp-ASIT+TM on immune system		
2014	<sup>a</sup> BTT-gpASIT007 Phase IIa study: Proof of concept of clinical effect of subcutaneous injections of gp-ASIT+ <sup>TM</sup>		
	<sup>□</sup> BTT-gpASIT008 Phase IIb study: Determination of the optimal dose/regimen of gp-ASIT+ <sup>TM</sup> to be used in phase III		
	$^{\circ}$ Further development of the pipe-line with the initiation of the development of the second product candidate – hdm-ASIT+TM		
2015	$^{\circ}$ Successful production of 3 consecutive compliance batches of gp-ASIT+ $^{TM}$ drug substance		
	BTT-gpASIT009 Phase III study: Approved by the Regulatory Authorities of six Eupean countries (France, Spain, Italy, Germany Belgium and Czech Republic).		
	□ Furher preclinical development of the second product candidate—hdm-ASIT+TM		
2016	<sup>a</sup> Launch of BTT-gpASIT009 Phase III study		
	<sup>o</sup> Completion of the initial public offering on 10 May on Euronext Brussels and Euronext Paris. The final offer price was set at EUR 7 per share giving a Company market capitalization of approximately EUR 93.1 million.		
	• Further to the completion of the Offering, conversion of bonds issued in August 5 2015 for a total amount of EUR 4,130,000 divided into 902 shares		
	<sup>a</sup> Appointment of Dr Vincent Bille as Vice President of Manufacturing & Controls		
	□ gp-ASIT+ <sup>TM</sup> manufacturing supply chain secured		
	<sup>o</sup> Appointment of Dr. Mohamed Shamji an internationally recognized expert on allergy immunotherapy, as Scientific Advisor for the discovery of new drug candidates and for pre-clinical activities. Dr Mohamed Shamji has established the Immunomodulation and Tolerance Group within Allergy and Clinical Immunology Department at Imperial College of London lead by Professor Stephen Durham		



- BTT-gpASIT009 Phase III study: 512 attended the last visit planned in the study protocol, giving a global retention rate of 93% between enrolment and last visit.
- BTT-hdmASIT001 Phase IIa clinical study: approved and launched in Germany in September 2016
- □ gp-ASIT+™ US clinical development: the Company received constructive recommendations from the FDA for the preparation of a first clinical trial
- <sup>o</sup> Conclusion of a strategic partnership with SynteractHCR, an US CRO specialized in running clinical trials in the field of respiratory disorders
- Appointment of 2 US allergy experts, Dr. Linda Cox and Dr. Peter Creticos, to the opinion leaders Committee for the US development
- rag-ASIT+TM: further preclinical development of the product candidate for ragweed rhinitis ongoing
- <sup>a</sup> rag-ASIT+<sup>TM</sup>: successful GMP manufacturing of the first clinical batch of drug substance and drug product

2017.....

- <sup>a</sup> EUR 6 million recoverable cash advance received from the Walloon Region relating to food allergy research program
- <sup>a</sup> Results of the BTT-hdmASIT001 Phase IIa clinical study
- Results of the BTT-gpASIT009 Phase III study

### 7.6 KEY STRENGTHS

The Company believes that a number of strengths have helped its development so far, and will enable it to achieve its strategic goals:

# 7.6.1 FOCUS ON DEVELOPING IMMUNOTHERAPY TREATMENTS FOR ALLERGIES - A LARGE MARKET OPPORTUNITY WITH SIGNIFICANT UNMET MEDICAL NEED

Allergies to grass pollen and house dust mites, for which the Company develops its two lead product candidates, affect a significant part of the population in Europe and the United States. It is estimated that 22 million adults suffer from physician-diagnosed allergic rhinitis in the four biggest European immunotherapy markets (Germany, France, Italy, Spain) and 25 million in the United States (Bauchau & Durham 2004, Nathan et al 2008). Despite significant consumption of mainly symptomatic medications, there is an important unmet medical need in the allergic patient population. The target population for respectively gp-ASIT+TM and hdm-ASIT+TM are those patients with a poor control of their disease and who are looking for new effective treatment. They are estimated at 25% of the physician-diagnosed allergic rhinitis patients, representing today 6 and 5 million adult patients respectively in the United States and in the four biggest European immunotherapy markets. Most of these patients are probably sensitised to both grass pollen and house dust mites allergens. These patients could be satisfied by products that:

• improve compliance and real life effectiveness;



- offer patients and health care payers better cost efficiency;
- tackle the root causes of the disease; and
- reduce the duration of the treatment and the number of treatment visits.

The only current treatment available on the market tackling the cause of allergic disease is whole allergen immunotherapy (EUR 1 Billion market in 2015 – Stallergènes, Document de Référence 2015). However, the numerous drawbacks of this treatment (weekly or biweekly injections and a long course of therapy of up to three years in order to achieve desensitisation to specific allergens and consequently high cost obligation) limit its acceptance and compliance to it. This offers a real opportunity for safe and efficacious short-course AIT products that reduces both the overall number of visits and associated patient costs.

On the basis of the clinical results obtained to date for its grass-pollen ASIT+TM (see Section 7.6.2), the Company believes that its product candidates have the potential to become the best-in-class immunotherapy products for the relevant allergens and overcome the limitations of current treatments. In addition, the Company believes that its product candidates represent a step change to a new generation of immunotherapy treatments that could significantly expand the immunotherapy market. The short-course approaches, the fast onset of action, as well as adjuvant-free products are among the features that resonate the most in that target group.

## 7.6.2 GP-ASIT+TM -VERY PROMISING PRODUCT CANDIDATE FOR GRASS POLLEN RHINITIS WITH SHORT TIME TO MARKET

The Company's lead product candidate has successfully completed early stage clinical development. The phase IIa, phase IIb and phase III clinical studies generated compelling and statistically significant proof of concept results demonstrating that, after 4 treatment visits within 3 weeks, gp-ASIT+TM:

- induces a significant reduction of the reactivity to a standardised conjunctival provocation test, used to assess the clinical efficacy;
- has a positive and significant impact on the immune system as evidenced by the production of protecting antibodies; and
- has a favourable benefit-risk profile.

In consequence, gp-ASIT+<sup>TM</sup> is the first adjuvant free short course treatment AIT product with 4 doctor visits over 3 weeks with clear clinical safety and efficacy data. The Company therefore believes that this breakthrough product can address the significant unmet need by inducing an immune response in a quickly, convenient and safely manner.

The Company has launched a first phase III clinical study in Europe with gp-ASIT+<sup>TM</sup>. In September 2016, 510 patients attended the last visit planned in the study protocol, giving a global retention rate of 93% between enrolment and last visit. The results of this phase III have been released during Q1 2017. These results consistently improved clinical symptoms and reduced medication use in allergic rhinitis patients by between 15 and 21 % compared to placebo, depending on the type of analyses performed (peak vs. entire



pollen season, intention-to-treat (ITT) vs. per protocol population). More specifically, the statistical significance of the primary endpoint, the mean combined clinical symptom and medication score (CSMS) during the peak pollen period, reached p<0.041 using non-parametric testing (Mann-Whitney) and p<0.078 using parametric testing (ANOVA using square root transformation of the scores) on the ITT population. Similar results were obtained when assessing the entire pollen period. Furthermore, these results (i) confirm the use of the Conjunctival Provocation Test (CPT) as a surrogate marker of clinical efficacy and the reduction in the reactivity score to this test induced by gp-ASIT<sup>+TM</sup> (p<0.01), (ii) confirm the induction by gp-ASIT<sup>+TM</sup> of grass pollen allergen-specific IgG4 and blocking antibodies (assessed on a subset of 32 patients) and (iii) confirm the overall good tolerability of gp-ASIT<sup>+TM</sup> as demonstrated by the occurrence of mostly mild adverse reactions and the absence of new or unexpected safety findings. As such, gp-ASIT<sup>+TM</sup> is well-positioned to become the first short course treatment SCIT product without adjuvant targeting grass pollen rhinitis to be authorised in Germany on the basis of a marketing authorisation based on a fully documented file.

The Company believes that the short duration of the AIT treatment with gp-ASIT+ $^{TM}$  can be considered by both physicians and payers as obvious benefits for patients in terms of convenience and Quality of Life (QoL) aspects.

## 7.6.3 INNOVATIVE AND FLEXIBLE ASIT+TM PLATFORM APPLICABLE TO A BROAD RANGE OF ALLERGIES

The ASIT+TM platform allows the production, characterisation and quality control of active ingredients consisting of highly purified natural allergen fragments with an optimal size selection. In contrast with the current immunotherapy products including whole allergens, ASIT+TM allergen fragments have been demonstrated in vitro to induce less allergic reactions, as shown by a reduction by 100 times of the blood basophil degranulation of allergic patient induced by gp-ASIT+TM compared to placebo (according to BTT-gpASIT001 preclinical study UZ Gent). The mechanism of action allows for the fast induction of protecting antibodies while limiting the allergic reaction and thus resulting in an improved safety profile. This innovation results in a short course of treatment, expected improved patient compliance and clinical efficacy. The Company is currently the only developer of product candidates consisting of a unique mixture of highly purified peptides produced from natural sources of allergens.

The Company believes that its innovative ASIT+<sup>TM</sup> technology platform is very flexible and would be applicable across a range of other allergies. The know-how collected at industrial scale during the validation of the production process of gp-ASIT+<sup>TM</sup> can be applied to the development of allergen fragments from other natural allergens such as house dust mite, ragweed and food allergens like egg white and peanut. A Phase IIa clinical study to test the second product candidate, hdm-ASIT+<sup>TM</sup>, for the treatment of house dust mite-induced rhinoconjunctivitis has been initiated in Q4 2016. The primary endpoint of the study is the assessment of its safety profile and the clinical tolerability. Other objectives of this study are the assessment of the immunogenicity and the impact on a conjunctival provocation test of hdm-ASIT+<sup>TM</sup>.

In addition, the preclinical development of ragASIT+<sup>TM</sup>, a product candidate for ragweed pollen induced allergy, a prerequisite to the initiation of any clinical trial, is almost completed. The first clinical batch of the drug substance and the drug product of ragASIT+<sup>TM</sup> have been produced successfully. The company believes that these assets will allow it to start the clinical development of ragASIT+<sup>TM</sup> in 2018. Feasibility



of different clinical development scenarios are under examination.

The food allergen drug will be designed in collaboration with Dr M. H. Shamji (Senior Lecturer in Immunology and Allergy) who has established the Immunomodulation and Tolerance Group within Allergy and Clinical Immunology Department at Imperial College of London (lead by Professor Stephen Durham). The objective of this collaboration is to test the allergenicity and antigenicity of its product candidates on human ex-vivo allergy model and optimize the safety/efficacy ratio of its new product candidates.

Afterwards, the selected product candidates will be tested in the frame of clinical trials that will be performed in the framework of a collaboration with Dr Stephen Till who is one of few specialist doctors accredited in Adult Allergy by the General Medical Council His current research interests include immunotherapy (desensitisation) and food allergy. The objective of this collaboration is to assess the safety and clinical impact of the product candidates on a food allergen provocation test.

According to the first estimates of the Company, launching a product for a new indication in Europe and the United States would require funding for a minimum amount of EUR 25 million.

# 7.6.4 A CLEAR MARKETING AUTHORISATION STRATEGY FOR LEAD PRODUCT CANDIDATE GP-ASIT+ $^{TM}$ IN THE TARGET MARKETS

The regulatory pathways for allergy immunotherapy are well established in Europe by the Guideline CHMP/EWP/18504/2006 "Guideline on the clinical development of products for specific immunotherapy for the treatment of allergic diseases". According to this guideline, marketing authorisations can be granted to medicinal products based on the demonstration of their short-term or the long-term efficacy. As a matter of priority, the Company intends to demonstrate the efficacy of gp-ASIT+TM over the first grass pollen season after the treatment (claim 1). The demonstration of long-term efficacy (over more than one grass pollen season) (claim 2) will only be investigated once the marketing authorisations for the claim 1 have been granted.

The marketing authorisations for this claim 1 will be sought in two phases. In accordance with the conclusions of scientific advice with the PEI, it is possible that the PEI gives the Company a marketing authorisation in Germany on the basis of compelling results of the first phase III clinical study. Therefore, subject to compelling results of the first phase III clinical study, the Company intends to file a first marketing authorisation application in Germany in Q2 2017. However, considering the relatively limited number of treated patients, a post-authorisation safety study is likely to be requested at the time of approval. Therefore, the Company intends to collect safety data in the framework of a likely phase IV clinical study, with a commercialised treatment.

The authorisation of the product in the United States for a short-term efficacy claim will be conditional upon a second positive phase III clinical study, and if required a positive phase II clinical study, to be performed in the United States. The Company intends to start clinical development in the United States as soon as possible. Contacts have been initiated with the FDA during H2 2016. ASIT biotech has received the FDA's initial comments regarding the gp-ASIT+TM Master File. These include very useful recommendations regarding the product's quality and the launch of a first clinical trial in the United States. ASIT biotech will interact with the FDA during the year 2017 in order to file an approval application for a clinical trial whose phase will depend on the conclusion of the Company's interaction with the FDA.



Moreover, ASIT biotech has reached an agreement with SynteractHCR, a CRO (Contract Research Organization) acknowledged for its expertise in running clinical trials in the field of respiratory disorders. This agreement foresees, in compliance with the budget presented at the time of the Offering, the preparation and execution of the next clinical trials, from the choice and auditing of sites through the analysis of clinical data. ASIT biotech is therefore ready – subject to the FDA's definitive approval – to initiate its first clinical trials in the United States.

Lastly, in order to address the specificities of North American clinical developments, ASIT biotech has set up a Committee of experts notably comprising Dr. Linda Cox, Past President of the American Academy of Allergy, Asthma & Immunology (AAAAI) and of the immunotherapy and allergy diagnostics committees of both the AAAAI and the ACAAI (American College of Allergy, Asthma & Immunology), and Dr. Peter Creticos, former Director of the Division of Allergy and Clinical Immunology of the Johns Hopkins University School of Medicine, and now clinical Director of research for his own entity and who has worked with governmental agencies and industry to design, develop, and conduct clinical research on the therapeutic efficacy of new drugs or underlying mechanisms of allergen immunotherapy. These recognized leaders in the field of allergy and immunology will contribute their extensive expertise to the preparation and monitoring of the clinical trials undertaken by ASIT biotech in the United States.

Subject to compelling results of this second phase III clinical study, the Company intends to file a full BLA application file to the FDA. The results of this second phase III clinical study will also be used to apply for marketing authorisation in European markets other than Germany. The strategy to expand into the rest of the European market is the Mutual Recognition Procedure, whereby each individual Member State extends the approval from one Member State to its market. This process involves independent application files for each individual Member State.

#### 7.6.5 STRONG IP PROTECTION

The Company has multiple levels of intellectual property protection for its allergy product candidates and has a robust patent filing and maintenance programme in place which is intended to offer protection until at least 2027 (for both gp- and hdm-ASIT+TM's most relevant patents, that are BTT04 (expiration date 2027) and BTT07 (expiration date 2032)). The Company may be eligible for extensions of up to five years for each product through supplementary protection certificates (SPCs) in the European Union and certificates extending patent term in the United States. In addition, the Company's product candidates could benefit from data/market exclusivity (between ten to twelve years depending on the territory) after marketing authorisation approval.

### Potential further upside

- Other ASIT+TM products: the preclinical development of allergen fragments from other allergens such as ragweed and food allergens like egg white and peanut on the basis of the ASIT+TM technology platform is ongoing.
- Geographic expansion: the Company believes that in addition to its 5 key target markets for both gp- and hdm-ASIT+TM, which it plans to address in the first instance, there could be potential to envisage targeting other European and emerging markets with similar product propositions. The



market potential of the Chinese market is elaborated upon in Section 7.10.1.

• Additional indications: new therapeutic options targeting both allergic rhinitis and allergic asthma would offer clear advantages in terms of the diseases cost and management, especially since the socio-economic impact of allergic asthma is high, as demonstrated by surveys in the United States and (more anecdotal) evidence for European countries. As a growing body of evidence points out to the potential of AIT to be the only treatment to prevent the onset of allergic asthma, there is potential for the Company to conduct further research to assess the potential impact and efficacy of gp-ASIT+TM and hdm-ASIT+TM on allergic asthma.

### 7.7 STRATEGY

The Company aims at becoming a key global player in allergy immunotherapy. Its product pipeline currently consists of two novel ASIT+TM product candidates targeting respiratory allergy with the highest prevalence. The key elements of the strategy are as follows.

# 7.7.1 COMPLETE THE CLINICAL DEVELOPMENT OF ITS INNOVATIVE LEAD PRODUCT CANDIDATE, GP-ASIT+TM, FOR GRASS POLLEN RHINITIS

The Company has received all approvals from the Competent Regulatory Authorities and Ethical Committees in Europe to start its Phase III pivotal study (BTT-gpASIT009) and has finalised in spring 2016 patients screening and recruitment, with 549 randomised patients. The study was performed in 67 sites spread over Belgium, Czech Republic, France, Germany, Italy and Spain. In September 2016, 512 patients attended the last visit planned in the study protocol, giving a global retention rate of 93% between enrolment and last visit. The results of the study have been released on 28 February 2017. The Company will seek marketing authorisation in Germany shortly by Q2 2017 to obtain it one year later (Q2 2018) in order to launch the product immediately thereafter. Furthermore, the Company plans to continue its discussions with the FDA in order to be in a position to start clinical development in the United States. The Company believes that the possible performance of a Phase II study could be required by the FDA.

# 7.7.2 PERFORMING CLINICAL STUDIES FOR ITS SECOND DRUG CANDIDATE FOR HOUSE DUST MITE RHINITIS, HDM-ASIT+TM, AND ADVANCING OTHER PRODUCT CANDIDATES THROUGH THE PIPELINE

The Company has launched the first clinical study with hdm-ASIT+<sup>TM</sup> in Germany at the beginning of Q3 2016. Results of the phase I/II study, having as primary endpoint the assessment of the maximum tolerated dose, have been released on 4 April 2017.

Furthermore, the Company has completed the preclinical development required by Regulatory Authorities of its third product candidate, rag-ASIT+<sup>TM</sup> for ragweed pollen induced allergy. It has successfully produced the clinical batches of drug substance and drug product of rag-ASIT+<sup>TM</sup>. Consequently, the Company is ready to launch the first clinical study with rag-ASIT+<sup>TM</sup>. Different scenarios are under examination in order to optimize the return of this investment in terms of collected results and time to market.

ASIT+TM product candidates for food allergies (cow's milk, egg white and peanut) are entering into preclinical development, as required by the regulatory authorities, in order to be authorized to launch clinical



trials.

The food allergen drug will be designed in collaboration with Dr M. H. Shamji (Senior Lecturer in Immunology and Allergy) who has established the Immunomodulation and Tolerance Group within Allergy and Clinical Immunology Department at Imperial College of London lead by Professor Stephen Durham. The objective of this collaboration is to test the allergenicity and antigenicity of its product candidates on human ex-vivo allergy model and optimize the safety/efficacy ratio of its new product candidates.

Afterwards, the selected product candidates will be tested in the frame of clinical trials that will be performed in the framework of a collaboration with Dr Stephen Till who is one of few specialist doctors accredited in Adult Allergy by the General Medical Council. His current research interests include immunotherapy (desensitisation) and food allergy. The objective of this collaboration is to assess the safety and clinical impact of the product candidates on a food allergen provocation test.

## 7.7.3 INDEPENDENTLY COMMERCIALISE ITS PRODUCT CANDIDATES IN GERMANY AND THE UNITED STATES

The Company has retained global commercialisation rights for all its product candidates and intends to establish its own sales and marketing capabilities in Germany and in the US, focusing on allergy specialists. The Company believes that the relatively low number of allergy specialists (approximately 5,000 in Germany/80 million inhabitants and 5,500 in the US/345 million inhabitants, Internal report, AVOS Consulting, 2015) should enable the effective promotion of its product candidates with a focused marketing strategy and a limited sales force. The Company may also consider alternative ways of commercialising its product candidates in these markets, including collaborating with other companies that have the required infrastructure and expertise.

Given its attractive market characteristics, the Company selected Germany as its first target market for gp-ASIT+<sup>TM</sup> after the completion of the positive first phase III clinical study. Subject to successful completion of a second phase III clinical study in the United States, the Company will target subsequently the United States and other key European countries (France, Spain and Italy). Germany represents about 39% of the European AIT market in terms of sales, followed by France (31%), Spain (10%) and Italy (10%) (ALK-Abelló IR presentation 6 December 2014).

### 7.8 OVERVIEW OF ASIT+TM TECHNOLOGY PLATFORM

### 7.8.1 INTRODUCTION

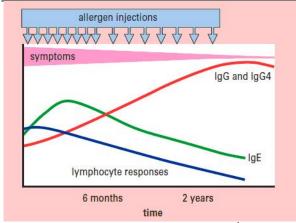
Classical allergen immunotherapy treatment starts with a dose escalation phase consisting of the administration of progressively higher doses of allergens. Because of the risk of systemic allergic reactions at the time of the injection, the first doses of injected allergens are very low (1 to 10 nanograms of major allergens per injection) and the dose is progressively increased up to an efficacious maintenance dose (5 to 20 micrograms of major allergens per injection). The maintenance dose is usually achieved after 18 to 27 serial increments at weekly intervals and is usually administered every 4-6 weeks with a maximum benefit after 2 to 5 years of treatment.

Clinical efficacy likely correlates with:



- the induction of regulatory cells of the immune system (called B-reg and T-reg) responsible for the reduction of the lymphocyte allergic responses;
- the induction of protecting antibodies (also called blocking antibodies IgG or IgG4) suppressing the immediate allergic reaction and the activation of B-cells (Figure 5).

Figure 5: Effects of immunotherapy on allergic rhinitis



Source: Male et al (eds) Immunology 7<sup>th</sup> edition, Mosby, 2006: 340

Allergen extracts used in current immunotherapy products are whole allergen extracts prepared from a wide variety of sources, including pollens, fungi, arthropods, animal dander, foods, and dusts. The composition of whole allergen extracts can vary in function of the allergen source, manufacturing process, and storage conditions. Given that the allergen source materials are heterogeneous mixtures of proteins, glycoproteins, carbohydrates, and other substances that are not allergenic, variability exists between whole allergen extracts. Variability within a single manufacturer's allergen product can be controlled by using reproducible extraction and processing procedures and large lots of allergen source material.

The major factors limiting the growth of the whole allergen immunotherapy market are related to the length of the treatments, the cumbersome administration regimen and the low perceived real life effectiveness of its current products (see Section 8.3.3 "Current immunotherapy treatments").

### 7.8.2 ASIT+TM TECHNOLOGY PLATFORM

In order to propose an immunotherapy product with both a superior safety and real life effectiveness profile and no or shorter dose escalation phase, the Company has developed the ASIT+<sup>TM</sup> technology platform allowing the development, the characterisation, the manufacturing, and the quality control of truly innovative active pharmaceutical ingredients consisting of highly purified natural allergen fragments, in an optimal size selection based on the results of the phase IIa, phase IIb and phase III clinical studies. It has been demonstrated with the grass pollen ASIT+<sup>TM</sup> product candidate (gp-ASIT+<sup>TM</sup>) in the framework of a phase I, phase II and phase III clinical studies that this selection triggers a rapid immune response without the need of an adjuvant.

Adjuvants are non-specific stimulators of the immune system and are therefore injected together with the active pharmaceutical ingredients in order to increase their immunogenicity. Adjuvants however also increase the frequency and the severity of the side effects related to higher local and general reactogenicity.



As the Company has demonstrated in a phase II study performed in 2011-2013 that the addition of an adjuvant did not improve the immunogenicity of gp-ASIT+TM, the Company has therefore focused its clinical development on adjuvant-free gp-ASIT+TM.

The ASIT+<sup>TM</sup> platform allows the production, characterisation and quality control of truly new active ingredients consisting of highly purified natural allergen fragments, in an optimal size selection. In the framework of phase I and phase II clinical studies it has been demonstrated that the optimal size selection of highly purified natural allergen fragments contained in the grass pollen ASIT+<sup>TM</sup> product:

- triggers a rapid immune response without the need for an adjuvant, leading to the potential for at least one-year production;
- induces minimal side-effects;
- reduces the reactivity to an artificial allergen challenge; and
- allows a faster injection regimen of higher doses, compared to treatments with whole allergens, resulting in a reduced course of treatment with four doctor visits over 3 weeks.

Therefore, the Company believes that:

- the absence of an adjuvant improves the overall safety profile and represents a real advantage with respect to long-term safety; and
- the reduced course of treatment will improve patient acceptance and compliance and, therefore, real-life clinical effectiveness.

The ASIT+TM technology platform is based on a well-defined and reproducible production process including:

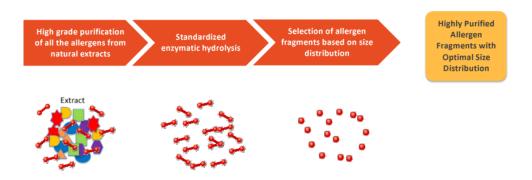
- extraction of soluble components from natural sources of allergens;
- purification of all the proteins from allergen extracts and elimination of non-proteic components; and
- standardised enzymatic hydrolysis of the purified proteins resulting in highly purified natural allergen fragments.

The Company has demonstrated for its first product candidate the reproducibility of its production process at the commercial scale leading to the batch to batch consistency. At this stage of process validation, one GMP batch of drug substance would allow the treatment of more than 20,000 patients. On the basis of these results, the Company is confident that it would be able to supply the market.



Figure 6: ASIT+TM technology platform

### ASIT+™ platform: technology scalable & applicable to various allergens



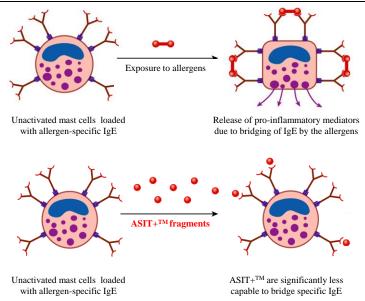
The Company believes that ASIT+TM products have a superior safety profile due to:

- the lack of adjuvant;
- the use of highly purified natural allergen fragments with
  - no impurities, therefore reducing the risk of side-effects and the induction of unwanted reactions;
  - reduced risk for the induction of immediate allergic reactions. As shown in Figure 7, allergen
    fragments are significantly less capable to cross-link the IgE antibodies present on the surface
    of mast cells and therefore to trigger the release of proinflammatory mediators such as histamine.

The safety, the immunogenicity and the potential clinical efficacy of gp-ASIT+TM using subcutaneous delivery have been confirmed in phase II, phase IIa, phase IIb and phase III clinical trials in patients with grass pollen rhinitis.



Figure 7: Cross-linking of IgE antibody on mast-cells leads to rapid release of inflammatory mediators by the mast cells with intact allergens but not allergen fragments



Mast cells are large cells found in connective tissue with secretory granules containing many inflammatory mediators. They bind stably to IgE antibodies through the very high-affinity Fce receptor (FceRI). Allergens but not allergen fragments are able to bridge efficiently the mast cell bound IgE antibodies. Such bridgings trigger rapid degranulation and release of inflammatory mediators leading to acute allergic reaction causing asthma, hay fever, and, even, life-threatening response known as systemic anaphylaxis.

The Company believes that the use of natural sources of allergens leads to product candidates with a very broad panel of antigens stimulating the immune system with the optimal complexity.

The Company has confirmed that the preclinical, clinical and production process of gp-ASIT+TM is applicable to the development of allergen fragments from other allergens such as house dust mite and ragweed. The Company is confident that the ASIT+TM platform is also applicable to food allergens like peanut and egg white. It should be noted that the flexibility of the platform allows adapting the process to particular characteristics of a specific allergen.

### 7.9 PRODUCT PIPELINE

#### **7.9.1 OVERVIEW**

Currently, the Company's product pipeline includes three ASIT+TM product candidates targeting the respiratory allergies with the highest prevalence:

- gp-ASIT+TM for the treatment of grass pollen allergy administered by subcutaneous injections; and
- hdm-ASIT+TM for the treatment of house dust mite allergy administered by subcutaneous injections.

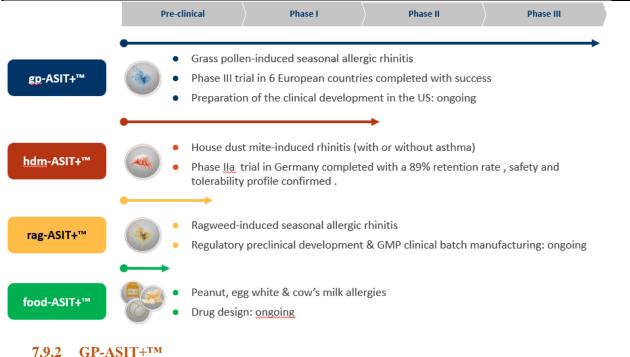


• rag-ASIT+TM for the treatment of ragweed pollen allergy administered by subcutaneous injections.

Furthermore, the Company currently develops in an early preclinical stage a product candidate targeting the food allergies (peanut, egg white and cow milk).

The development stage and milestones of products are presented in Figure 8.





### > Product description

The product candidate consists of a mixture of natural allergen fragments obtained from a purified specific proteinic extract from *Lolium perenne* pollen. In contrast to the synthetised peptides, the natural peptides (70% of the fragments ranging from 1,000<MW<10,000) include a wide range of epitopes that stimulate the immune system with optimal complexity. It consists in a ready to use, sterile and stable solution (18 months at 4°C according to ICH stability guideline requirements). As the allergic reactions is the consequence of the cross bridging of IgE bound on mast cells by allergens, the size distribution has been selected to remove large allergen fragments capable to bridge these IgE while keeping the allergen fragments capable to activate the immune system with the optimal complexity by activating B-cells and T-cells. On the other side, the peptides have kept the information required to stimulate the immune system as reflected by the induction of grass-pollen specific immunoglobulins after injection to animals or allergic patients.

The administration schedule of the treatment is of short duration compared with currently commercialised treatments. This constitutes a major competitive advantage to improve the acceptance and the compliance of the patients. In addition, the administration schedule includes successive injections with half of the visit dose in both arms, an innovative solution that enables the delivery of the total dose necessary for the therapeutic effect in a faster and safer way. Finally, the product candidate is formulated without adjuvant, which



increases the long-term safety of the product by decreasing the local and general reactogenicity as well as the frequency of the adverse events, which represents a further advantage in markets less permissive to adjuvanted formulations (e.g. US).

The product is supplied as aqueous buffered solutions and should be stored at 2-8°C until use.

### > Target product profile

The target product profile of gp-ASIT+TM product candidate consists among others of:

- a ready to use natural allergen-fragment based product;
- an adjuvant free product;
- a safety profile in line with best-in-class products;
- a very short treatment schedule with a maximum of 4 treatment visits over 3 weeks, prior to allergen exposure;
- a rapid onset of action, both on symptomatic and immunological parameters; and
- a superior real life effectiveness during natural grass pollen exposure.

All the above-mentioned characteristics have been demonstrated in the conducted clinical studies (see below).

As a result, the Company believes that gp-ASIT+TM is the only short course treatment AIT product without adjuvant with significant efficacy results.

### Competitor products in grass pollen immunotherapy

Classical allergen subcutaneous immunotherapy starts with a dose escalation phase consisting in the administration of progressively higher doses of allergens. Because of the risk of systemic allergic reactions at the time of injection, the first doses of injected allergens are very low (ng) and the dose is progressively increased up to an efficacious maintenance dose ( $\mu$ g). The maintenance dose is usually achieved after several serial increments at weekly intervals and is usually administered on a monthly basis with a maximum benefit after two to five years of treatment.

In order to avoid or shorten the dose escalation phase and the length of the treatment as well as to reduce the risk of immediate allergic reactions, currently commercialised products contain chemically modified allergens and adjuvants. Figure 9 provides a selection of the products of the Company's competitors, which are marketed under the NPP status, with the exception of Allergovit and Purethal that have received a marketing authorisation in Germany (for an exhaustive list of the authorised products in Germany, please refer to section 7.10.1). With the exception of Pollinex Quattro (commercialised by Allergy Therapeutics), all these products still require an important number of doctor visits resulting in a 3-year treatment duration, with as result low compliance and a low real-life effectiveness (see Section 7.3.3).



Figure 9: comparison of the subcutaneous products in the field of the grass pollen allergy

### **Grass pollen**

		Name	Treatment course		f
Current existing treatments	Company		Esc. (weeks)	Maintenance. (months)	Use of adjuvant?
	ALK-Abello	Alutard°	8	36	~
	Allergopharma	Allergovit°	. 7	30	~
	HAL Allergy	Purethal <sup>®</sup>	6	8	1
	Stallergènes	Alustal®	13	36	~
	Stallergènes	Phostal®	13	36	1
	Allergy Therapeutics	Pollinex Quatro° Europe	3	0	~
	Company	Phase	Treatment course		
On-going development	Name		Esc. (weeks)	Maintenance. (months)	Use of adjuvant?
	ASIT biotech gp-ASIT+™	Phase III	3	О	x
	Biomay AG BM32°	Phase IIb	8	О	~
	Circassia Grass-Spire°	Phase II	16	О	×
	Allergy Therapeutics Pollinex Quatro°	Phase II US	3	0	/

ALK-Abello

Note: the following products are commercialised in Germany: Allergovit, Purethal, Phostal, Pollinex Quatro and Avanz; only Allergovit and Purethal have received a marketing authorisation in Germany, the other products are sold as NPP.

**Pollinex Quatro** treatment involves four pre-seasonal allergy vaccine injections administered over a one-month period. The strategy of Allergy Therapeutics in order to reduce the course of treatment to 3 weeks is to combine allergens with an adjuvant, MPL, which is expected to have an elevated reactogenicity profile. This product is currently commercialised in the main European countries, where it is estimated that it has sold for approximately GBP 23 million in 2015, an increase of 7.5% over 2014 (based on Allergy Therapeutics' Annual Reports for 2015). In the United States, the development of this product was placed on hold in 2007 by the FDA due to an adverse event. In March 2011, the FDA has lifted the clinical hold on the three Pollinex Quattro programmes (grass, ragweed & tree).

The symptom reduction with a first version of Pollinex Quattro measured during the season for grass pollen



rhinitis was described by Dubuske et al (Allergy Asthma Proc 32:239 –247, 2011; doi: 10.2500/aap.2011.32.3453):

- 13.6% benefit over placebo in the 4 peak pollen weeks in ITT population (p=0.0038);
- 24.3% benefit over placebo in a subset of patients with complete data (p=0.0031).

These results are relatively lower than the ones obtained after a one-year treatment with *Alutard* 100,000 S-QU (a SCIT NPP currently commercialised by ALK-Abelló, see Figure 9) in the framework of a double-blind, randomized, placebo-controlled study of 410 subjects. Over the peak pollen season, mean symptom and medication scores of Alutard were 32% and 41% lower than those in the placebo group (Frew et al - J Allergy Clin Immunol. 2006 Feb; 117(2):319-25), which are better than the ones obtained with Pollinex Quattro. No phase III data are available for BIOMAY.

In March 2015, Allergy Therapeutics has announced its intention to continue US clinical development of Pollinex Quattro Grass through the FDA regulatory approval. Allergy Therapeutics anticipated that it will submit a BLA for a US regulatory approval of Pollinex Quattro Grass in 2018, assuming the successful completion of the remaining clinical development programme. The US clinical development programme of Pollinex Quattro comprised a safety study, immediately followed by a phase IIb study, with results expected in the second quarter of 2016 before progressing into a pivotal phase III study.

Allergy Therapeutics (AIM: AGY) announced in June 2016 findings from its exploratory Phase II doseranging study (G204) for the US Grass\_MATA\_MPL clinical development program and informed that the results did not determine a recommended dose for the Phase III trial. A further dose range finding study need to be implemented prior to proceeding into the planned pivotal Phase III study.

This trial was designed to explore higher dose regimens using the novel technology of the mEEC (mobile environmental exposure chamber) and optimise the recommended dose before starting the pivotal Phase III trial (G306) to be performed in the US.

The dose range finding data with the mEEC did not allow the Company to recommend an optimised dose regime to take into Phase III studies for the US. Consequently, Allergy Therapeutics need to perdorm a further dose-ranging study employing a fixed Conjunctival Provocation Test (CPT) which provided robust results.

The next dose range finding study is planned to start in 2017. Allergy Therapeutics will await the outcome of an End of Phase II meeting with the FDA, scheduled later in 2016, before progressing into Phase III.

Besides these existing treatments, new therapies are currently under development by *Circassia* and *Biomay*.

*Circassia* (UK) is running several programs in cat, house dust mite, grass, birch and ragweed allergy using the company's proprietary ToleroMune technology based on the mixture of several synthetic peptides brand named –SPIRE. Grass-SPIRE targets the same indication as gp-ASIT+<sup>TM</sup>. Circassia has completed one phase IIa and one phase IIb clinical studies with Grass-SPIRE.

The phase IIa with Grass-SPIRE was a single centre, randomised, double-blind, placebo-controlled, esca-



lating multiple dose study evaluating the safety and tolerability of five different doses in grass allergic patients. The results of this clinical study did not provide a consistent dose response with active treatment.

Afterwards, Circassia completed a phase IIb dose ranging clinical study in a challenge chamber with three different regimens of Grass-SPIRE and one placebo.

The results of this trial have been presented by Circassia at various congresses:

- 1. AAAAI 2014 Ellis et al Poster # 999,
- 2. AAAAI 2015 Ellis et al Poster # 517,
- 3. EAACI 2015 Ellis et al Oral Presentation.

According to the posters and oral presentations at these various congresses, the group treated with the lowest dose showed statistically significant difference compared to placebo after the first pollen season. This difference was no longer present during the 2 following years. There was no statistically significant difference compared to placebo for the groups treated with higher doses, whatever the time point.

Circassia announced Top-Line Results from Cat Allergy Phase III Study in June 2016. The study compared a four-dose course of Fel d 1 allergen peptides, two sequential courses (eight doses) and placebo. The primary endpoint measure was the mean Combined Score (combined total rhinoconjunctivitis symptom score [TRSS] and rescue medication use score); mean TRSS was a secondary endpoint measure. The study's endpoint outcomes were the difference between placebo and active groups one year after the start of dosing. The Combined Score in the active treatment groups were not significantly different to placebo.

Based on these negative results, Circassia has decided to stop the registration study of its grass allergy treatment and the preparatory work for a dose-ranging study of its ragweed allergy therapy. The phase IIb study of Circassia's house dust mite allergy product has been continued as well as the Circassia's birch allergy product phase II study.

**Biomay AG**'s is an Austrian company. Its product, BM32, is an alum-based grass product including recombinant allergens fused with an immunostimulating viral protein. Biomay recently finalised the phase IIb clinical trial (clinicaltrials.gov; identifier NCT01538979). The treatment consists of 3 subcutaneous injections every 4 weeks before the grass pollen season followed by one boost injection after the grass pollen season.

According to *Biomay* (news release dated 3 June 2015), the study (clinicaltrials.gov; identifier NCT01538979), which was completed in 2014, provided clinical proof of concept for this allergy vaccine. A statistically significant difference of 25% in the Rhinoconjunctivitis Symptom Score was observed between the treated group and the placebo (p=0.042 during the peak of pollen season of the second treatment year). A non-statistically significant 22% difference in the Combined Symptom and Medication Score was observed between the treated group and the placebo (p=0.085 – not statistically significant). Biomay has announced in January 2016 the start of a new Phase II.

The study follows a novel design by linking a combined symptom and medication score recorded with a



patient diary with measurement of grass pollen sensitivity in an environmental exposure chamber. The study protocol has been conceived together with the Vienna Challenge Chamber (VCC), which also acts as the study site. Specific IgG immune response against the four major timothy grass pollen allergens Phl p 1, Phl p 2, Phl p 5 and Phl p 6 is the primary outcome measure of the trial.

### Clinical results

Current clinical development with gp-ASIT+TM demonstrated its good tolerability. The data also showed a clinical benefit of the treatment as evidenced by a reduction of the reactivity Conjunctival Provocation Test (*CPT*) from a score of 1.9 to a score of 0.4 after 4 treatment visits and to a score of 0.3 at the end of the treatment (improvement in CPT score for 83.0% of the subjects after 4 treatment visits and 87.5% of the subjects at the end of the treatment). Treatment with gp-ASIT+TM had a positive impact on the humoral immune.

To date, the Company conducted 4 clinical trials with subcutaneous applications of gp-ASIT+TM including in total 238 treated patients. All the studies were performed according to Good Clinical Practices (*GCP*) and ICH Guidelines.

The phase I clinical study (with reference BTT-gpASIT004) and the phase IIa clinical study (with reference BTT-gpASIT006) were conducted with a dosing schedule of five subcutaneous injections performed at weekly interval. Study results suggested that gp-ASIT+TM is safe and can stimulate the production of grass pollen specific antibodies.

A second phase IIa clinical study (with reference BTT-gpASIT007) was performed to assess the maximum tolerated individual dose of gp-ASIT+TM. The last trial was a phase IIb (with reference BTT-gpASIT008), which has allowed to determine the dose with the optimal safety/efficacy ratio. This dose was tested in the frame a first phase III clinical study.

### **♦** Phase IIa study (BTT-gpASIT007 study)

BTT-gpASIT007 phase IIa study showed the good tolerability of gp-ASIT+TM, its clinical benefit as evidenced by a reduction of the reactivity CPT and its positive impact on the humoral immune.

The BTT-gpASIT007 study was a dose-escalation study carried out outside the pollen season, in a single centre in Germany, with 65 patients with seasonal allergic rhinoconjunctivitis to grass pollen. The patients received increasing doses of gp-ASIT+TM in 6 treatment visits performed over a period of 5 weeks. During each treatment visit, the patients received a first injection in one arm and a second injection in the other arm 30 minutes later. The planned cumulative dose of gp-ASIT+TM in this study was 490 µg.

The primary objective of the study was the assessment of the safety and clinical tolerability subcutaneous injections of increasing doses of gp-ASIT+<sup>TM</sup>, in order to determine the individual maximal tolerated dose. The secondary objectives were to assess the immunogenicity of the subcutaneous gp-ASIT+<sup>TM</sup> and to assess the clinical effect of gp-ASIT+<sup>TM</sup> by comparing the reactivity of the patients to a CPT performed:

• before.



- one week after 4 treatment visits,
- one week after completion of the treatment.

This test has proved to be predictive of allergic rhinoconjunctivitis symptoms (Kruse et al, J Allergy Clin Immunol Pract. 2015 3(3):381-6). In accordance with guidelines on the clinical development of immunotherapy products for the treatment of allergic disease (CHMP/EWP/18504/2006), provocation tests are accepted by Competent Regulatory Authorities as primary endpoint in Phase IIb studies.

The CPTs are performed using standardised commercialised solutions with 3 different concentrations of grass pollen allergens (100, 1,000 and 10,000 SQ/ml respectively). One eye, called "provocation eye", is the eye in which the solutions with increasing strengths of allergen is applied. The other eye is used as the "control eye" and received the so-called "negative control" (placebo).

The CPT scoring system is based on the strength of allergens at which pronounced ocular symptoms occur after one drop of allergen solution is applied. The CPT scoring system is summarised in the following figure:

Allergen (U/mL)	Score
100	3
1000	2
10000	1
>10000	0

The gp-ASIT+TM treatment was safe and well tolerated:

- 80% of the patients reached the full cumulative dose planned in the protocol;
- 49% of the patients did not have any adverse event.

Moreover, 89% of the patients reached at least 150 μg of gp-ASIT+TM and 80% of the patients reached the total cumulative dose of 490 μ of gp-ASIT+TM. As expected, all patients reported mild local reactions at the injection site. No increase in local reactions at the injections site was reported while the treatment was progressing (*i.e.*, when receiving increasing doses of gp-ASIT+TM). Seven early allergic reactions were reported on 6 patients (9.2%). None of these allergic reactions were serious, no anaphylaxis occurred, no administration of epinephrine was required. Moreover, the faster disappearance of local reactions at the injection site with the progressing treatment can be interpreted as a first suggestion of clinical tolerance.

Clinical efficacy of gp-ASIT+TM was assessed by a highly significant decrease in mean CPT score from pre- to post-treatment (p < 0.001 - Figure 10). In addition, after only 4 treatment visits, the CPT score already had decreased from 1.9 to 0.4 (p< 0.001), representing a decrease of the mean CPT score by 77% after a 3-week treatment, and suggesting that patients can tolerate 33 times more allergens before developing allergic reaction.



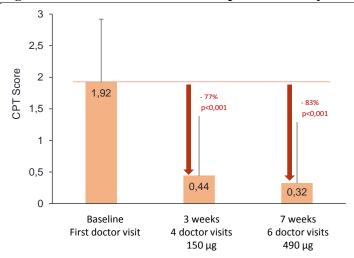


Figure 10: evolution of CPT score – phase IIa study - mITT.

Subjects were treated with subcutaneous injections of gp-ASIT+ $^{TM}$ . CPT was performed before treatment, 3 weeks after start of treatment and 7 weeks after start of treatment. Results of CPT score are presented as mean  $\pm$  Standard Deviation. Comparisons are made by Wilcoxon rank test.

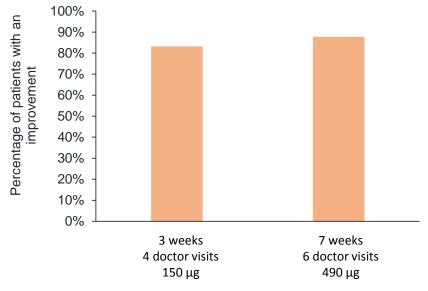


Figure 11: percentage of patients with an improvement – phase IIa study - mITT.

Subjects were treated with subcutaneous injections of gp-ASIT+ TM. Results are presented as percentage of patients who improved at the CPT performed 3 weeks after start of treatment and at the CPT performed 7 weeks after start of treatment compared to baseline CPT.

Moreover, there is no significant difference in the mean CPT score between the mid treatment and the end treatment time points. Decrease of CPT reactivity was reported for 83% of patients after 4 treatments visits and for 87.5% of patients after completion of the treatment (Figure 11). Finally, 70% of the patients became desensitised (no longer reactive to CPT) at mid- and end treatment.

These data indicate that the total cumulative dose of gp-ASIT+<sup>TM</sup> received by the patients after 4 treatment sessions (150 μg) induced maximal reduction of CPT reactivity.

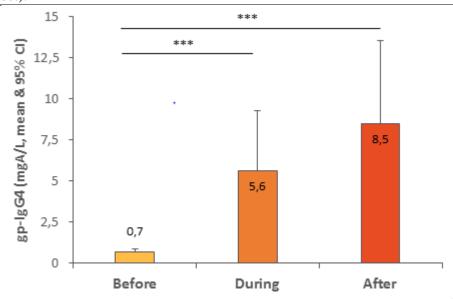
The treatment with gp-ASIT+TM also had a positive impact on the humoral immune profile (immune re-



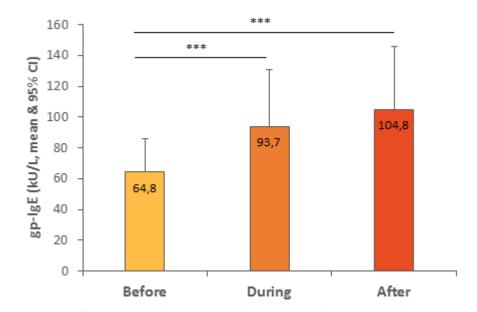
sponse in the blood). **Grass pollen-specific IgG4** levels significantly increased by 8 and 12-fold with respect to baseline levels after 4 and 6 sessions of treatment respectively (p<0.001 at both time points, Figure 12, A). Specific IgG4 levels are considered markers of the desensitisation process, the higher level the better induction of immune tolerance towards that specific allergen. These antibodies act as well as inhibitors of the bridging between the IgE bound to the mast cells and the allergens, thus inhibiting the allergic reaction.

An increase in **mean grass pollen-specific IgE levels** was also observed from baseline to end of treatment, representing a 1.4 and 1.6-fold increase in the mean IgE level from baseline at mid and end of treatment, respectively. Mean IgE levels were significantly different from baseline (p <0.001) at each time point (Figure 12, B). The increase of specific IgE levels during the early phase of immunotherapy treatment is also observed with commercial immunotherapy products.

Figure 12: mean change from baseline in grass pollen-specific antibodies, IgG4 (A) and IgE (B) (ITT set).





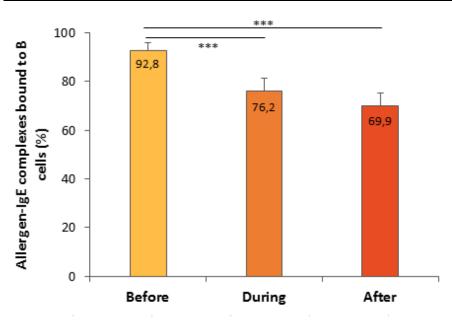


<u>Notes</u> 1) Patients were treated with subcutaneous injections of gp-ASIT+<sup>TM</sup>. Antibody concentrations were measured before, during, and after treatment; and

2) "\*\*\*" means p < 0.001 and that the results are therefore extremely significant

Treatment with gp-ASIT+TM induced the production of functional blocking antibodies as reflected by a decrease in the relative percentage of B-cells binding IgE/allergen complexes (Shamji et al. J Allergy Clin Immunol. 2013 132(4):1003-5). The mean relative IgE-allergen complexe binding was 92.8% at baseline, significantly decreasing to 76.3% after 4 treatment visits and decreasing to 69.8% at the end of the treatment (p<0.001 at both time points compared to baseline, Figure 13).

Figure 13: mean change from baseline in IgE-allergen facilitated binding (FAB) – ITT set.





- Notes 1) Patients were treated with subcutaneous injections of gp-ASIT+TM and allergen-IgE complexes binding to B cells was measured before, during, and after treatment. Data are expressed as mean ±95% CI;
  - 2) "\*\*\*" means p < 0.001 and that the results are therefore extremely significant

The difference with respect to placebo was also statistically significant after 4 treatment visits while the patients had received 170 µg of gp-ASIT+TM (Figure 14, A).

In conclusion, the results of this study confirmed the good tolerability of gp-ASIT+TM. The data also showed a clinical benefit of the treatment as evidenced by a reduction of the reactivity CPT from a score of 1.9 to a score of 0.4 after four treatment visits and to a score of 0.3 at the end of the treatment (improvement in CPT score for 83.0% of the subjects after 4 treatment visits and 87.5% of the subjects at the end of the treatment). Treatment with gp-ASIT+TM had a positive impact on the humoral immune profile of allergic patients, characterised by the induction of an increase in grass pollen-specific IgG4 and blocking antibodies that can be associated with the clinical outcome. The relatively lower increase of IgE levels compared to the increase of IgG4 levels does not negatively impact on the decrease of reactivity to the CPT.

Based on the data of this study, it was concluded that the presumed therapeutic effects of a cumulative dose above 150  $\mu$ g would likely be marginal, as the differences in CPT score between mid-treatment (when a cumulative dose of 150  $\mu$ g had been reached) and study completion (when a maximal cumulative dose of 490  $\mu$ g had been reached) were not substantial. This hypothesis was validated in the placebo controlled dose-ranging study phase IIb study.

### Phase IIb study

The BTT-gpASIT008 Phase IIb study showed the good tolerability of gp-ASIT+<sup>TM</sup>, its clinical benefit as evidenced by a reduction of the reactivity CPT and its positive impact on the humoral immune.

The BTT-gpASIT008 clinical study is a double-blind, placebo-controlled dose-finding study that was carried out in multiple centres (21) in Germany. The primary objective of the study was to assess the clinical effect of three different cumulative doses of gp-ASIT+TM subcutaneously administered to adult patients suffering from grass pollen-induced allergic rhinoconjunctivitis. The clinical effect was estimated on the change of the CPT reactivity of treated patients in comparison to placebo. The secondary objectives were to assess the impact of gp-ASIT+TM on the immunological status of the patients in comparison with placebo, as well as to assess the safety and clinical tolerability of gp-ASIT+TM.

The study enrolled patients with a documented history of moderate to severe seasonal allergic rhinoconjunctivitis. This trial enrolled 198 patients, randomised into 4 groups receiving either placebo or one of the 3 cumulative doses of gp-ASIT+ $^{TM}$  (70  $\mu$ g, 170  $\mu$ g or 370  $\mu$ g). The treatment was administered outside the pollen season and consisted of a dose-escalation phase of 10 subcutaneous injections administered in 5 doctor visits. 2 subcutaneous injections of the same dose of gp-ASIT+ $^{TM}$  were performed 30 minutes apart in opposite arms at each visit.



No severe systemic reactions were reported during the study. There was no relation between the injected dose and the frequency or the severity of systemic allergic reactions. At this stage there are no safety concerns that could impact the further development.

192 patients were included in the efficacy analysis of gp-ASIT+<sup>TM</sup> treatment. After completion of the treatment, a dose-dependent clinical effect of gp-ASIT+<sup>TM</sup> was confirmed by a reduction of reactivity to CPT (Figure 14, B) in:

- 25.6% of patients in placebo;
- 37.2% of patients in group gp-ASIT-70 µg (3 treatment visits and 2 placebo injection visits);
- 51.2% of patients in group gp-ASIT-170  $\mu$ g (p=0.023 4 treatment visits and 1 placebo injection visit); and
- 46.3% of patients in group gp-ASIT-370 μg (5 treatment visits and 0 placebo injection visit).

The difference with respect to placebo was also statistically significant in the patients receiving 170  $\mu$ g of gp-ASIT+<sup>TM</sup> after only 4 treatment visits (p=0.004) (Figure 14, A).

Figure 14: percentage of patients with an improvement to CPT at mid treatment (after 4 treatment visits, A) and after complete treatment (after 5 treatment visits, B) compared to baseline (mPPS)

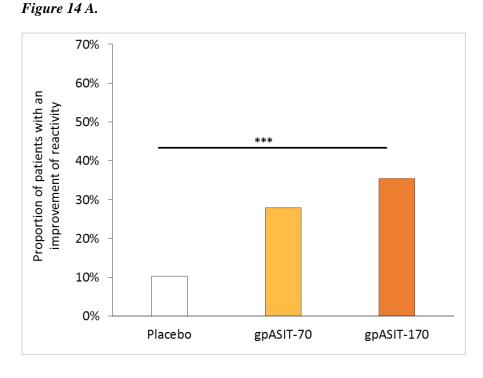
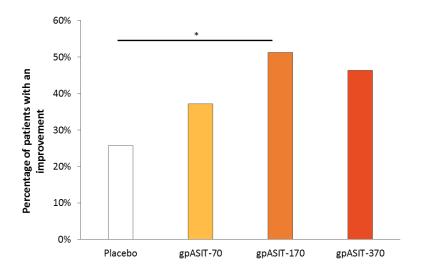


Figure 14 B.





Notes to figures 14A and 14B

- Patients were treated with subcutaneous injections of gp-ASIT+TM. Results are presented as percentage of patients who improved at the CPT performed 2 weeks after start of treatment compared to baseline (Figure 14A) and at the CPT performed after completion of treatment compared to baseline (Figure 14B).
- 2) "\*" means p=0.023 and that the results are therefore significant; "\*\*\*" means p=0.004 and that the results are therefore extremely significant.

These results indicate that a statistically significant improvement to CPT has been observed after the administration of 170  $\mu g$  of gp-ASIT+<sup>TM</sup> in 4 visits. Continuing the treatment does not further improve the clinical benefit. This conclusion confirms the results obtained in BTT-gpASIT007 phase IIa clinical study that showed that the treatment with 490  $\mu g$  of gp-ASIT+<sup>TM</sup> had no further clinical benefit compared to treatment with 150  $\mu g$  gp-ASIT+<sup>TM</sup>.

Further analysis showed that the mean CPT score in the placebo group was 1.28 at baseline and 1.15 one week after the end of the treatment, indicating a 10% decrease over the study (non-statistically significant). A decrease of 38% over placebo was observed in the group of patients who received 170µg of gp-ASIT+TM (p<0.01). A decrease of 36% over placebo was observed in the group of patients who received 370µg of gp-ASIT+TM (p=0.015). These phase IIb clinical study data also confirm the results of the phase IIa; the difference between the placebo and the two groups treated with the highest doses are statistically significant but the absence of difference between these 2 groups confirm a clear plateau effect.

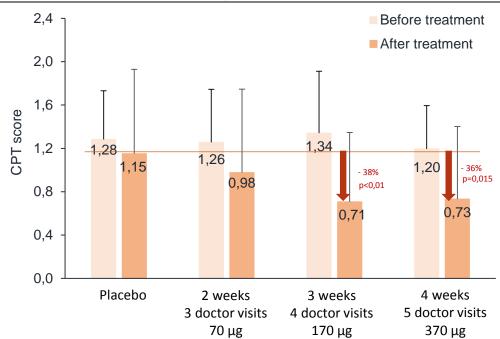


Figure 15: evolution of CPT score – phase IIb study – mPP

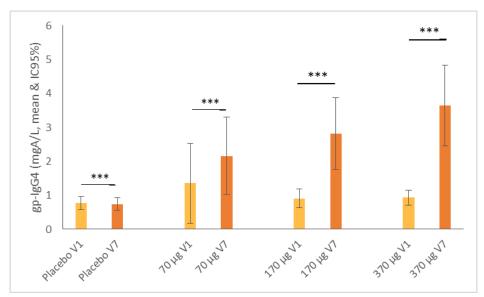
Subjects were treated with subcutaneous injections of  $gpASIT+^{TM}$  or placebo. CPT was performed before treatment and after treatment. Results are presented as mean  $\pm$  Standard Deviation

The treatment with gp-ASIT+TM had also a positive impact on the humoral immune profile (immune response in the blood) specific for grass pollen antigens as reflected by an improvement of the immunological profile.

The specific IgG4 levels increased respectively 1.6, 3.1 and 3.9-fold in the patients who received 70, 170 and 370  $\mu$ g of gp-ASIT+<sup>TM</sup>, respectively (p<0.001, Wilcoxon test), whereas no effect was observed in placebo group (Figure 16).

Figure 16: increase in specific IgG4 in different treatment groups following the gp-ASIT+TM

#### treatment



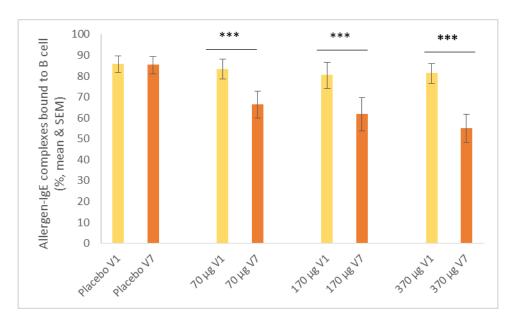
*Note:* "\*\*\*" means p < 0.001 and that the results are therefore extremely significant.

Thus gp-ASIT+TM stimulates the production of grass pollen IgG4 in a dose-dependent manner. This is as well visible while progressing during the treatment. Figure 16 is showing the increase in the IgG4 parameter after 3, 4 and 5 treatment visits respectively. This IgG4 increase compared to the baseline is statistically significant.

Treatment with gp-ASIT+TM induced the production of functional blocking antibodies as reflected by a decrease in the relative percentage of B-cells binding IgE/allergen complexes, parameter considered as well a marker of a good sensitisation process (Shamji et al. J Allergy Clin Immunol. 2013 132(4):1003-5). As detailed previously, B-cells are also involved in the allergic reaction mainly via the synthesis of IgE. Free IgE and/or still bound to the surface of the B-cells recognise and bound the allergen. Thus less B-cells binding the allergen via the IgE results in less allergic reaction. Therefore the decrease in this parameter is considered a marker of the good desentisisation process. Figure 17 shows the dose-dependent effect of the treatment on the decrease of the percentage of allergen-IgE complexes bound to B cells. This parameter decreases by 17% after a 2-week treatment, by 19% after a 3-week treatment and by 26% after a 4-week treatment (p<0.001 for the 3 treatment groups, Wilcoxon test) while no significant change was observed in the placebo group.

Figure 17: evolution of the percentage of allergen-IgE complexes bound to B cells during the gp-ASIT+ $^{\text{TM}}$  treatment





Note: "\*\*\*" means p < 0.001 and that the results are therefore extremely significant. Specific IgE levels increased with the treatment but to a lesser extent than the production of Specific IgG4. Specific IgE levels increased 1.1, 1.6 and 1.5-fold in the patients who received 70, 170 and 370 µg of gp-ASIT+TM respectively, with a slight decrease in placebo group (p<0.001, Wilcoxon test).

Figure 18: increase in specific IgE in different treatment groups following the gp-ASIT+TM treatment

*Note:* "\*\*\*" means p < 0.001 and that the results are therefore extremely significant.

In conclusion, the study showed that subcutaneous treatment with gp-ASIT+TM at a cumulative dose of 70 to 370 µg was well tolerated by subjects with grass pollen allergy. No clinically relevant changes with respect to baseline in laboratory parameters, vital signs, or physical signs at examination were observed during the study. The gp-ASIT+TM injections induced transient local reactions which resolved spontaneously or with antihistamine treatment.



The results from this study showed that a significant improvement in CPT score is already observed after treatment with 170  $\mu g$  and that continuing treatment until 370  $\mu g$  does not further improve clinical benefit. This observation fully confirms the results obtained in phase IIa clinical study BTT-gpASIT007 where the treatment with 490  $\mu g$  of gpASIT+TM had no further clinical benefit compared to treatment with 150  $\mu g$  gpASIT+TM.

This study confirmed that  $gpASIT^{+TM}$  induces grass pollen-specific IgG4 antibodies and blocking antibodies in a dose-dependent manner.

Both studies lead to the same conclusions:

- gp-ASIT+<sup>TM</sup> is safe and well-tolerated. The most frequently reported adverse events were local reactions at the injection site (transient and not related to the dose) and mild allergic reactions (also reported in placebo group of Phase IIb study);
- a 4-visit treatment with gp-ASIT+<sup>TM</sup> (leading to the administration of 150 μg in phase IIa study and to 170 μg in phase IIb study) induces a reduction of reactivity to CPT compared to baseline;
- phase IIb study shows that this reduction of reactivity is statistically significant compared to the evolution of reactivity observed in placebo group; and
- pursuing the treatment with 1 or 2 treatment visits does not further improve the clinical benefit for the patients.

Following the positive results of the phase IIb, the first Phase III study has been designed to demonstrate clinical efficacy over the peak of the pollen season in patients treated with the product candidate compared to patients receiving the placebo. Assessment of long-term clinical efficacy will require complementary phase III clinical studies longer than one year but such studies are not yet planned.

### Phase III study

The first phase III clinical study (code-named BTT-gpASIT009) has been designed based on the knowledge gathered during the clinical development of gp-ASIT+TM, mainly coming from the phase IIa and phase IIb studies: the results of these studies indicate that a dose of 170 µg appears to be optimal for confirming the clinical efficacy in this phase III pivotal trial.

This multicenter, randomized, double-blind, placebo-controlled study was performed in 57 centers in Belgium, the Czech Republic, France, Germany, Italy and Spain. 554 patients were randomly distributed between 2 groups, 182 patients were allocated to placebo and 372 patients were treated with gp-ASIT<sup>+TM</sup>. 9 patients withdrew their consent before starting meaning that 545 patients started the treatment and 28 patients discontinued during treatment phase, meaning that 517 patients received the entire course of treatment and were followed-up during the grass pollen season. Out of the 517 treated patients, 510 attended the last visit planned per protocol after the pollen season constituting the patient population for clinical efficacy assessment (171 patients in the placebo group and 339 patients in the gp-ASIT+<sup>TM</sup> group). The global retention rate between enrolment and last study visit was 93%.



The objective of this first phase III clinical study was to demonstrate the clinical efficacy of gp-ASIT+TM during one grass pollen season when administered subcutaneously prior to that season in patients suffering from hay fever. The primary endpoint was the reduction (in the treated group compared with the placebo group) of the Combined Symptom and Medication Score (CSMS) which is the sum of the daily Rhinoconjunctivitis Total Symptom Score (RTSS) and the daily Rescue Medication Score (RMS) over the peak of the grass pollen season subsequent to treatment.

More precisely, clinical efficacy was analysed over the peak period (period of 2 consecutive weeks with the highest pollen count in the air) and over the entire pollen season, in the intention-to-treat population (ITT) and in the per protocol (PP) population. It was foreseen in the protocol to perform different statistical analyses according to the type of distribution of the data:

- 1. In case of normality of the data, only an ANOVA testing was performed
- 2. In the absence of normality:
  - a. If data could be normalized (square root), the ANOVA testing was performed on the normalized data
  - b. If it was impossible to normalise the data, a non-parametric analysis was performed.

The statistical distribution of the primary endpoint (CSMS) and related scores was extremely skewed, with a lot of very low values. Therefore, in order to keep the possibility to explore a full statistical model - i.e. "treatment effect, country effect and interaction" a parametric model (ANOVA) was selected on transformed scores (square root) when preparing the statistical analysis plan. Given the fact that, even after the square root transformation, the scores were still somewhat non-Gaussian, a non-parametric analysis was performed to check the first results. Both p-values of the parametric and non-parametric testing show that there is a treatment effect. The fact that the p-value of the ANOVA model did not reach the assumed threshold (p<0.05) is due to the low level of symptoms in the placebo group and limited number of evaluable patients compared to the full set of analyzable data. As parametric testing eventually did not appear to be entirely reliable, the non-parametric testing prevails as it is valid in any circumstance.

Reduction of CSMS during the grass pollen peak and during the entire pollen season are illustrated table below. As recommended by Regulatory Authorities and guidelines:

- An analysis was performed on the patient population (310 during peak period and 159 during the entire pollen season) having entered for all the days of the considered period the complete set of daily symptom scores and drug consumptions in their diaries (data called "Observed cases")
- Another analysis was performed on the patients population including the Observed cases plus patients for which a limited number of data were missing (400 during the peak period and 296 during the entire pollen season); the hypothesis to complete the missing data are as follows:
  - in case of missing data regarding oral corticosteroid intake are considered as not having being taken



- in case of missing data for the daily symptom score of 50% or less of the days within the considered period, missing daily symptom score are replaced by the mean of the available daily symptom score within the considered period.

These imputation rules, wich have of course been defined before the unblinding of the database, do not impact positively the reduction of the CSMS (see table below), but allows a statistical analysis on a larger number of evaluable patients.

Observation Analysis period		CSMS reduction in gpASIT+ group vs placebo	P value with non- parametric test	P value with parametric test
Peak period	With imputation: N=400	15.5%	p<0.05	Trend but not significant
T can periou	Observed cases N=310	15.7%	Trend but not signifi- cant	Not significant
Entire pollen	With imputation N=296	17.9%	p<0.05	Not significant
season	Observed cases N=159	21.1%	Trend but not signifi- cant	Not significant

Overall, even though the 20% CSMS reduction threshold objective that was mentioned in the Offering prospectus was not reached, the 15% to 21 % reduction in the CSMS reached in this phase III study can be regarded as positive results taking into account the very good consistency between the different symptoms score, the immunogenicity results and an atypical pollen season (only one – usually very short - peak early in the season, large discrepancy in pollen counts between centers). Considering the non-Gaussian characteristic of the distribution of the CSMS data, the trend but absence of statistically significance of the CSMS data calculated with the parametric model does not put in question the relevance of the non parametric statistical analysis model. Therefore, considering the p<0.05 for the values "with imputation " of 15,5% and 17,9%, these figures can be considered as statistically significant.

After treatment with gp-ASIT+<sup>TM</sup>, the RTSS improved significantly by 18.5% (P<0.05) during the pollen peak and by 15.6% during the entire season compared with placebo (Mann-Whitney test, intention-to-treat population: 171 patients in placebo and 339 patients in treated groups).

Observation period	Analysis	RTSS reduction in gpASIT+ group vs placebo	P value with non- parametric test
Peak period	Observed cases N=434	18.5%	p<0.05
Entire pollen season	Observed cases N=340	15.6%	Trend but not signifi- cant

In order to contrast these results with key competitors in the AIT field, we have analyzed the corresponding results in the FDA submission report of Oralair and Grazax.



		Grazax											
RTSS	GT-07		GT-02		GT08		GT-14		P05238		Weighted mean		
	season	peak	season	peak	season	peak	season	peak	season	peak	season	peak	
N placebo	39	NR	129	127	286	281	150	143	207	201	811	752	
N traité	68	NR	131	131	282	278	139	137	184	183	804	729	
Placebo	3,0	NR	2,9	4,2	4,1	5,3	6,1	6,5	4,7	5,2			
Treated	2,3	NR	2,5	3,6	2,9	3,8	5,7	6,0	3,8	4,2			
relative reduction	-25%	NR	-15,74%	-15,53%	-31%	-28%	-6,18%	-7,72%	-18,30%	-21,00%	21,00%	20,00%	
p value	0,0503	NR	0,071	0,047	<0,0001	<0,0001	0,348	0,265	0,015	0,003			

		gpAST						
RTSS	V061.08 (US)	V034.04	V053.06 Y1	V053.06 Y2	V053.06 Y3	Weighted mean	ВТТ	009
	season	season	season	season	season		season	peak
N placebo	228	148	205	172	165	918	171	
N traité	208	136	188	160	149	841	33	39
Placebo	4,2	4,9	4,3	3,8	3,6		3,2	4,5
Treated	3,2	3,5	3,8	2,6	2,2		2,7	3,7
relative reduction	-22,90%	-28,20%	-11,00%	-31,40%	-38,50%	25%	-15,60%	-18,50%
p value	0,004	0,0001	ns	<0,0001	<0,0001		0,07	0,013

These data show that the 18.5% reduction in RTSS after gpASIT treatment is close to the 20% reduction reported for Grazax over the peak period. Similarly, gpASIT induce a reduction of 15.6% in RTSS over the entire pollen season. The values reported for the various studies performed with Grazax are from 6.1% to 31% and for Oralair from 11% to 38%.

Reactivity to a conjunctival provocation (CPT), used as secondary endpoint of efficacy, was assessed before and after treatment phase. Reactivity to CPT decreased significantly in 60.0% of gp-ASIT+<sup>TM</sup>-treated patients compared with 35.6% in the placebo group (p<0.0001, Chi-square test).

The reduction of the CPT score was of 23% in the placebo group and 41% in the gp-ASIT+ $^{TM}$  group *i.e.* a 19% difference, using a 3-point scale (as in our phase IIb study) and 13% using a 4-point scale (as was used in this study). The limited impact of the treatment on the CPT compared to our previous clinical studies seems to be due to a higher placebo effect in this phase III study.

The impact of gp-ASIT+<sup>TM</sup> on the humoral immune responses, was assessed in a subgroup of 32 patients after treatment period and at the end of the grass pollen season. The data confirmed those obtained in previous studies:

- Blunting of the seasonal increases in specific-IgE were observed in the gp-ASIT+TM-treated group.
- A 4-fold increase in specific IgG4 levels were increased in the gp-ASIT+TM-treated group after treatment and remained elevated after grass pollen season compared to baseline.
- In addition, allergen-IgE complexes bound to B cells were decreased at after treatment (p=0.0003)
  compared to baseline in the gp-ASIT+TM-treated group, reflecting the production of blocking antibodies.

No change in specific IgG4 level, no inhibitory activity for facilitated allergen-IgE binding to B cells were



observed in the placebo group.

The company intends to seek scientific advice from the PEI on the adequacy of the full results of this first phase III study (including safety data arising out of the sub-cutaneous grass pollen clinical development) to support a marketing authorisation application for gp-ASIT+TM in Germany.

Due to the indication, particular attention has been paid to the occurrence of systemic allergic reactions (SAR) in BTT-gpASIT009 study. Safety data are summarized in the table below.

Systemic allergic	Plac	cebo	gpASIT+ <sup>TM</sup>			
reaction	Total N patie	ents = $177 (*)$	Total N patients = $368$ (*)			
(WAO class)	N Events	N Patient (%)	N Events	N Patient (%)		
Grade 1	9	8 (4.5%)	94	61 (16.6%)		
Grade 2	1	1 (0.6%)	21	19 (5.2%)		
Grade 3	0	0 (0%)	1	1 (0.3%)		
Grade 4	0	0 (0%)	1	1 (0.3%)		

(\*) 554 patients were randomized, but 9 patients withdrew their consent before starting meaning that 545 patients started the treatment.

The above table presents the five-point grading system proposed by the World Allergy Organization to classify subcutaneous immunotherapy systemic reactions. Each grade is based on organ system involved and severity. Briefly, grade 1 SAR comprises reactions from a single organ system such as cutaneous, conjunctival, or upper respiratory (except asthma), gastrointestinal, or cardiovascular. A SAR will be identified as grade 2 or 3 whenever symptoms/signs are detected from more than 1 organ system or asthma, gastrointestinal, or cardiovascular. Grade 4 is defined by a respiratory failure or hypotension (with or without loss of consciousness), and grade 5 by death (Cox L., Larenas-Linnemann D., Lockey R., Passalacqua G., et al., "Speaking a Common Language in Grading Subcutaneous Immunotherapy Systemic Reaction Grading Systemic Reactions: World Allergy Organization Subcutaneous Immunotherapy Systemic Reaction Grading System", Journal of Allergy and Clinical Immunology, 2010(3); 125:569-574).

Out of 127 systemic allergic reactions, 103 events were mild grade 1 and 22 events were grade 2 SARs. It has to be noted that 9 grade 1 SAR and 1 grade 2 SAR were reported in patients who received placebo (see table above). The frequency of SAR and the severity did not increase with the injected dose. The grade 3 and grade 4 SARs occurred at the first treatment visit.

Throughout the study, safety information was provided to the Data Safety Monitoring Board (*DSMB*) that reviews cumulative study data to evaluate safety, study conduct, and scientific validity and integrity of the trial.

The DSMB is an independent group of experts that advises the Company and the study investigators and monitors the safety aspects of a investigational product such as gpASIT. As part of this responsibility, DSMB members must be satisfied that the timeliness, completeness, and accuracy of the data submitted to them for review are sufficient for evaluation of the safety and welfare of study participants. The DSMB should also assess the performance of overall study operations and any other relevant issues, as necessary.



From the start of the treatment period of study BTT009, the DSMB has held a weekly meeting since January 25, 2016 to review all adverse event with a particular attention local reaction at the ite of injection. At the end of the treatment phase, the DSMB concluded that it was pleased with the good efficiency of the safety physician and the company's team in promptly providing it with all information needed to assessing the safety study.

The frequency of systemic allergic reactions reported at the end of the treatment phase in BTT-gpASIT009 study are in line with what was observed during previous clinical studies as illustrated in the table below.

	Classification	N Patients exposed to gpASIT+ <sup>TM</sup>	SAR G1 (% pat)	SAR G2 (% pat)	SAR G3 (% pat)	SAR G4 (% pat)	Epinephrine (% pat)
BTT007 (Ph. IIa)	AWMF	65	3.1 %	6.1 %	0	0	0
BTT008 (Ph. IIb)	WAO	152	13.1 %	7.9 %	0	0	0
BTT009 (Phase III)	WAO	368	16.6 %	5.2 %	0.3 %	0.3 %	1.1 %

The total number of epinephrine injections that were required in the frame of BTT009 study is unchanged:

- 1 epinephrine injection was administered to 2 different Spanish patients who had a grade 1 systemic reaction each. The injection for a grade 1 systemic reaction is part of the Spanish standards of care to treat immunotherapy-induced systemic reaction as of its onset. This recommendation is not applicable in the other EU countries where a grade 1 systemic reaction would be treated with antihistaminic drug. These two events are reported in the table as 2 epinephrine injections;
- 1 epinephrine injection was administered to 1 patient having a grade 2 systemic reaction in the Czech Republic because of high blood pressure occurrence reported by the investigator. This event is reported as 1 injection;
- 1 epinephrine injection was administered to 1 patient with a grade 4 systemic reaction in Germany because of blood pressure drop. This event was reported as moderate in severity.

In addition systemic reaction frequency seems to be in line with the frequencies that are described in the litterature (see overview in the below table).

Comparative table of the % of patients with SARs

			SAR G1	SAR G2	SAR G3	SAR G4	Epinephrine		
	Classif.		% of patients						
	Cochrane <sup>(1)</sup>	EAACI	nr	22	7	0.7	3.41	Calderon et	
Meta-analysis	(1) based on 51 publications, 2,871 participants (1,645 active, 1,226 placebo) each receiving on average 18 injections.								
Cluster admi-	Aquagen SQ (ALK) – several allergens	EAACI	24	22	5	2	4	Mellerup et	
nistration	Alutard SQ (ALK) – several allergens	LAACI	21	20	3	0.2	0.4	al. 2000	



Classical	Alutard SQ (ALK) – grass	EAACI	10.8	17.2	4.4	0	0	Frew et al. 2006
administration	AVANZ (ALK) – grass/birch/trees	Abritrary	nr	5.1	3	1.4	0	Hauswald et al. 2013

However, considering the relatively limited number of treated patients, a post-authorisation safety study is likely to be requested by the PEI at the time of approval. Therefore the Company intends to collect safety data in the framework of a likely PASS study (Post Authorisation Safety Study), with the commercialised treatment. A follow-up of patients treated with gp-ASIT+TM in BTT009 during subsequent seasons is not planned.

The Company also intends to initiate the clinical development of gp-ASIT+<sup>TM</sup> in the United States as soon as possible. Contact has been initiated with the FDA in Q2 2016 and ASIT biotech has received the FDA's initial comments regarding the gp-ASIT+<sup>TM</sup> Master File. These include very useful recommendations regarding the product's quality and the launch of a first clinical trial in the United States. ASIT biotech will interact with the FDA during year 2017 in order to file an IND program for a clinical trial whose phase will depend on the conclusion of the Company's interaction with the FDA.

Moreover, ASIT biotech has reached an agreement with SynteractHCR, a CRO (Contract Research Organization) acknowledged for its expertise in running clinical trials in the field of respiratory disorders. This agreement foresees, in compliance with the budget presented at the time of the IPO, the preparation and execution of the next clinical trials, from the selection and auditing of sites up to the analysis of clinical data. ASIT biotech is therefore ready – subject to the FDA's definitive approval – to initiate its first clinical trials in the United States.

Lastly, in order to address the specificities of North American clinical developments, ASIT biotech has set up a Committee of experts notably comprising Dr. Linda Cox, Past President of the American Academy of Allergy, Asthma & Immunology (AAAAI) and of the immunotherapy and allergy diagnostics committees of both the AAAAI and the ACAAI (American College of Allergy, Asthma & Immunology), and Dr. Peter Creticos, former Director of the Division of Allergy and Clinical Immunology of the Johns Hopkins University School of Medicine, and now clinical Director of research for his own entity and who has worked with governmental agencies and industry to design, develop, and conduct clinical research on the therapeutic efficacy of new drugs or underlying mechanisms of allergen immunotherapy. These recognized leaders in the field of allergy and immunology will contribute their extensive expertise to the preparation and monitoring of the clinical trials undertaken by ASIT biotech in the United States.

In conclusion, the results of the phase III show that gp-ASIT+<sup>TM</sup> induced a 15% to 21 % reduction in the CSMS, which is only slightly below an originally defined 20% threshold corresponding to an acceptable real-life clinical benefit as mentioned in the Offering prospectus. Furthermore, complementary analysis performed on blood cells of a subset of the patients (10 placebo and 22 gp-ASIT+<sup>TM</sup> treated patients) at the Imperial College of London elucidate a clear and consistent mechanism of action of gp-ASIT+<sup>TM</sup>.

These results are considered as positive by the Company because they confirm with a good consistency :a clinical efficacy in real life conditions, the,safety and immunogenicity of gp-ASIT+<sup>TM</sup>. Moreover, these results are in line with the data reported for competing products and also with the data of the previous



studies.

The very good consistency of the overall results of the Company's lead product clinical development will allow further discussions with German authorities towards regulatory approval and with US authorities regarding the clinical development strategy for this important market. The Company is currently submitting to the PEI a briefing package including the results of the Phase III for scientific advice on the sufficiency of these results to support a marketing authorization. Depending on the opinion of the PEI on the results, the Company could be requested to proceed to a complementary Phase III clinical study in adult before the issuance of the marketing authorization. Considering the delay in the discussion with the FDA and the incertainty on the clinical development in the US, a second phase III can be planned before 2019. Therefore, if the PEI is of the opinion that a second Phase III is needed, it would be performed in adult in several European countries in 2018.

Finally, the Company is in the opinion that these results reduce the risk related to the future development of gp-ASIT+<sup>TM</sup>.

Should the Company be authorised by the PEI to submit a marketing authorization application for its products in Germany, the next study to be performed in Europe would be a pediatric Phase III study. Such study could be used to support a Mutual Recognition Procedure in France, Sapin and Italy.

### 7.9.3 HDM-ASIT+TM

## > Product description

The product candidate consists in a mixture of natural peptides (ranging from 1,000 to 10,000 kDa) obtained from the purified specific allergen extracted from Dermatophagoïdes pteronyssinus.

### > Target product profile

Based on the similarities with the gp-ASIT+<sup>TM</sup> product issued from the same ASIT+<sup>TM</sup> platform, the target product profile of hdm-ASIT+<sup>TM</sup> product should consist of:

- a ready to use natural allergen-fragment based product;
- an adjuvant free product;
- a safety profile in line with best-in-class products;
- a very short treatment regimen, prior to allergen exposure;
- a rapid onset of action, both on symptomatic and immunological parameters; and
- a superior real life effectiveness during natural house dust mite exposure.

All these characteristics need to be confirmed during the clinical development of the product candidate.



## > Competitor products in house dust mite immunotherapy

The existing immunotherapy products are based on the whole allergen obtained via extraction or by genetic engineering. These products are at risk to induce systemic allergic reaction. As a result, the administration schedule is long and the immunogenicity of the product should be enhanced by adding adjuvants to the formulation. To its knowledge, the Company is the only one focusing on the development of novel naturally derived active ingredients with superior antigenicity. For this type of products, the administration schedule should be short compared to other immunotherapy products. A comparison of the subcutaneous products in the field of the house dust mite allergy is presented below.

Figure 19: comparison of the subcutaneous products in the field of the house dust mite allergy

			Treatm	ent course	
	Company	Name	Esc. (weeks)	Maintenance. (months)	Use of adjuvant?
	ALK-Abello	Alutard°	8	36	/
Current existing	HAL Allergy	Purethal <sup>®</sup> Mites	8	36	1
treatments	HAL Allergy	Depot-HAL° Mites	8	60	1
	Stallergènes	Phostal®	13	60	1
	Stallergènes	Alustal <sup>e</sup>	13	60	<b>✓</b>
	LETI Laboratorios	Depigoidl <sup>®</sup>	4	24	~

# House dust mite

	Company	Phase	Treatme	Use of	
On-going development	Name		Esc. (weeks)	Maintenance. (months)	Use of adjuvant?
	ASIT biotech hdm-ASIT+™	Phase I/II	3	0	*
	Circassia HDM-Spire°	Phase IIb	12	0	ж

As in the grass pollen immunotherapy the same innovations are being applied (see Section 9.6.2 (c)) though the Company believes that none of these above mentioned products are today likely to overcome the current drawbacks of immunotherapy.

### > Preclinical development and key results

The characterisation and quality control tests of the manufacturing process have been developed and were qualified by the CMO by the end of Q4 2015. The manufacturing process was transferred to the CMO,



which has released a GMP clinical batch during Q1 2016. No scaling-up is necessary at this stage of development.

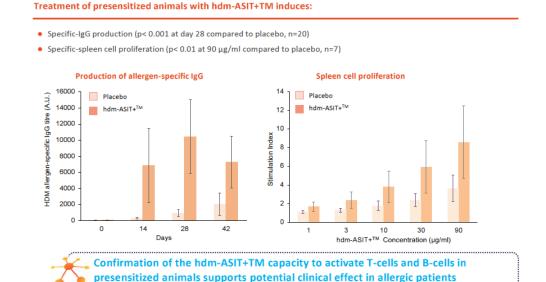
Preclinical studies include assessment of the immunogenicity and toxicity of the investigational product manufactured under the same procedures and meeting the same specifications as products intended for use in human studies (*ex vivo* study and planned clinical trial). The first phase of regulatory required preclinical development of hdm-ASIT+TM was completed by the end of 2015. First, the capacity of the hdm-ASIT+TM allergen fragments to stimulate the humoral and cellular responses following subcutaneous injections has been illustrated in animal model. As for gp-ASIT+TM, the purposes of the pharmacological study in animal model was to demonstrate the capacity of hdm-ASIT+TM to stimulate the B- and T-cells compartment of the immune system in mice pre-sensitised with native house dust mite proteins. For this purpose, presensitised mice were treated with 6 sub-cutaneous injections of hdm-ASIT+TM over a period of 3 weeks.

As shown in the following figures, the treatment with hdm-ASIT+<sup>TM</sup>:

- induces the production of native allergen-specific IgG (p< 0.001 (day 28), compared to placebo),
- stimulates the proliferation of spleen cells incubated in vitro with increasing doses of hdm-ASIT+<sup>TM</sup> peptides (p< 0.01, compared to placebo) but not with native allergens (p> 0.05, compared to placebo).

Figure 20: confirmation of immunogenicity in animal models

## hdm-ASIT+™: confirmation of immunogenicity in animal models



These data confirm the capacity of hdm-ASIT+<sup>TM</sup> to stimulate the B-cell and the T-cell compartments of immune system in a sensitised animal model. They also suggest that a treatment with hdm-ASIT+<sup>TM</sup> of house dust mite allergic patients may result in a T-cell mediated induction of house dust mite allergen-specific IgG.

Particular attention has also been paid to the demonstration that hdm-ASIT+<sup>TM</sup> allergen fragments are less allergenic (lower capability to induce allergic reaction) than whole allergens. Reduced allergenicity has been confirmed in *in vitro* model by comparing the binding of hdm-ASIT+<sup>TM</sup> with the binding of whole allergens to house dust mite allergen-specific human IgE antibody pool.

The design of general toxicity and local tolerance studies is based on the program developed for grass pollen allergen fragments. Due to the low molecular weight of peptides in the product, significant toxicity is not anticipated. Absence of toxicity and good local tolerance of hdm-ASIT+TM has been confirmed in an animal through assessment of clinical observations, body weight, food consumption, ophthalmoscopic assessments, urinalysis, blood chemistry, haematology, histopathology (according to EMA guidelines: CPMP/SWP/1042/99), and other immunotoxicity parameters, inclusing allergen-specific IgG and IgE production.

## **➤** Clinical development First human study (Phase IIa - hdmASIT001)

Following the completion and evaluation of the first phase of regulatory required preclinical studies completed in Q4 2015, the Company has filed in Q2 2016 the clinical trial documentation for the phase IIa clinical study with hdm-ASIT+TM in Germany. The Company has received the approval of the Paul Ehrlich Institute (German Regulatory Authority) for this first human clinical study in September 2016. The primary objective of this study was the determination of the maximum tolerated dose of hdm-ASIT+TM in adult patients with a clinical history of house dust mite allergy. The following endpoints have been assessed:

- determination of the maximum tolerated dose;
- safety and clinical tolerability of the product;
- impact of the treatment on immunological parameters;
- impact of the treatment on the reactivity to an allergen provocation test.

The patients received increasing doses of hdm-ASIT+TM under close medical supervision. The patients received two subcutaneous injections during the same treatment visit with the same schedule as the one applied in the gp-ASIT clinical development. The phase I/II clinical trial has assessed safety and immunogenicity but has not been powered to assess efficacy. However, the comparison of the reactivity of the patients to the allergen provocation tests performed before and after treatment provided the first evidence of the effect of the product candidate on house dust mite allergy.

40 patients have been screened on the basis of a positive house dust mite allergen skin prick test with detectable house dust mite-specific IgE in the blood and positive baseline allergen provocation test. Out of them 36 patients have been randomized and 33 patients finished the study mid January 2017.

The Company announced on 4 April 2017 that it has achieved the primary endpoint of the phase I/IIa clinical trial with its hdm-ASIT<sup>+TM</sup> product candidate for house dust mite rhinitis. The trial's primary endpoint was achieved, insofar as hdm-ASIT<sup>+TM</sup> showed, at this stage, a good safety and tolerability profile for the product candidate. No serious or unexpected adverse treatment-related event was observed during the trial, even at the highest allergen dose of 200 µg, which was 200 times greater than the first dose administered.



The two groups were comparable at baseline for all the tested parameters, with the exception of house dust mite allergen-specific IgE antibodies, which were substantially lower in the treated group than in the place-bo group.

Assessing hdm-ASIT<sup>+TM</sup>'s impact on the immune system and on the reduction of the reactivity to a conjunctival provocation test (CPT) were amongst the secondary objectives. A positive effect was observed on the immune system in a limited number of patients. However, there was no difference overall between the treated group and the placebo group with regard to immunogenicity parameters. Lastly, the trial showed a somewhat stronger reduction in CPT reactivity in the treated group compared to the placebo group. The study was not powered to show statistical significance. The absence of a larger reduction can be explained by a substantial response to placebo (55%), the limited number of patients, the short observation period in this perennial disease and/or the nature of the product.

## > Furhter clinical development

The relationship between the dose and the clinical efficacy of the hdm-ASIT+TM will be assessed in a future classical randomised, double blind, placebo controlled phase IIb dose ranging study, including 4 regimen of 60 patients each. The clinical doses of hdm-ASIT+TM to be used will be defined on the basis of the phase I/II study.

As above-mentioned, the understanding of the mechanism of action of gp-ASIT+TM constitutes an outstanding strategic asset of the ASIT+TM technology allowing now a rational design of other pipeline products candidates targeting important allergies. Therefore, the current hdm-ASIT+TM product will be tested as well as other ASIT product derived from natural source of house dust mite allergens ex vivo on the blood cells of allergic patients in the framework of a rational design program performed in close collaboration with Dr M. Shamji from the Imperial College of London. Complementary preclinical development will also be performed in animal with the current product.

This ex vivo study would allow the understanding of the mechanism of action of the current hdm-ASIT+<sup>TM</sup> or the selection of a second product more appriopriate to fit with the specifications of the above-mentioned target product profile.

Further clinical trial with hdm-ASIT+<sup>TM</sup> will be postponed until equivalence between immunoligical properties of hdm-ASIT+<sup>TM</sup> and the ones of gp-ASIT+<sup>TM</sup> would have been confirmed. This confirmation is intended to be completed by the end of 2017. In the meantime, as the commercially available house dust mite CPT solution has been demonstrated to induce a very high placebo effect, an in house ASIT CPT solution would be designed and validated in order to a have better early stage clinical trial surrogate efficacy marker.

### 7.9.4 RAG-ASIT+TM

### > Product description

The product candidate consists in a mixture of natural peptides (ranging from 1,000 to 10,000 kDa) obtained from the purified specific allergen extracted from ragweed (Ambrosia ambrosioides) pollen.



## > Target product profile

Based on the similarities with the gp-ASIT+<sup>TM</sup> and hdmASIT+<sup>TM</sup> product issued from the same ASIT+<sup>TM</sup> platform, the target product profile of rag-ASIT+<sup>TM</sup> product should consist of:

- a ready to use natural allergen-fragment based product;
- an adjuvant free product;
- a safety profile in line with best-in-class products;
- a very short treatment regimen, prior to ragweed allergen exposure;
- a rapid onset of action, both on symptomatic and immunological parameters; and
- a superior real life effectiveness during natural ragweed exposure.

All these characteristics need to be confirmed during the clinical development of the product candidate.

## > Competitor products in ragweed immunotherapy

The existing immunotherapy products are based on the whole allergen obtained via extraction or by genetic engineering. These products are at risk to induce systemic allergic reaction. As a result, the administration schedule is long and the immunogenicity of the product should be enhanced by adding adjuvants to the formulation. To its knowledge, the Company is the only one focusing on the development of novel naturally derived active ingredients with superior antigenicity. For this type of products, the administration schedule should be short compared to other immunotherapy products. A comparison of the subcutaneous products in the field of the ragweed allergy is presented below.

Figure 21: comparison of the subcutaneous products in the field of the ragweed allergy

			Treatm	ent course	Use of	Mode of
	Company	Name	Esc. (weeks)	Maintenance (months)	adjuvant ?	admnistration
Current existing	Allergy Therapeutics	Pollinex-R	3	0	V	SCIT
treatments	Alk-Abello	Ragwitek	12	4	X	SLIT - tablets
	Hal Allergy	SUBLIVAC	1	36	X	SLIT - drops
	Stallergenes	Stallergenes SAIL TM		4	X	SLIT
	Stallergenes	Alustal	12	36	V	SCIT



	Company	Name	Treat	ment course	Use of	Mode of
			Esc. (weeks)	Maintenance (months)	adjuvant?	admnistration
On-going	Anergis	Aller R	Preclinic	al development	V	SCIT
development	Biomay	BM34	Preclinic	al development	V	SCIT
	Circassia	Ragweed- SPIRE	16 0		X	SCIT
	Hal Allergy	PURETHAL	Preclinic	al development	V	SCIT

As in the grass pollen immunotherapy the same innovations are being applied (see Section 7.9.2) though the Company believes that none of these products are today likely to overcome the current drawbacks of immunotherapy.

## Preclinical development and key results

The characterisation and quality control tests of the manufacturing process have been developed and were qualified by the CMO by the end of Q3 2016 at the industrial scale. The manufacturing process was transferred to the CMO, which has released a GMP clinical batch during Q4 2016. No further scaling-up is anticipated at this stage of development. The manufacturing of the drug product is ongoing.

Preclinical studies include assessment of the immunogenicity and toxicity of the investigational product manufactured under the same procedures and meeting the same specifications as products intended for use in human studies (*ex vivo* study and planned clinical trial). The first phase of regulatory required preclinical development of rag-ASIT+TM was completed by the end of 2016.

First, the capacity of the rag-ASIT+<sup>TM</sup> allergen fragments to stimulate the humoral and cellular responses following subcutaneous injections has been illustrated in animal model. As for gp-ASIT+<sup>TM</sup> and for hdm-ASIT+<sup>TM</sup>, the purposes of the pharmacological study in animal model was to demonstrate the capacity of rag-ASIT+<sup>TM</sup> to stimulate the B- and T-cells compartment of the immune system in mice pre-sensitised with native house dust mite proteins.

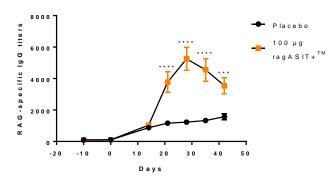


Figure 22: Production of ragwwed specific IgG

Data are presented as mean  $\pm$  SEM where ns = not significant, \* = p < 0.05; \*\* = p < 0.01, \*\*\* p < 0.001 and \*\*\*\* = p < 0.0001.



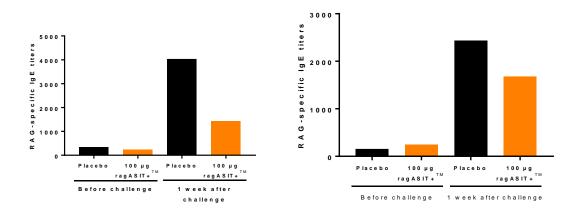


Figure 23 Ragweed specific IgE in pooled serum 1 week after Day 28 IP challenge with native ragweed allergens following  $ragASIT+^{TM}$  treatment

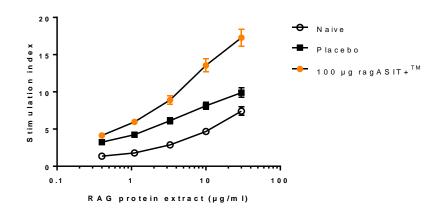


Figure 24 Spleen cell proliferation 1 week after Dayv 28 IP challenge with native ragweed allergens following  $ragASIT+^{TM}$  treatment

These data confirm the capacity of rag-ASIT+<sup>TM</sup> to stimulate the B-cell and the T-cell compartments of the immune system in a sensitized animal model. They also suggest that a treatment with rag-ASIT+<sup>TM</sup> of ragweed allergic patients may result in a T-cell mediated induction of ragweed specific IgG. In addition, the reduced IgE titer in polled serum of ragASIT+<sup>TM</sup> treated group may result from the inhibition of the production of ragweed-specific IgE or from the competition between the sensitization-induced IgE and the **ragASIT**+<sup>TM</sup> treatment-induced blocking antibodies.

Particular attention has also been paid to the demonstration that rag-ASIT+<sup>TM</sup> allergen fragments have a better safety profile than whole allergens. Reduced allergenicity (lower capability to induce allergic reaction) has been confirmed *in vitro* by comparing the binding of rag-ASIT+<sup>TM</sup> with the binding of whole allergens to ragweed allergen-specific human IgE antibody pool.

The design of general toxicity and local tolerance studies is based on the program developed for grass pollen and house dust mite allergen fragments. Due to the low molecular weight of peptides of the active ingredient, significant toxicity is not anticipated. Absence of toxicity and good local tolerance of rag-



ASIT+TM has been confirmed in an animal through assessment of clinical observations, body weight, food consumption, ophthalmoscopic assessments, urinalysis, blood chemistry, haematology, histopathology (according to EMA guidelines: CPMP/SWP/1042/99), and other immunotoxicity parameters, including allergen-specific IgG and IgE production.

## ➤ Clinical developmentFirst human stduy (Phase IIa - ragASIT001)

Clinical developmeny with rag-ASIT+<sup>TM</sup> will be postponed until equivalence of immunoligical properties of rag-ASIT+<sup>TM</sup> and the ones of gp-ASIT+<sup>TM</sup> would have been confirmed. This confirmation is intended to be performed ex vivo on the blood cells of allergic patients in the framework of a rational design program performed in close collaboration with Dr M. Shamji from the Imperial College of London. Complementary preclinical testings are currently ongoing in animal.

In the meantime, no commercial ragweed CPT solution has been validated, an in house ASIT CPT solution would be designed and validated in order to have an early stage clinical trial surrogate efficacy marker. Considering the high prevalence of ragweed induced rhinoconjonctivitis in the US, the clinical development of rag-ASIT+<sup>TM</sup> will start in the US. US KOL have already been contacted in order to start feasability studies The first clinical development would intend to validate in the US a CPT solution to be used as clinical efficacy surrogate marker in further rag-ASIT+<sup>TM</sup> clinical studies.

The primary objective of the first in man study will be the determination of the maximum tolerated dose of rag-ASIT+TM and assessment of the safety profile in adult patients with a clinical history of ragweed allergy. The following endpoints will be assessed:

- determination of the maximum tolerated dose;
- safety and clinical tolerability of the product;
- impact of the treatment on immunological parameters;
- impact of the treatment on the reactivity to a conjonctival provocation test as soon as the adequate solution is available

The patients will receive increasing doses of rag-ASIT+TM under close medical supervision. The patients will receive two subcutaneous injections during the same treatment visit, a schedule applied in the hdm-ASIT clinical development. The phase I clinical trial will assess safety and immunogenicity but will not be powered to assess efficacy. Neertheless, the comparison of the reactivity of the patients to the allergen provocation tests performed before and after treatment will provide the first evidence of the effect of the product candidate on house dust mite allergy.

### 7.9.5 FOOD-ASIT+TM

### Product description

The product candidate consists in a mixture of natural peptides (ranging from 1,000 to 10,000 kDa) obtained from the purified specific allergen extracted from:

- peanut



- cow's milk
- egg white.

### > Competitor products in food immunotherapy

There is currently no approved immunotherapy treatment aimed to induce tolerance for food allergens. The only available solution for patients suffering from food allergies is strict avoindance of the culprit allergen and use of antihistamines or epinephrin auto-injector in case of accidental exposure. Considering the high burden and anxiety generated by a constant food surveillance and the challenge of strict avoidance, a treatment inducing long-lasting tolerance in case of a contact with the allergen is of great interest.

Previous clinical trials of immunotherapy showed a high risk of systemic reactions potentially leading to anaphylactic life-threatening reactions. Therefore, new developments are based on long administration schedules with a slow increase over time of the allergen. These treatments rely on full-size allergens administrated via different routes. Clinical researches from speciallised hospitals in collaboration with universities and public health administrations generally favour the oral path. Pharmaceuticals companies also considered other modes of administration such as the subcutaneous and the epithelial route. In order to minimize allergenicity and systemic reactions while maximizing antigenic properties of the active ingredients, the Company is, to our knowledge, the only one to develop natural allergen-fragment based products. These products should be used in shorter periods of treatment compared to other active ingredients currently in development.

Two studies provide insight into sustained unresponsiveness following peanut OIT. In a study by Vickery and colleagues, 17 24 subjects were treated up to 5 years with peanut OIT, with a maintenance daily dose of 4000 mg peanut protein and a mean duration of 3.98 years (SD, 1.8 years). Twelve (50%) of 24 passed a peanut challenge to 5000 mg of peanut protein 1 month after stopping OIT, were considered to have achieved sustained unresponsiveness, and added unrestricted peanut to their diet. At baseline and at the time of the final peanut challenge, subjects who achieved sustained unresponsiveness had smaller skin test results, lower serum peanut-specific IgE antibody levels for peanut, Ara h 1, Ara h 2, and lower ratios of peanut-specific IgE/total IgE compared with subjects who did not achieve achieved sustained unresponsiveness.

Syed and colleagues showed that with a shorter duration of peanut OIT (24 months of daily dosing with 4000 mg of peanut protein), 20 of 24 (83%) treated subjects became desensitized, as determined by a peanut challenge while on OIT. However, after 3 months of strict peanut elimination, only 7 of 24 (29%) subjects passed the peanut challenge with 4000 mg of peanut protein. Following an additional 3 months of peanut avoidance (a total of 6 months after discontinuation of peanut OIT), 3 of those 7 subjects (12.5% of original treatment group) remained tolerant to peanut during a final peanut challenge. These observations suggest that sustained responsiveness to peanut following peanut OIT is likely dose-dependent and duration-dependent.

These 2 publications highlighted the transient effect of immunotherapy. As a consequence, a follow up of these patients is crucial and the use of a periodic boost should compensate a possible relapse. A comparison of the different products in development in the field of peanut, cow's milk and egg white allergies are



presented below.

	Company Allerg		gen Name	Treatment course			Mode of
		Allergen		Esc. (weeks	Maintenance (months)	Use of adjuvant?	admnistratio n
	Hal Allergy	Peanut	HAL- MPE1	?	?	V	SCIT
On-going	Aimmune Therapeutics	Peanut	AR101	22	3	X	OIT
development	Aimmune Therapeutics	Egg	/	Preclinical development		X	OIT
	DBV technologies	Peanut	Viaskin Peanut	/	12	X	
	DBV technologies	Milk	Viaskin Milk	/	12	X	EPIT
	DBV technologies	Egg	Viaskin Egg	/	12	X	

## > Target product profile

Based on the similarities with the gp-ASIT+<sup>TM</sup> product issued from the same ASIT+<sup>TM</sup> platform, the target product profile of food -ASIT+<sup>TM</sup> product should consist of:

- a ready to use natural allergen-fragment based product;
- an adjuvant free product;
- a safety profile in line with best-in-class products;
- a very short treatment regimen completed by boost at regular interval of time;
- a rapid onset of action, both on symptomatic and immunological parameters; and
- a superior real life effectiveness during natural house dust mite exposure.

All these characteristics need to be confirmed during the preclinical and clinical development of the three product candidates.

### > Development programme

The food-ASIT+<sup>TM</sup> product candidates will be designed in collaboration with Dr M. H. Shamji (Senior Lecturer in Immunology and Allergy) who has established the Immunomodulation and Tolerance Group established by within Allergy and Clinical Immunology Department at Imperial College of London lead by Professor Stephen Durham. The objective of this collaboration is to test the allergenicity and antigenicity of food-ASIT+<sup>TM</sup> product candidates on human ex-vivo food allergy model and optimize the safety/efficacy ratio of its new product candidates.



When the food-ASIT+<sup>TM</sup> product candidates with optimal safety/efficacy ratio will be selected, their immunogenicity and toxicity will be tested in animal model as required by regulatory authorities to be allowed to start in man clinical study. In parallel to the preclinical development, the production process and quality control procédure will transfer to an appropriate CMO to produce GMP clinical batches of drug subsntances and drug products.

Afterwards, the selected product candidates will be tested in the frame of clinical trials that will be performed in the frame work of a collaboration with Dr Stephen Till who is one of few specialist doctors accredited in Adult Allergy by the General Medical Council His current research interests include immunotherapy (desensitisation) and food allergy. The objective of this collaboration is to assess the safety and clinical impact of the product candidates on a food allergen provocation test

### 7.10 MARKETING AND COMMERCIALISATION

### 7.10.1 TARGETED MARKETS

The Company commissioned a strategic market access review by an independent third party organisation (Internal report, AVOS Consulting, 2015) that principally focused on the opportunities in the USA and four key EU countries - Germany, France, Spain and Italy. These countries have established AIT markets. An exploratory review was also conducted for China, providing an insight into potential expansion opportunities.

Based on numerous sources (VacZine Analytics - MarketVIEW: Allergic immunotherapy vaccines – Report VAMV012 (July-2014), various ALK-Abelló, Stallergènes and Allergy Therapeutics investor presentations), the value of the global allergy immunotherapy is estimated between EUR 900M and 1 Billion in 2015, of which Europe represents EUR 700 million. NPPs represent more than 90% of the wordwide sales. Germany represents about 39% of the European AIT market in terms of sales, followed by France (31%), Spain (10%) and Italy (10%) (ALK-Abelló IR presentation 6 December 2014). SLIT-tablets that have been registered in Europe in 2006 (Grazax, ALK-Abelló) and 2008 (Oralair, Stallergènes), still represent less than 10% of the total sales. The two market leaders are ALK-Abello and Stallergènes with respectively 33% and 31% of the total market.

As a result of the SCIT treatments currently administered in the United States, which mainly consist in solutions self-prepared by US allergists, the United States are estimated to represent about EUR 100 to 120 million in sales of AIT products (total revenues related to the allergy immunotherapy are estimated at USD 2 to 3 billion, taking into account the billing of US allergists), and the rest of the world (essentially Latin America, Japan, Russia, China) is estimated at less than EUR 100 million.

In terms of patients, circa 1.3 million patients (ALK-Abelló IR presentation January 2014) are currently treated in Europe with immunotherapy for allergic rhinitis while more than 6 million patients are not satisfied with their current treatment. The geographic distribution is as follows: 560,000 in Germany, 350,000 in France, 188,000 in Spain, 135,000 in Italy, and about 40,000 each in Austria, the Netherlands and Nordic countries (according to ALK-Abelló, and in particular their investor presentations of Dec-2012 and Jan-2014).

In the United States, it is estimated by ALK-Abelló (see their investor presentations of Dec-2012 and Jan-



2014) that there are about 3 million AIT-treated patients, while more than 6 million patients are eligible for this therapy. The market is dominated by SCIT with products self-prepared by the allergists before their injection representing more than 95% of the prescriptions. SLIT-tablets (Grastek and Ragwitek from ALK-Abelló and Oralair, from Stallergènes/Greer) have been registered in the United States as from 2014. Their market penetration is very low, with 500 prescriptions each week for Grastek, and even lower figures for Ragwitek (300) and Oralair (less than 100) (ALK-Abelló Investors Relations presentation Sep-2015). The immunotherapy treatments are associated with a low acceptance rate of 50% and a high drop-out rate of 80%.

First-line treatments only alleviate symptoms and there is presently no gold standard for AIT. It was hoped for some time that SLIT-tablet therapy would completely change the treatment paradigm. However, mainly due to compliance and patient convenience problems, SLIT-tablet sales still represent less than 10% of the current allergy immunotherapy market, despite numerous years on the market SCIT remains the preferred administration form, presenting a genuine opportunity for a short-course treatment that improves the ease of administration and thus competes very aggressively with oral treatments (for more detailed information, see Section 8.2.3 "Current immunotherapy treatments").

In Europe, the most frequently detected allergen in diagnosed allergic rhinitis patients is grass pollen (60 %) followed by house dust mite (52.5 %) and tree (40.4%) (Bauchau V & Durham SR. Prevalence and rate of diagnosis of allergic rhinitis in Europe. Eur Respir J. 2004 Nov 24 (5):758-64).

In the United States, the most frequently detected allergen in diagnosed allergic rhinitis patients is grass pollen (56%) followed by ragweed (49%) and house dust mite (45%) (ALK-Abelló, investors' briefing, Dec-2012).

## German market

## Market opportunity

Germany, which is the largest and most established AIT market in Europe, will be the first market targeted by the Company. The prevalence of allergic rhino-conjunctivitis is estimated at 21% of the population: 16.2% of the population has received a physician diagnosis of allergic rhinitis, among whom about 75% (12.3% of the population) are using medications (Bauchau V & Durham SR. Prevalence and rate of diagnosis of allergic rhinitis in Europe. Eur Respir J. 2004 Nov 24 (5):758-64). About 25% of the patients taking medication for allergic rhinitis are not satisfied by their treatment and have poor disease control (Marple et al, Otolaryngol Head Neck Surg, 2007, 136, 107-24). This translates into nearly 6.8 million and 5.7 million unsatisfied patients for grass pollen and house dust mite allergic rhino-conjunctivitis, respectively.

## **❖** Clinical treatment algorithm for AIT

In 85% of cases treatments are largely administered by allergists or physicians holding allergist certifications (which the Company estimates to be around 5,500 - about a third each are represented by ENTs and dermatologists, with the rest divided among pediatricians, pulmonologists, etc. with an allergy sub-specialty). Subcutaneous immunotherapy is the preferred route of administration, accounting for around 78% of the AIT market. Patients are typically treated on a mono-sensitisation basis but the long treatment periods characterised by frequent injections result in a drop-out rate of more than 50% by year 3



of treatment. The short treatment regimen of the ASIT+TM product candidates serves as a key differentiator to current subcutaneous products and absence of adjuvant is also expected to be a strong leverage point.

## **SCIT** management by payers

Germany has also seen a number of regulatory changes that have raised the barrier to entry of new AIT products, ultimately resulting in a consolidation of the market. The TAV (Therapieallergeneverordnung) process introduced in 2008 has been set out to rationalise the spectrum of historic Named Patient Products in circulation, which account for >50% of the market place. It is anticipated that a limited number of products for grass pollen will remain as a consequence of the requirement of a marketing authorisation (see further details in Section 8.3.3 "Current immunotherapy treatments"). As a result the market place will be less fragmented, ideally positioning the future potential ASIT+TM product candidates with a rapid onset of desensitisation and in a compliance-promoting formulation.

The approved products in Germany for grass pollen are available on the website of the Paul Ehrich Institute at the following URL: <a href="http://www.pei.de/DE/arzneimittel/allergene/therapie-allergene/subkutan/graeser/graeser-getreide-kraeuter-pollen-node.html; jsessionid=0083436D278121A8EF7FA2D7BEA9A932.1\_cid319.">http://www.pei.de/DE/arzneimittel/allergene/therapie-allergene/subkutan/graeser/graeser-getreide-kraeuter-pollen-node.html; jsessionid=0083436D278121A8EF7FA2D7BEA9A932.1\_cid319.</a>

There are currently a dozen approved grass/weed immunotherapy products in Germany, most of which have received their market autorisation prior to the introduction of the Medicinal Products Directive:

- 4 from ALK-Abelló (ALK-7 Gräsermischung, ALK-depot SQ 200 Gräsermischung, ALK-depot SQ 231 Roggen (rye), ALK-depot SQ 299 Gräsermischung, in different doses and combinations);
- 6 from Allergopharma (Allergovit 006 Gräser, Allergovit 015 Gräser, Allergovit 106 Beifuß, Allergovit 123 Glaskraut, Allergovit 158 Roggen, Allergovit 169 Wagerich);
- 1 from HAL Allergie (Purethal Gräser);
- 1 from BENCARD Allergie (TA Gräser).

Typically, these products that have received marketing authorisations are considered as Type 3 NPPs (see Section 7.3.3) and have received their marketing authorisation before the introduction of the Medicinal Products Directive, with the exception of Purethal. However, in addition to the products listed on the PEI-website, 93 products are marketed in the frame of the transitional procedure organised under the Therapy Allergens Regulation (including but not limited to Pollinex Quattro and Avanz group). As a consequence such products are allowed to be marketed in Germany until a final decision on their marketing authorisation application has been made. There is no time limit neither for the termination of the clinical studies nor for the final decision on the marketing authorization application.

The objective of the Company to access the German market is to rapidly gain parity reimbursement with current SCIT treatments.



### US market

## **Market opportunity**

The United States market is the largest potential commercial opportunity for the ASIT+™ product portfolio. Allergic rhinoconjunctivitis was the third leading chronic disease in the United States among those aged 45 and younger, and the fifth leading chronic disease across all ages (Chronic conditions – a challenge for the 21<sup>st</sup> century. National Academy on an Aging Society Washington DC, 1999, p. 2; The American Academy of Otolaryngology-Head and Neck Surgery Foundation (AAO-HNSF), Press release announcing a Clinical Practice Guideline on Allergic Rhinitis, Feb. 2015).

The prevalence of allergic rhinitis in the United States is estimated at 22%. Among responders with a higher burden of nasal symptoms (≥ 30 days in the last 12 months), the prevalence of physician-diagnosed hay fever, allergic rhinitis, or nasal allergies was 11.9% of the total population (Nathan et al., Allergy Asthma Proc. 2008; 29: 600-8). The use of medication for allergic rhinitis in the American population is 7.5% (U.S. Department of Health and Human Services - Centers for Disease Control and Prevention National Center for Health Statistics: Summary Health Statistics for U.S. Adults: National Health Interview Survey, 2012). The most frequently detected allergen in allergic rhinitis patients in the United States is grass pollen (56%) followed by ragweed (49%), house dust mite (45%) and tree (23%) (ALK-Abelló Investors' Briefing on December 6 2012). An estimated 6 million patients with grass pollen and house dust mite allergic rhino-conjunctivities each year are reported to be candidates for AIT, as symptomatic treatment alone is inadequate.

Referral patterns and treatment approaches are well-established and prescription is generally undertaken by allergy/immunology specialists for whom AIT remains the preferred treatment approach for those in which symptomatic therapies (e.g., non-sedating antihistamines, nasal steroids, etc.) offer inadequate relief.

In the US, patients are able to present directly to the specialist if so desired. Many others are referred to allergy specialists following initial presentation to their attending primary care physician.

Allergy/immunology as a specialty remains quite concentrated with approximately 5,500 board-certified specialists and as few as 3,500 physicians accounting for most of the AIT prescriptions today.

The US market today is still dominated by SCIT injections commercialised under a Named Patient Product status, accounting for 95% of AIT administration. SLIT modalities are also available in the US, including sublingual drops as an off-label practice and selected, recently-approved SLIT tablets including *Oralair* and *Grastek* (grass pollen induced allergic rhinitis) and *Ragwitek* (ragweed induced allergic rhinitis). Despite the clear medical need, it is estimated that only about 10% of the diagnosed allergy patients are treated with immunotherapy and there is still a very high rejection and drop-out rate of classical immunotherapy: 50% of the patients refuse to initiate treatment and 50% of the patients who started treatment discontinue treatment within 1 year (ALK-Abelló R&D and business briefing, New York, May-2014).

## **SCIT** management by payers

In the United States, specialty drugs such as allergy immunotherapy are typically reimbursed either as part



of the medical benefit offered to insured patients (typically office or hospital visits) or under the pharmacy benefit (which covers only the prescribed drug itself). The pharmacy benefit usually covers only self-administered drugs (mostly oral or inhaled, but also sometimes self-injectable) while the medical benefit covers drugs that are injected or infused by a health care professional in the doctor's office, hospital outpatient centre, free-standing infusion centre/clinic or by a mobile infusion therapy provider at home (Internal report, AVOS Consulting, 2015).

SCIT has traditionally been managed through the medical benefit rather than the pharmacy benefit. The physician administering the subcutaneous shot charges the insurance company for the administration as well as the cost of the immunotherapy shot itself. Accordingly, economic factors influence AIT treatment selection in two important ways.

First, unlike pharmaceutical products which are managed as part of the pharmacy benefit (such as symptomatic treatments and the new oral SLIT-tablets), payers typically do not outsource the management of their medical benefit to third-party administrators. Conversely, most drug reimbursement is closely supervised by Pharmacy Benefit Managers (PBMs) who have implemented strict cost control measures such as tiering (higher patient co-pays for expensive drugs), prior authorisation or restrictive formularies. Even when newer oral treatments (such as the SLIT-tablets) are reimbursed (i.e. included in the plan's formulary), most US payers insist on the patient trying SCIT first: for example United Healthcare, one of the largest national insurance carriers in the US, covers Grastek, Oralair and Ragwitek on Tier 3 formulary (i.e. with a high patient co-pay) but with a prior authorisation that requires use first of SCIT and care administered only by an allergy/immunology specialist. Since traditional AIT (subcutaneous AIT administered in the allergist's office) is considered as providing the patient with a clear medical benefit, payers have managed SCIT in a less restrictive manner than oral products such as SLIT-tablets.

Furthermore, US allergists/immunologists bill for procedural steps involved in testing, preparing, and administering SCIT injections. They are realising significant financial profits associated with SCIT administration. As a result, clinicians have little economic incentive to adopt new AIT technologies such as the oral SLIT-tablets, which are not clinician-administered but are dispensed by retail pharmacies and taken at home. Interviews suggest these issues as part of the explanation for why uptake of the SLIT tablets by clinicians has been quite limited.

# **Polysensitisation treatment approaches as a unique aspect to US treatment practices**

One aspect of AIT treatment which distinguishes US approaches as somewhat unique vis-à-vis other key commercial markets is the clinician preference to combine allergens into a multiple-extract cocktail in accordance with individualised conditions observed during allergy diagnostic testing. For patients who demonstrate sensitivity to multiple allergens, all of these allergen extracts are combined in the allergen mixing and preparation process within the clinic setting by physicians and their staff. In contrast, the treatment approach for AIT in other markets (especially in Europe) tends to be mono-allergen interventions because there is no demonstration of clinical effectiveness of multiple allergen desensitisation. Under these circumstances, products authorised on the basis of a full BLA file will clearly have an efficacy competitive advantage compared to self-mixed product. The Company has the ambition to offer US therapists in the future short-course treatments based on the ASIT+ TM platform for allergies to grass pollen and house dust



mites and also eventually ragweed, which are the top three most common allergens for which US patients are sensitized (Salo PM, Arbes SJ Jr, Jaramillo R et al. Prevalence of allergic sensitization in the United States: results from the National Health and Nutrition Examination Survey (NHANES) 2005-2006. *J Allergy Clin Immunol*. 2014;134(2):350-9).

New AIT technologies based on single-allergen agents such as SLIT-tablets have been introduced in the US market. Physicians needed to amend their treatment guidelines and protocols to accommodate a single-allergen immunotherapy approach for these products while likely continuing with polysensitisation approaches for other allergen types in multi-sensitised patients. Market research conducted by AVOS Consulting reveals a willingness to undertake this amendment to treatment practices, provided the value proposition and evidence supporting new therapies is viewed as compelling and the overall impact does not significantly alter economic incentives of the clinic.

## **Second Proposition** Favourable US market sentiment to ASIT+TM value proposition

As described above, gp-ASIT+TM will have to overcome two major challenges to succeed in the US market:

- US allergists derive significant revenue from their current practice of mixing bulk allergens themselves and administering them as Named Patient Products to their patients; and
- as a result, they also tend to view simultaneous desensitization to multiple allergens as Best Clinical Practice.

The Company will not attempt to change overnight these attitudes: as a result, gp-ASIT+<sup>TM</sup> will not be positioned on the market as a substitute to classical (multi-allergen) SCIT but rather as a complement to it. The marketing strategy is to convince allergists to prescribe gp-ASIT+<sup>TM</sup> to their patients who refuse to commit to a 3-year course of classical SCIT (they represent an estimated 50% of the patients who are offered immunotherapy) and to patients who have dropped out of a classical SCIT course of therapy (again, it is estimated that as many as 50% of the patients who start classical SCIT drop out before the end of the first year). Accordingly, using a short-course treatment such as gp-ASIT+<sup>TM</sup> would generate additional visits and income for US allergists, but hopefully result in a significantly higher number of successfully treated patients.

For patients who are reluctant to initiate a full course of classical immunotherapy, or non-compliant to it, desensitizing them to their major allergen is an attractive option for allergists both economically and clinically.

Payer sentiment was similarly positive due to their expectation for lower overall costs associated with a regimen involving significantly fewer office visits and sub-cutaneous injections. Both physicians and payers cite the obvious benefits to patients, such as convenience and Quality of Life (QoL) aspects (Internal report, AVOS Consulting, 2015).

Lastly, the availability of new SCIT treatments which have been studied in well-controlled phase III clinical studies is seen as a major benefit and "differentiating" factor versus allergen extracts for which formal efficacy studies have never been conducted. Allergen extract forms of SCIT have been available in



the United States since their initial introduction in 1911. This pre-dates the FDA and never included a formal clinical study evaluation of effectiveness of these agents. Regulatory oversight has focused solely upon CMC/supply issues (such as potency and QA/QC issues).

Finally, a major future commercial opportunity in the United States for the Company is related to the opportunity to desensitise the same patient with two allergens at different times in a given year (e.g. Bermuda or rye grass in Q1, house dust mite or ragweed in Q3) without increasing the total number of yearly injections when compared to the alternative current immunotherapy treatment. This would be an attractive proposition for allergists in the US, who strongly believe in simultaneously treating multiple allergies in poly-sensitised patients, and it would allow them to offer a convenient treatment, without compromising their physician economics.

To gain rapid adoption by US allergists in commercial and Medicaid segments the Company will also try to achieve both inclusion in Medical Benefit at a competitive price and the quick granting of procedure and billing codes.

## > Other European markets review – France, Spain and Italy

## **Market opportunity**

France, Spain and Italy are established AIT markets in Europe, offering some challenges but providing additional opportunities for growth and expansion.

## **Clinical treatment algorithm for AIT**

Referral patterns and treatment approaches are well-established in France and prescribing is generally undertaken by specialists. Currently 1,700 practitioners specialise in allergies, often set up as office-based practitioners. This numbers is declining, putting pressure on the remaining allergists. This provides a great opportunity for a short course treatment that reduces the number of appointments, providing a compelling argument for sublingual administration (>80% of the French market). In contrast, in both Italy and Spain the prescription is also done by an allergy specialist, however, the referral process is subject to regional variation and best practice varies significantly between clinical settings.

In Spain, a short-course treatment has the potential to introduce a paradigm shift in the patient experience. Typically a patient undergoes his initial treatment with an allergist and the maintenance phase is then administered by a primary care physician, placing an additional burden on the healthcare system. Eliminating the maintenance phase allows the allergist to administer the full course of treatment. Finally, a registered product convenient to administer and with clear protocols may expand the prescriber base to include additional specialists (e.g. Ear Nose Throat Doctor).

## **SCIT Management by Payer**

The Spanish and Italian regulators are standardising legislation on the administration of AIT. Much like Germany they are now rationalising NPP products in favour of registered products, effectively opening up the market. France, which is currently reimbursing 65% of their NPP products, is also seeking to move to registered products that are underpinned by robust clinical data. Therefore the Company considers it



unlikely that a regulator will object to reimbursing a registered SCIT, a product demonstrating equivalent efficacy and improved cost per treatment. The Company believes that rapidly gaining parity reimbursement with current SCIT treatments will help it gain access to the European market.

SLIT drops dominate the market in France despite their very low compliance rate. Therefore a short course treatment product with an expected improved compliance should be an attractive alternative for patients, allergists and payers in France.

These country-specific nuances highlight the significant need for the ASIT+TM product portfolio and potential for growth and expansion.

### Chinese market

## Market opportunity

China has a population of approximately 1.4 billion people, with a rate of urbanisation and the increasing middle class that makes it a particularly attractive market for future expansion of the hdm-ASIT+TM product candidate. This demographic shift is also resulting in an increase in the incidence of diseases associated with a Western lifestyle.

The allergen rhinitis prevalence is of 6.2% and 7.2% among the rural and urban adults, respectively (Zheng et al. Prevalence of Allergic Rhinitis Among Adults in Urban and Rural Areas of China: A Population-Based Cross-Sectional Survey. Allergy Asthma Immunol Res. 2015; 7(2):148-157).

As the sensitisation of the Chinese population to pollen is very low (lower than 1% of the Chinese population), whilst house dust mites are the most prevalent allergens in patients with rhinitis in China (China Alliance of Research on Respiratory Allergic Disease, a.o., A multicentre study assessing the prevalence of sensitizations in patients with asthma and/or rhinitis in China, Allergy, 2009 Jul;64(7), 1083-92), the Company will focus on the expansion of its hdm-ASIT+TM product candidate to address the Chinese market.

The growth of the middle class (more than 15% of the Chinese population is now earning more than USD 20,000 per year) is also driving an increase in private medical healthcare (Internal report, AVOS Consulting, 2015). This is reflected by the ever-expanding private healthcare market, which has seen a 6-fold increase in healthcare premiums over a 10-year period, resulting in more than 7% of the total population being covered by private medical insurance. This in turn drives an increase of access to specialist treatments, which includes AIT.

### Clinical treatment algorithm for AIT

The AIT market in China is still in its infancy, presenting significant potential for growth and development. Currently no formal reimbursement pathway exists for specialist AIT treatments and patients are expected to cover all incurred expenses. As a consequence there are limited referral processes and patients typically opt for private healthcare by direct engagement with an allergist through specialist clinics and hospitals.

The relationship between clinicians and patients dictates the choice of treatment. First-line treatments



(antihistamines and corticosteroids) are used to build trust with the patient before progressing onto more expensive treatments. SCIT is then considered to be the benchmark treatment in AIT, with a good reputation amongst allergists in China, who control the majority of the market share (Internal Report, AVOS Consulting, 2015). Nevertheless, China has some challenging market forces (such as understanding the influence network, dealing with ethical promotion challenges) that need to be managed; however, it provides appealing long-term growth prospects with significant potential for expansion.

## 7.10.2 ASIT+TM MARKET DRIVERS

The allergic rhinitis immunotherapy market drivers are the following:

- symptomatic treatments are becoming either generic and/or OTC products with limited promotional and marketing investment, leaving increasing opportunities for the promotion and the marketing of innovative products;
- current treatments do not bring an effective solution to patients with permanent moderate-to-severe rhinitis, either because they lack efficacy on the underlying cause of the disease (e.g., symptomatic treatments) or they are inconvenient due to prolonged and costly treatment (current subcutaneous or sublingual immunotherapy) leading to low acceptance and compliance. The compliance to immunotherapy treatment in the United States is low: 58% of adults and 55% of children complete less than 1 year of their 3- to 5-year course of SCIT and the median duration of treatment is only 217 days for adults and 296 days for children (Hankin et al, oral presentation at the 2011 Annual Meeting of the AAAAI, Session #274, March 19, 2011);
- all European countries are driving a concerted move towards products authorised on the basis of a marketing authorisation based on a fully documented file and away from NPPs;
- at this stage, there is no clear planning concerning any regulatory limitations of the NPP status of AIT products in the United States. The Company expects that the evolution of the regulatory environment in the United States will be accelerated by the launch of products authorised on the basis of a fully documented biologics license application file. In any case, registered products are likely to have a competitive advantage as the demonstration of their safety and clinical efficacy would have been approved by the Competent Regulatory Authorities, and should be perceived as an opportunity to reduce treatment related costs for the payers;
- the increasing prevalence and complexity of allergic disorders and the rising affluence of the middle-class in emerging countries and, in particular, China, create a large potential upside for the global immunotherapy market.

Despite all these limitations, allergy immunotherapy has the potential to be cost-effective for health care payers: several studies comparing the cost-effectiveness of immunotherapy (in its various administration forms: subcutaneous, sublingual, tablet, etc.) with standard pharmaceutical treatment have shown that immunotherapy is cost-effective or even cost-saving for a healthcare system, in that it either delivers additional clinical benefits for a minor incremental cost or it generates a better clinical outcome at a reduced overall treatment cost when compared to a standard therapy alone (Hankin, Cox and Bronstone, Immunol Allergy Clin N Am. 2011; 31(2): 325-341 – Lockey and Hankin. J Allergy Clin Immunol 2010;



127: 39-43 or Pokladnikova, Krcmova and Vlcek. Ann Allergy Asthma Immunol. 2008; 100: 482–489).

Finally, the incentives for the market players are compelling:

- for patients: the possibility to be desensitised for an entire season in 4 physician visits over 3 weeks, instead of
- a minimum of 12 visits (one per month) during a maintenance year and a maximum of 21 visits (1/week during the titration period then 1/month afterwards);
- daily intake of a sublingual tablet for at least 6 months even outside the season and during asymptomatic days.
- for payers: the current cost-effectiveness of allergy immunotherapy (despite better than symptomatic treatment) is not considered optimal by payers simply because it is widely recognised that patient compliance is poor. Payers are looking for a treatment with equal clinical efficacy and safety and improved compliance that could result from short course treatment. Furthermore, the association of gp-ASIT+TM with 4 doctor visits will cost less to the healthcare system than:
- current SCIT associated with 12 to 21 doctor visits per year and the drug cost,
- current SLIT associated with 1 or 2 visits per year and the cost of the drug which is USD 8.25 per Graztek/Ragwitek tablet and USD 10 per Oralair tablet in the US.
- for specialists: as many as 50% of the patients refuse classical SCIT primarily because of the length of the therapy and the costs (see the GfK report, in Circassia' prospectus for its initial public offering, 2014). Most patients drop out before completing their full course SCIT or SLIT treatment (50% at least in the first year, and as many as 80% by the third year). This should prompt most specialists propose short course and efficient treatment to patients refusing or dropping-out the current SCIT and SLIT treatments. Finally, there is a real commercial opportunity to administer consecutively several short course ASIT+TM products to treat in the same number of doctor visits polysensitized patients who require very long treatment.

## 7.10.3 ASIT+TM POTENTIAL MARKET

### ❖ gp-ASIT+™

Subject to additional funding, the Company expects to launch gp-ASIT+TM on the German market by 2019, followed by the United States and other European countries by H2 2020. These timing are estimates and have been delayed by one year compare to the estimations disclosed in the IPO prospectus to take care of a possible longer reaction time from the PEI and the FDA before decisions would be made regard to the granding of a market authorisation . The target population for gp-ASIT+TM consists of patients with grass pollen-induced moderate-to-severe persistent rhinitis with poor disease control representing today approximately 6.8 million patients per annum in the combined European target countries and the United States. It is evident that the United States present the most significant market opportunity, followed by the well-established subcutaneous market in Germany. France, Italy and Spain are smaller, but significant



## opportunities.

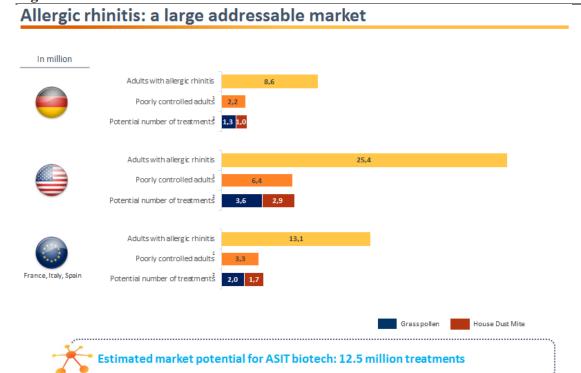
In addition, the increase in prevalence of allergic diseases in emerging countries could further increase the number of potential patients. In all targeted countries, there is a growing demand for a safe and efficacious registered product that drives improved patient compliance and is convenient to administer. To the Company's knowledge, the ASIT+TM product candidates have the profile to take significant shares of these populations due to their competitive advantages in comparison with the current products or product in development (*i.e.* an improved overall safety profile and a reduced course of treatment resulting in higher patient compliance and, therefore, real-life clinical effectiveness, see Section 9.6.2 (*b*)).

Initially, gp-ASIT+TM will claim treatment of allergic symptoms based on the results of a one-year phase III clinical trial. It is assumed that the gp-ASIT+TM will be administered every year prior to the pollen season. Long-term efficacy and disease-modifying effect will be claimed after the completion of a long-term phase III clinical study. The treatment will be limited to four visits that are scheduled over 3 weeks, supporting enhanced compliance and an improved patient experience.

## ♦ hdm-ASIT+TM

As hdm-ASIT+<sup>TM</sup> is targeting the same population of patient with poorly controlled allergic rhinitis, the number of potential patients are quite similar as for gp-ASIT+<sup>TM</sup>.





Notes 1) Based on 25% of patients looking for a new treatment - Marple BF Otolaryngol Head Neck Surg. 2007 Jun;136(6 Suppl):S107-24; Didier A et al Rev. Fr Allergol. 1999; 39: 171-185; and

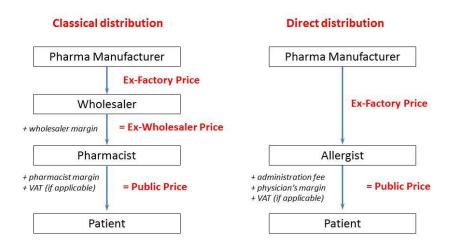
2) Based on the prevalence of the sensitization by allergen - EU: Bauchau & Durham 2004; US: Nathan 1997 & 2008.

### 7.10.4 ASIT+TM PRICING

In the pharmaceutical sector, a distinction is made between the ex-factory and the public price. The exfactory price (also sometimes called the "ex-manufacturer price") is the price charged by the pharmaceutical company to its customers regardless of the distribution channel (direct to physicians or through wholesalers). The public price, on the other hand, is the final amount paid by the end-user: in general, a portion of this public price will be reimbursed by a public or private health insurance (classically called the "payer") and the non-reimbursed portion will be borne by the patient (typically called "patient co-pay"). The different components of pharmaceutical pricing are detailed in the following table.

Figure 27: components of pharmaceutical pricing

# **Components of Pharmaceutical Pricing**



A clear pricing strategy has not been determined yet, because it will depend, among other things, on the results of the clinical efficacy results of the phase III. However in order to be competitive, the price will be established on the benchmark, set out by AVOS Consulting in the below table.



Figure 28: pricing

Yearly ex-factory price

# A competitive pricing strategy

### Country SCIT NPP **SLIT tablets** €520 - €600\* €750 - €1,500 Germany USA €650 €2,000 - €2,300 ASIT biotech €450 €850 - €1,300 Spain €400 €400 - €650 France €450 €800 - €1,500

Note: \* Pollinex Quattro ex-factory price is EUR 600.

Sources: AVOS interviews; ZenRx; Pharmacoeconomic assessment of specific immunotherapy versus current symptomatic treatment for allergic rhinitis and asthma in France; German List Prices based on Arzneimittelverordnungsreport 2011 and in line with 2010 update of HTA assessment for AIT in allergic rhinitis; Centers for Medicare and Medicaid Physician Fee Schedules; Spain & Italy- AVOS Cat Tander project 2013; http://www.petrone.it/index.php/en/company-activities, accessed May 2015 for Italian and Spanish Oral treatments.

### 7.10.5 ASIT+TM POSITIONING

Marketing of gp-ASIT+™ is expected to focus primarily on allergy specialists with a classical "pyramid of influence" approach (international → national → regional / Key Opinion Leaders → practicing clinicians) with a strong scientific and medical content. The marketing mix will be primarily focused towards scientific communication: presence at major congresses such as EAACI, AAAAI, World Allergic Congress, Deutsche (booth, satellite scientific symposia, and presentations), national and regional scientific meetings, and contacts with scientific associations, advisory boards, and scientific societies.

Differentiation will be focused on the expected robust clinical profile of gp-ASIT+TM.

<b>Expected Features</b>	Expected Advantages	<b>Expected Benefits</b>
Robust efficacy and fast onset of action	Rapid relief of symptoms for patient	Return to normal quality of life and activities of daily living, low- er use of symptomatic medication
Short treatment (4 treatment visits over 3 weeks)	Simple and convenient regimen resulting in better acceptance and compliance	Better real-life clinical effective- ness and higher cost-effectiveness



<b>Expected Features</b>	Expected Advantages	Expected Benefits
No need for an adjuvant	Demonstration of intrinsic efficacy of highly-purified allergen fragments and no issue with long-term safety	Peace of mind for the clinician and the patient
Low incidence of systemic adverse events	Well-tolerated treatment	Peace of mind for the clinician and the patient

### 7.10.6 ASIT+TM SALES MANAGEMENT

Given the limited number of the allergy specialists in the key target markets (the United States or Germany), the required sales force is likely to be less than 50 in each country (geographic dispersion is the limiting factor in the US), allowing rapid recruitment and deployment. The management structure is also likely to be light: 1 National Sales Director and 5 Regional First-Line Sales Managers for each country.

Country Estimated number of allergists		Number of field-based personnel (sales reps and Medical Science Liaisons)	
USA	5,500	100 (because of geographic dispersion)	
Germany	5,000	50	
Italy	1,500	20	
Spain	1,000	15	
France	2,000*	10	

<sup>\* 500 &</sup>quot;pure" allergists plus approx. 1,500 physicians with double specialty (pulmonologist, ENT, etc.)

With regard to the costs associated with the sales force, the Company considers, at the date of this Prospectus, that they will be in accordance with the current market practice. The sales force costs to the Company's 5 main markets (including sales management) is unlikely to exceed EUR 35 million per year, which will be progressively incurred starting about 6 months before launch in each geography (recruitment and training of the sales representatives). This will be financed by the Company as it reaches successive milestones: filing and marketing authorisation in Germany then filing and marketing authorisation in the US and the rest of Europe (see Section 9.3.4 "A clear marketing authorisation strategy").

The Company expects that it will have to raise new funds to finance the costs associated with the sales force, before the commercialisation of its products generates revenue to finance such costs.

## 7.11 RESEARCH AND DEVELOPMENT

Conducting a significant amount of research and development is central to the Company's business. In the past, the Company has devoted most of its financial resources to research and development, including



preclinical and clinical development activities of its two product candidates gp-ASIT+TM and hdm-ASIT+TM. The Company expects to pursue its investment in its two product candidates until commercialisation and start research and development on new product candidates (allergies to peanut, egg white, cow milk, etc.) to build its pipeline of products. The Company outsources certain functions, tests and services to CROs, and investigation sites that conduct the Company's clinical trials.

### 7.12 PATENT STRATEGY

#### **7.12.1 OVERVIEW**

The Company's intellectual property comprises patent and patent applications filed and owned by the Company. It has been the Company's strategy to file technology based patent applications covering a broad range of possible allergens and methods of preparation. During the last years, going further into product development, applications have been filed in the context of formulations and dosage regimens.

The Company's patent portfolio and all IP related matters are managed by an external patent counsel in close corporation with the Company. The patents and patent applications cover compositions of matter, methods of making the compositions, dosage regimens, formulations and uses.

In order to establish priority dates, the Company files European patent applications. Prior to the AIA (*American Invents Act*) reform in the United States, US provisionals were used as an additional tool in the patent strategy. At the end of the priority year, international applications under the PCT (*Patent Corporation Treaty*) are filed which allows the Company to later on decide in which of the 150 member countries (including all major jurisdictions) patent protection will be sought.

The Company continues to monitor all research efforts in view of new possible inventions.

## 7.12.2 PORTFOLIO

The Company has filed 10 patent families in the field of allergy. The table below provides an overview of the Company's allergy-related patents as well as detail on patent applications.

The expiration dates mentioned below are based on the usual 20 years of patent protection and take into account the patent term adjustment used in the United States to compensate for delays at the US Patent Office. The expiration dates assume the payment of renewal and annuity fees. There are different possibilities to extent the patent protection (*e.g.* a supplementary protection certificate for maximum five years) and/or a period of so-called "data exclusivity" of five to eight years from initial marketing authorisation. This could be extended with two years, which is a period of so called "market protection". It is only after this protection ends that generic products are authorised on the market.

Patent family	Description of the patent	Jurisdictions where pa-	Maximum term
		tent is granted or where	
		application has been	
		made (pending)	



Patent family	<b>Description of the patent</b>	Jurisdictions where pa-	Maximum term
2 40040 244445	2 doct-prior of the parent	tent is granted or where application has been	
BTT01	The patent is directed to a	made (pending) Major European countries	March 5, 2018
Vaccine HSP	pharmaceutical or food com-	US	
	position comprising a stress	Canada	
	protein and an epitope of an	Japan	
	antigenic structure related to graft rejection or allergic reac-		
	tion or autoimmune reaction		
BTT02	The patent is directed to a	Major European countries	June 23, 2023
Epitope Composition	pharmaceutical composition		,
	for sublingual, buccal or enter-	Pending application in the	
	ic administration comprising	US	
	at least one substance obtaina-		
	ble by hydrolysis with chymo-		
	trypsin or any other protease of an antigenic structure		
	which induces graft rejection,		
	allergic reaction or autoim-		
	mune disease		
BTT03	The patent is directed to a	Major European countries	May 18, 2024
Peptide Complex	complex comprising a heat	US	(Europe)
	shock protein and certain peptides	B 11 11 1 1 1 1 1	September 22,
	tides	Pending divisional patent application in Europe	2025 (US)
BTT04	The patent family is directed	Pending patent application	June 28, 2027
Allergen Purification	to a special way of purifying	in Europe, China, USA,	(expected)
8	and denaturing extracts of	Japan, India, and Brazil	( 1
	natural allergens and a special		
	way of hydrolysing allergens.	Divisional application	
D. (1970)		pending in Japan.	
BTT05	The patent family covers a	Major European countries	October 12,
Purified Heat Shock Proteins	special way of producing ultra pure heat shock proteins	USA Japan	2027 (Europe, Japan, China)
Trotems	pure near snock proteins	China	April 19, 2031
			(US).
		Pending patent application	
		in Brazil and India	
BTT06	This is an amendment of	Pending patent application	December 30,
Allergen Preparation	BTT04	in Europe	2028 (expected)
(starch based pellets) BTT07	The patent family covers an	Pending patent application	June 15, 2032
Production of Hydro-	improved method for the pro-	in Europe, USA, Japan,	(expected)
lysed Allergens	duction of hydrolysed aller-	China, Brazil, India, Cana-	(enpected)
(peanut)	gen, especially applicable to	da and Australia	
	peanut allergens		
BTT08	The patent family is covering	Pending patent application	July 19, 2032
Dosage of DnaK	a pharmaceutical preparation	in Europe, USA, Japan,	(expected)
	of HSP70	China, Brazil, India, Canada and Australia	
		ua anu Ausuana	1



Patent family	Description of the patent	Jurisdictions where pa- tent is granted or where application has been made (pending)	Maximum term
BTT09	The patent family covers a	Pending patent application	March 19, 2034
Allergen Preparation	special formulation of an al-	in Europe, USA, Japan,	(expected)
	lergen	China, Brazil, India, Cana-	
		da and Australia	
BTT10	This is a PCT application cov-	PCT application (decision	April 9, 2035
Allergen Preparation	ering a further special formu-	on the countries to be taken	(expected)
	lation of an allergen	by October 10, 2016)	

### 7.13 MATERIAL CONTRACTS

### 7.13.1 CONTRACTS WITH CMO'S

The Company has entered into contracts with CMO's in view of the outsourcing of the manufacturing, packing and labelling of its active pharmaceutical ingredients and of the necessary products to carry out its clinical trials. In this framework the Company has granted free licenses over its IP rights for a scope limited to the execution of the contracts by the CMO's and subject to IP rights clauses preserving the Company's IP rights.

The Company has entered into a framework service agreement (the *FSA*) dated 28 April 2015 with a CMO for the production of its novel APIs, and for the production process validation relating to the APIs.

The FSA has been entered into for a fixed period of six years, and it can only be terminated without cause subject to a two-year prior written notice. Under the FSA, the Company provides the CMO with a detailed description of the process as well as the list of equipment, raw materials and disposable equipment with their specifications, to enable the CMO to produce the APIs.

Considering the important exchange of know-how required for the execution of the agreement, the FSA includes the following clauses:

- > a confidentiality clause whereby the CMO is refrained from disclosing and using for any other purpose than the execution of the FSA any information which is confidential; this clause shall remain in force for a period of ten years after the termination of the FSA;
- > an intellectual property rights clause reserving to the Company all the proprietary rights with respect to the products and the results of the execution of the contract;
- > an exclusivity clause preventing the CMO to perform any project in the Company's field as defined in the FSA for its own or any third party benefit; this prohibition shall remain in force until 31 December 2027;
- > restrictions with regard to subcontracting whereby the CMO's option to subcontract all or part of its obligations under the contract with the Company is subject to the Company's prior written approval; and



> a change of control clause that grants the Company the right to put an end to the contract in case of change of control on the CMO, subject to a three-month notice.

Under the FSA, the CMO is granted, during the term of the FSA, an exclusive right to deliver (i) the services with respect to the API's developed and commercialised by the Company in Europe and (ii) services that are similar to those performed under the FSA for any other biological active ingredients developed and commercialised by the Company in Europe, unless the CMO is not capable of delivering these services against normal market conditions.

The Company has also entered into an agreement with another CMO for the transfer of its technology and under which the CMO will provide full scale registration/process validation of the batches and the commercial supply of the Company's drug product in vials. The contract has been entered into on 20 August 2015, and shall be supplemented by a quality agreement.

This contract has no explicit duration, and the Company can terminate the contract for any business reason by giving the CMO thirty days prior written notice. The CMO can only terminate the agreement in case of material breach or in case of re-scheduling by the Company beyond 120 days.

The contract contains confidentiality and intellectual property rights clauses. The confidentiality clause incorporates a confidentiality agreement previously entered into between the parties, and provides that its terms shall at least govern the parties' obligations for the duration of the agreement.

The intellectual property clause distinguishes between the intellectual property generated during the contract that is specific to the development, manufacture, use and sale of the Company's product that is the subject of the agreement, and the intellectual property which is not. The former shall be the exclusive property of the Company.

The contract is submitted to the laws of England.

#### 7.13.2 CONTRACTS WITH CRO'S

The Company has entered into several contracts with CRO's in view of the performance of the different development phases of its product candidate for the treatment of grass pollen-induced and house dust mite allergic rhinoconjunctivitis.

These contracts with CRO's are most generally entered into for the duration of completion of the project study, with early termination options for the Company, even for convenience (but subject to the payment of some or part of the costs already, or to be, incurred by the CRO in view of the complete performance of the contract). The counterparties' early termination options are often limited to termination for cause.

All the contracts with CRO's contain confidentiality and intellectual property rights clauses. The confidentiality clause remains applicable at least five years after termination of the contract, and in some cases 10 years, with a lump sum penalty in case of breach of the confidentiality clause. The intellectual property rights clause grants the Company all proprietary rights with respect to the results of the study or the execution of the agreement (with, for some agreements, an obligation for the CRO to provide its cooperation in obtaining patents to the benefit of the Company for the results of the research).



#### 7.14 GRANTS, SUBSIDIES AND RECOVERABLE ADVANCES

The Company benefited between 1998 and 2007 from subsidies granted by the Brussels-Capital Region for an aggregate amount of EUR 2,166,690.85 for its research project in the field of grass pollen-induced allergic rhinoconjunctivitis. Each of the Brussels Grants was awarded through several subsidies agreements, which all contained a condition to the effect that the Brussels-Capital Region should benefit from the results of the study projects on an economic, employment-related and environmental level. Grants and subsidies are subject to certain obligations. In case such obligations are not complied with, the grants and subsidies could be suspended, reviewed or reclaimed.

Pursuant to the latest official letters from the Brussels-Capital Region authorities dated 4 June 2014, the Company is considered to comply with its obligations under the subsidies agreements from the relevant authorities. The risk of reimbursement of the grants is therefore considered as remote by the Company.

The Company has been awarded in 2016 with funding from the Walloon Region. The Walloon Grant consists in a refundable advance for an amount of EUR 1,254,000 helping the Company's research project relating to the treatment of house dust mite allergy and the development of hdm-ASIT+<sup>TM</sup>.

In January 2017 the Company has been awarded with funding from the Walloon Region for supporting the development of new drug candidates to treat food allergies. The Walloon Grant consists in a refundable advance for an amount of EUR 6 million.

The Walloon Grants are subject to certain terms and conditions. The Company will have to start reimbursing the advances on an annual basis during the phase of use of the results arising from the research projects. The reimbursement is divided into a fixed part and a variable part dependent upon the Company's turnover. The Walloon Grants also set forth that the exploitation activities relating to the subsidised researches have to be performed within the European Union until the end of the phase of use.

The Company owns the results of the research projects subsidised by the Walloon Grant, but the Company will need to obtain the consent of the Walloon Region for any transfer, out-licensing or sale to a third party of any or all of the research projects related results. In addition, the Walloon Grants are dedicated to support specific research projects, and their terms and conditions may limit the Company's ability to conduct research with third parties in the field of such research projects and prohibit the granting of any other rights relating to the Company's findings of such research programmes to third parties.

In case the Company would decide not to use the results of the research projects, it will have to transfer its rights over the results (including the patents relating to the results of the research projects and which were filed or obtained during or following the research phase) to the Walloon Region. Furthermore, the Company would be prohibited from conducting any research on behalf of a third party relating to the research projects during 72 months. The results of the research projects will also become the property of the Walloon Region in case of bankruptcy of the Company.

#### 7.15 REGULATION OF THE BUSINESS

**7.15.1 OVERVIEW** 



As for any company involved in human research, in each country where the Company conducts its research and intends to market its products, it has to comply with regulatory laws and regulations (hereinafter, collectively the *Regulatory Regulations*), including regulations laid down by national or supra-national Competent Regulatory Authorities, as well as industry standards incorporated by such Regulatory Regulations, that regulate nearly all aspects of the Company's activities.

The Regulatory Regulations describe extensively how clinical trials need to be performed in compliance with internationally recognised standards of Good Manufacturing Practices (*GMP*) and Good Clinical Practices (*GCP*), as well as related implementing measures and applicable guidelines.

The Competent Regulatory Authorities notably include the EMA in the EU or the individual national Competent Regulatory Authorities in Europe (i.e.; PEI, FAMHP; etc.) and the Food and Drug Administration (*FDA*) in the US.

#### 7.15.2 PRECLINICAL AND CLINICAL DEVELOPMENT PLANS

Competent Regulatory Authorities are aware of the specificities of biological product candidates, and give much attention to their upfront characterisation, including the development of assays to measure their biological activity. The preclinical and clinical development paths are broadly similar in the EU and in the US. Initially, preclinical studies are conducted to evaluate the mode of action (pharmacology) and safety (toxicology) either *in vitro* or *in vivo*. Upon successful completion of non-clinical studies, a request for a Clinical Trial Authorisation (*CTA*, in the EU) or an Investigational New Drug application (*IND* in US) must be approved by the relevant Competent Regulatory Authorities for studies in humans to be allowed to start. Clinical trials are typically conducted sequentially from phase 1, phase 2 and phase 3, to phase 4 studies conducted after marketing approval. These phases may be compressed, may overlap or may be omitted in some circumstances.

Competent Regulatory Authorities typically have between one and six months from the date of receipt of the CTA or IND application to raise any objections to the proposed trial. They may also require additional data before allowing studies to commence and could demand that studies be discontinued at any time, for example if there are significant safety issues. In addition to obtaining Competent Regulatory Authority approval, clinical trials must receive Ethics Committee (in the EU) or Institutional Review Board, "IRB" (in the US) approval in every hospital where the clinical trials are conducted.

#### **▶** Phase 1 clinical studies

After a Clinical Trial Authorisation (CTA) in Europe or an Investigational New Drug (IND) application in the US, has been approved, a human clinical study may start.

Phase 1 clinical studies are initially conducted in a limited population to evaluate a drug candidate's safety profile, and the range of doses that can be administered, including the maximum tolerated dose that can be given to patients. In the case of products for allergic diseases, the initial human testing is conducted in patients with the target disease rather than in healthy volunteers. These studies may provide preliminary evidence of efficacy.



#### > Phase 2 clinical studies

As in phase 1 studies, relevant ethics committee and Competent Regulatory Authority approvals are required before initiating phase 2 clinical studies. These studies are conducted in a limited patient population to evaluate the efficacy of a drug candidate in specific indications, determine its optimal dosage and further describe the safety profile. The initial phase 2 studies of a development program, which is sometimes referred to as phase 2a, may be conducted in few patients to demonstrate safety and preliminary efficacy. Additional phase 2 studies, which may be termed phase 2b, may be conducted in a larger number of patients to confirm the safety and efficacy data generated in the phase 2a studies and to select the optimal dosing.

#### **▶** Phase 3 clinical studies

As in phase 1 and phase 2 studies, relevant ethics committee and regulatory authority approvals are required before initiating phase 3 clinical studies. These studies, which are sometimes referred to as registration or pivotal studies, are usually undertaken once phase 2 clinical trials suggest that the drug candidate is effective and has an acceptable safety profile and an effective dosage has been identified. The goal of phase 3 studies is to demonstrate evidence of clinical benefit, usually expressed as a positive benefit-risk assessment, of the new drug in a patient population with a given disease and stage of illness.

In phase 3 clinical studies, the drug is usually tested in randomised trials comparing the new drug to an approved form of therapy in an expanded and well-defined patient population, usually recruited from a large number of hospitals and medical practices. When no alternative is available, drugs may be tested against placebo. Stringent criteria of statistical significance apply to phase 3 trials.

The Company's pharmaceutical product candidates are subject to the above listed substantial requirements that govern their testing, manufacturing, quality control, safety, efficacy, labeling, storage, record keeping, marketing approval, advertising, promotion and pricing. The process of maintaining continued compliance with the regulatory constraints requires the expenditure of substantial amounts of time and money.

#### 7.15.3 MARKETING AUTHORISATION APPLICATION AND MARKETING APPROVAL

Given the move towards AIT products authorised on the basis of a marketing authorisation based on a fully documented file and away from NPPs (see Section 8.3.3 (c)), the Company will have to submit marketing authorisation application files in every country where it intends to commercialise its products, in accordance with its commercialisation strategy (see Section 9.3.4 "A clear marketing authorisation strategy for lead product candidate gp-ASIT+TM in the target markets").

Although different terminology is used, the data requirements, overall compliance to GMP, GCP and other regulatory requirements and the assessment and decision making process for marketing approval are similar in the EU and in the US. Upon availability of initial efficacy data from phase 2 clinical trials and confirmatory phase 3 clinical trial data, the Company may submit a request for marketing authorisation to the Competent Regulatory Authorities (a Marketing Authorisation Application (*MAA*) to EMA in the EU, a Biologics License Application to FDA in the US). Competent Regulatory Authorities may grant approval, deny the approval or request additional studies or data. Following favorable assessment and/or decision, the products may be commercially launched in the relevant territory. There can be no guarantee that such



approval will be obtained or maintained. In practice, effective market launch is often further conditioned upon completion of pricing and reimbursement negotiations with Competent Regulatory Authorities involved in healthcare and pharmaceutical expenditure at the national or regional level.

When granting marketing authorisation, Competent Regulatory Authorities may impose upon the Company an obligation to conduct additional clinical testing, sometimes referred to as phase 4 clinical trials or other post-approval commitments, to monitor the safety and effectiveness of the product after commercialisation. Also, after marketing authorisation has been obtained, the marketed product and its manufacturer will continue to be subject to Regulatory Regulations and monitoring by Competent Regulatory Authorities. The conditions for marketing authorisation include requirements that the manufacturer of the product complies with applicable legislation including GMP, related implementing measures and applicable guidelines that involve, amongst others, ongoing inspections of manufacturing and storage facilities.

#### 7.15.4 PRICING AND REIMBURSEMENT

In Europe, pricing and reimbursement for pharmaceuticals are not harmonised and fall within the exclusive competence of the national authorities, provided that basic transparency requirements defined at the European level are met as set forth in the EU Transparency Directive 89/105/EEC, which is currently under revision. As a consequence, reimbursement mechanisms by private and public health insurers vary from country to country. In public health insurance systems, reimbursement is determined by guidelines established by the legislator or a competent national authority. In general, inclusion of a product in reimbursement schemes is dependent upon proof of the product efficacy, medical need, and economic benefits of the product to patients and the healthcare system in general. Acceptance for reimbursement comes with cost, use and often volume restrictions, which again vary from country to country.

In the United States and markets in other countries, sales of any products for which the Company receives regulatory approval for commercial sale will depend in part on the availability of coverage and adequate reimbursement from third party payers. Third party payers include government payer programs at the federal and state levels, including Medicare and Medicaid, managed care providers, private health insurers and other organisations. The process for determining whether a payer will provide coverage for a drug product may be separate from the process for setting the price or reimbursement rate that the payer will pay for the drug product. Third-party payers may limit coverage to specific drug products on an approved list or formulary, which might not include all of the FDA-approved drug products for a particular indication. Third party payers are increasingly challenging the price and examining the medical necessity and cost-effectiveness of medical products and services, in addition to their safety and efficacy. A payer's decision to provide coverage for a drug product does not imply that an adequate reimbursement rate will be approved. Adequate third-party reimbursement may not be available to enable us to maintain price levels sufficient to realise an appropriate return on our investment in product development.

The price and reimbursement level for the Company's products will depend on the strength of the clinical data set and, as for most novel therapies, restrictions may apply. In most countries, authorities in charge of pricing and reimbursement ensure that the prices of registered medicinal products sold in their territory are not excessive. In making this judgment, they usually compare the proposed national price either to prices of existing treatments and/or prices in other countries also taking into account the type of treatment (preventive, curative or symptomatic), the degree of innovation, the therapeutic breakthrough, volume of



sales, sales forecast, size of the target population and/or the improvement (including cost savings) over comparable treatments. Given the growing burden of medical treatments on national health budgets, reimbursement and insurance coverage is an important determinant of the accessibility of medicines. The various public and private plans, formulary restrictions, reimbursement policies, patient advocacy companies, and cost-sharing requirements may play a role in determining access to products marketed by the Company. The national authorities may also use a range of policies and other initiatives intended to influence pharmaceutical consumption. To address the above, the Company integrates as part of its clinical development programs the collection of data aimed at facilitating the evaluation of therapeutic benefit, in terms of efficacy and/or reduction in side effect profile, and of its cost. Concomitantly with marketing authorisation applications, the Company will engage in a dialogue with key decision makers at different payers in order to identify unique preferences and concerns by payer type and to obtain insight in the perceived value drivers, reimbursement barriers and price elasticity for its products.

#### 7.16 MANUFACTURING

The Company intends to produce drug substance and drug product through subcontracting agreements whilst maintaining active control over the production process and QC. This will result in a reduction of the time to the market and an acceleration of the further product development.

The Company does not manufacture any of the components of its novel active pharmaceutical ingredients but has outsourced such manufacturing to its CMO (see "Business overview - Material contracts"). The Company has also outsourced the manufacturing of the products required for its clinical testing, such as resin, and solution of pollen-peptide.

#### 7.17 HUMAN RESOURCES

The Company currently employs 22 employees and relies on the services of five self-employed contractors (the CEO, the CFO, the Chief Marketing Director, the Head of Production and the Head of Regulatory).

The headcount of the Company has evolved from 10 employees in 2012, 8 employees in 2013, 10 employees in 2014, 19 employees in 2015 and 22 employees in 2016.

#### 7.18 INSURANCE

The Company has subscribed to several insurance policies to cover its potential exposure for a number of claims and losses, including fire insurance for the premises it leases, civil liability insurance and work accident insurance.

The Company is currently insured for its civil liability, capped at an amount of EUR 5,000,000 for claims arising from the operation of its business, and at an amount of EUR 1,500,000 for damages suffered after the delivery of its products or the performance of work orders.

The Company has contracted insurance policies for the civil liability insurance in the framework of the clinical studies. Insurance coverage is guaranteed for 3 years after the end of the study:

BTT-gpASIT007: capped at an amount of EUR 10,000,000 for the study (coverage until 09/12/2016)



- BTT-gpASIT008: capped at an amount of EUR 50,000,000 for the study (coverage until 11/11/2017)
- BTT-gpASIT009: capped at an amount of EUR 23,800,000 for the study (EUR 3,000,000 for the study in Belgium, EUR 2,300,000 in Czech Republic, EUR 6,000,000 in France, EUR 5,000,000 in Germany, EUR 5,000,000 in Italy and EUR 2,500,000 in Spain)
- BTT-hdmASIT001: capped at an amount of EUR 50,000,000 for the study (coverage until 1/07/2017)

The company also contracted travel accident insurances for the travel home/clinical centre of the patients during the BTT-gpASIT009 study period. The sum insured is EUR 50,000 for death and EUR 100,000 for disability (for patients between 18 and 64).

The Company also operates a defined contribution occupational pension plan which is financed by the employee (with 2% of 13.92 x monthly salary of the month May or of the subscription month, if the subscription occurs in the course of the year) and the employer (with 4% of 13.92 x monthly salary of the month May or of the subscription month, if the subscription occurs in the course of the year). The plan provides for retirement, death in service and disability coverage.

Under Belgian law, defined contribution plans are subject to a statutory minimum return on the contributions. Hence, any shortfall between the statutory minimum return and the actual return may have to be made up by the Company. On 31 December 2016, the shortfall amounted to approx. EUR 2,905. However, in the case at hand, the Company has taken up insurance to cover any potential shortfall. Therefore, the risk of any liability is considered as remote by the Company.

The Company contracted an Underwriter Indemnification Coverage relating to the Offering with a limit of liability capped at an amount of EUR 15 million.

Finally, the Company contracted a Directors and Officers Liability Insurance (D&O) with a limit of liability capped at an amount of EUR 15 million.

#### 7.19 ENVIRONMENT AND HEALTH & SAFETY

In accordance with the Walloon Decree of 11 March 1999 regarding environmental permits, the laboratory of the Company in Liège is of class 3. Class 3 facilities are facilities with the lowest environmental impact and, as a result, their operation does not require the granting of an environmental permit but requires the filing of an application with the municipality on whose territory the facility is located.

On 2 September 2015, the Company electronically filed an environmental declaration for its laboratory with the municipality of Liège. On 10 September 2015, the declaration was deemed inadmissible and rectifications of pure form were required (e.g. not all chemical products referred to in the declaration are classified under the prescribed category). The Company filed an amended declaration on 27 October 2015 with the municipality of Liège. Given that the municipality did not oppose to the declaration within the 15-day period starting with the filing of the declaration, the declaration has become final and the Company can validly exercise its activities in the Liège premises.

All the waste rejected by the Company is managed by a specialised company and does not raise any



environmental or health and safety concerns.

#### 7.20 PROPERTIES AND FACILITIES

The Company does not own any land or facilities. It carries out its activities on two sites, one in Brussels and one in Liège, leased under (non-commercial) lease agreements.

The Company does not own any production plant.

#### 7.21 INVESTMENTS

The Company has always had a very low level of investments. Acquisitions made in prior years amounted respectively to EUR 182,000 in 2014 and EUR 328,000 in 2015.

As at 31 December 2016, acquisitions mainly related to drug substances manufacturing equipment (EUR 281,000), IT equipment (EUR 13,000), furniture (EUR 53,000) and leasehold improvements (EUR 35,000). There was no significant disposal during the year.

The yearly depreciation charge amounts to EUR 141,000 in 2016, EUR 80,000 in 2015 and EUR 20,000 in 2014.



## 8 CORPORATE GOVERNANCE

#### A. PART 1:MANAGEMENT AND CORPORATE GOVERNANCE

#### 8.1 OVERVIEW

The Company has the legal form of a corporation with limited liability (*société anonyme/naamloze vennootschap*) organised under the laws of Belgium. The Company was incorporated on 23 May 1997.

This section summarises the rules and principles by which the Company's corporate governance is organised, and which are contained in the BCC, other relevant legislation, the Articles of Association as last amended on 28 December 2016 and the corporate governance charter of the Company as last updated by the Board of Directors on 19 September 2016 (the *Charter*).

#### 8.2 CORPORATE GOVERNANCE

#### **8.2.1 CHARTER**

The Company has adopted a Charter that is in line with the Belgian Code on corporate governance of 12 March 2009 (the *Code on Corporate Governance*) and that entered into force at the Offering. The Charter describes the main aspects of the corporate governance of the Company, including its governance structure, the terms of reference of the Board of Directors and its committees and other important topics. The Charter must be read together with the Articles of Association.

The Company complies with the nine corporate governance principles contained in the Code on Corporate Governance, but believes that certain deviations from its provisions are justified in view of the Company's particular situation. These deviations are the following:

- the severance pay to be awarded to Mr Thierry Legon, as CEO of the Company, in the event of early termination of his contract which exceeds the 12 months' basic and variable remuneration limitation set forth in Article 7.18 of the Code on Corporate Governance. The Company justifies such derogation by the fact that the service agreement of Mr Thierry Legon has been negotiated and signed a long time before the decision of the Company to comply with the Code on Corporate Governance. The Company does not intend to force the amendment of the existing service agreement but will consider such modification if the service agreement of Mr Thierry Legon is renegotiated in the future;
- the Company intends to award stock based incentives to the non-executive directors, upon advice of the Remuneration and Nomination Committee. This is contrary to provision 7.7 of the Code on Corporate Governance that provides that non-executive directors should not be entitled to performance-related remuneration such as (amongst others) stock related long-term incentive schemes. The Company justifies this as it allows to limit the portion of remuneration in cash that it would otherwise need to pay to attract or retain (internationally) renowned experts with the most relevant skills, knowledge and expertise, and as it is customary for directors active in companies in the biotech and life industry, and as the portion of the remuneration payable in warrants is limited.

What constitutes good corporate governance will evolve with the changing circumstances of a company



and with the standards of corporate governance globally, and must be tailored to meet those changing circumstances. The Board of Directors intends to update the Charter as often as required to reflect changes to the Company's corporate governance.

The Articles of Association and the Charter are made available on the Company's website (www. asitbiotech.com) and can be obtained free of charge at the Company's registered office.

#### 8.2.2 DEALING CODE AND DISCLOSURE POLICY

With a view to preventing market abuse (insider dealing and market manipulation), the Board of Directors has established a dealing code. The dealing code describes the declaration and conduct obligations of directors, members of the executive management, certain other employees and certain other persons with respect to transactions in shares or other financial instruments of the Company. The dealing code sets limits on carrying out transactions in Shares of the Company and allows dealing by the above mentioned persons only during certain windows. The dealing code is attached to the Charter.

As a Belgian listed company and with a view to ensure that investors in Shares of the Company have available all information necessary to ensure the transparency, integrity and good functioning of the market, the Board of Directors has established an information disclosure policy. The information disclosure policy aims to ensure that inside information of which the Company is aware is immediately disclosed to the public. In addition, the information disclosure policy is aimed at ensuring information that is disclosed is fair, precise and sincere, and enables the holders of Shares in the Company and the public to assess the influence of the information on the Company's position, business and results.

#### 8.3 BOARD OF DIRECTORS

#### 8.3.1 POWERS AND RESPONSIBILITIES

The Company has opted for a "one tier" governance structure whereby the Board of Directors is the ultimate decision making body, with the overall responsibility for the management and control of the Company, and is authorised to carry out all actions that are considered necessary or useful to achieve the Company's purpose. The Board of Directors has all powers except for those reserved to the Shareholders' Meeting by law or the Articles of Association.

Pursuant to the Charter, the role of the Board of Directors is to pursue the long term success of the Company by providing entrepreneurial leadership and enabling risks to be assessed and managed. The Board of Directors decides on the Company's values and strategy, its risk appetite and key policies.

The Board of Directors is assisted by a number of committees in relation to specific matters. The committees advise the Board of Directors on these matters, but the decision making remains with the Board of Directors as a whole (see also "—Committees of the Board of Directors" below).

The Board of Directors appoints and removes the chief executive officer (*CEO*). The role of the CEO is to implement the mission, strategy and targets set by the Board of Directors and to assume responsibility for the day-to-day management of the Company. The CEO reports directly to the Board of Directors.



Pursuant to the BCC the Board of Directors must consist of at least three directors. Pursuant to the Articles of Association the Board of Directors must consist of a maximum of nine directors. The Charter provides that the composition of the Board of Directors should ensure that decisions are made in the corporate interest. It should be determined on the basis of diversity, as well as complementary skills, experience and knowledge. Pursuant to the Code on Corporate Governance, at least half of the directors must be non-executive and at least three directors must be independent in accordance with the criteria set out in the BCC and in the Code on Corporate Governance. Pursuant to Article 518bis of the BCC by 1 January 2022, at least one third of the members of the Board of Directors must be of the opposite gender.

The directors are appointed for a term of no more than four years by the Shareholders' Meeting. They may be re-elected for new terms. Proposals by the Board of Directors for the appointment or re-election of any director must be based on a recommendation by the Remuneration and Nomination Committee. In the event the office of a director becomes vacant, the remaining directors can appoint a successor temporarily filling the vacancy until the next Shareholders' Meeting. The Shareholders' Meeting can dismiss the directors at any time.

Pursuant to the Company's Articles of Association, the Shareholders owning, individually or jointly, at least 15% of the share capital of the Company have the right to propose the names of two candidates for a position of director. Unless recommended otherwise by the remuneration and nomination committee of the Company (the *Remuneration and Nomination Committee*), the Shareholders' Meeting shall appoint one of those two candidates as director. At the date of this registration documents, two groups of shareholders owning jointly more than 15% of the share capital have proposed the appointment of directors. M. Everard van der Straten has been appointed as director upon the proposal of M. Rodolphe de Spoelberch, M. Marc Nollet, Mrs. Martine van der Rest, Espad-Services SA (M. Everard van der Straten) and Teck-Finance SA (M. Everard van der Straten). Bruservices SA (represented by M. Henri De Meyer) and Meusinvest SA (represented by M. Marc Foidart) have been appointed as directors upon the proposal of Société Fédérale de Participations et d'Investissement (SFPI) SA, Participation du Bassin de Liège (Meusinvest) SA, Spinventure SA, Brustart SA, Epimède SA and Société Régionale d'Investissement de Bruxelles (SRIB) SA. These groups of shareholders are not acting in concert as defined by Belgian law.

The Board of Directors meets whenever the interests of the Company so require or at the request of two or more directors. In principle, the Board of Directors will meet sufficiently regularly and at least five times per year. The decisions of the Board of Directors are made by a simple majority of the votes cast. The chairman of the Board of Directors does not have a casting vote.

#### 8.3.2 CHAIRMAN

The Board of Directors elects a chairman from among its non-executive members on the basis of his knowledge, skills, experience and mediation strength. On the date of this Annual Report, M. Gerd Zettlmeissl is the chairman of the Board of Directors since 14 March 2017. Dr. Béatrice De Vos had been the chairmperson of the Board of Directors between 28 June 2013 and 14 March 2017.



#### 8.3.3 INDEPENDENT DIRECTORS

A director will only qualify as an independent director if he meets at least the criteria set out in Article 526ter of the BCC, which can be summarised as follows:

- not being an executive member of the Board of Directors, exercising a function as a member of the
  executive management or as a person entrusted with daily management of the Company or a
  company or person affiliated with the Company, and not having been in such a position during the
  previous five years before his nomination;
- not having served for more than three terms as a non-executive director of the Board of Directors, without exceeding a total term of more than twelve years;
- not being an employee of the senior management (as defined in article 19, 2° of the Belgian Act of 20 September 1948 regarding the organisation of the business industry) of the Company or a company or person affiliated with the Company and not having been in such a position for the previous three years before his nomination;
- not receiving, or having received, any significant remuneration or other significant advantage of a financial nature from the Company or a company or person affiliated with the Company, other than any bonus or fee (tantièmes) he receives or has received as a non-executive member of the Board of Directors;
- not holding (directly or via one or more companies under his control) any shareholder rights representing 10% or more of the Company's Shares or of a class of the Company's Shares (as the case may be), and not representing a shareholder meeting this condition;
- if the shareholder rights held by the director (directly or via one or more companies under his control) represent less than 10%, the disposal of such Shares or the exercise of the rights attached thereto may not be subject to contracts or unilateral undertakings entered into by the director. The director may also not represent a shareholder meeting this condition;
- not having, or having had within the previous financial year, a significant business relationship with the Company or a company or person affiliated with the Company, either directly or as partner, shareholder, member of the Board of Directors, member of the senior management (as defined in article 19, 2° of the aforementioned Belgian Act of 20 September 1948) of a company or person who maintains such a relationship;
- not being or having been within the last three years, a partner or employee of the current or former statutory auditor of the Company or a company or person affiliated with the current or former statutory auditor of the Company;
- not being an executive director of another company in which an executive director of the Company is a non-executive member of the board, and not having other significant links with executive directors of the Company through involvement in other companies or bodies; and



• not being a spouse, legal partner or close family member (by marriage or birth) to the second degree of a member of the Board of Directors, a member of the executive management, a person charged with the daily management, or a member of the senior management (as defined in article 19, 2° of the aforementioned Belgian Act of 20 September 1948) of the Company or a company or person affiliated with the Company, or of a person who finds him or herself in one or more of the circumstances described in the previous bullets.

The resolution appointing the director must mention the reasons on the basis of which the capacity of independent director is granted.

In the absence of guidance in the law or case law, the Board of Directors has not further quantified or specified the aforementioned criteria set out in article 526ter of the BCC. Furthermore, in considering a director's independence, the criteria set out in the Code on Corporate Governance will also be taken into consideration. The Company is of the view that the independent directors comply with each of the relevant criteria of the BCC and the Code on Corporate Governance. An independent director who ceases to satisfy the requirements of independence must immediately inform the Board of Directors.

As of the date of this Annual Report, Gerd Zettlmeissl, Jean Duchâteau and Yves Désiront are independent directors.

### 8.3.4 COMPOSITION OF THE BOARD OF DIRECTORS AND BIOGRAPHICAL DETAILS

As of the date of this Annual Report, the Board of Directors is composed of 8 directors. The table below gives an overview of the members of the Company's Board of Directors and their term of office as at the date of this Annual Report:

Name	Term of office
Thierry Legon	4 years' term starting on 30 June 2016
Jean Duchâteau	4 years' term starting on 30 June 2016
Gerd Zettlmeissl	4 years' term starting on 30 June 2016
François Meurgey	4 years' term starting on 30 June 2016
Everard van der Straten Ponthoz	4 years' term starting on 30 June 2016
RE Finance Consulting SA (represented by Yves Desiront)	4 years' term starting on 30 June 2016

<sup>1</sup> Dr. Béatrice De Vos has resigned as director and chairperson of the Board of Directors with effect on 14 March 2017.



Bruservices SA (represented by Henri De Meyer)	1 year' term starting on 30 June 2016		
Meusinvest SA (represented by Marc Foidart)	4 years' term starting on 30 June 2016		

The profile and professional experience of each of the Directors is summarised hereafter:

**Béatrice De Vos** was the chairperson of the Board of Directors until 14 March 2017. Mrs. De Vos has MD, PhD and BCPM degrees. She is a physician, specialist in pharmaceutical medicine and member of the Belgian College of Pharmaceutical Medicine. Mrs. De Vos has been awarded a Doctor in Medical Sciences' degree at the University of Antwerp (UIA). For the past 25 years, she worked in leading positions of clinical research and medical affairs departments of major international pharmaceutical companies: Regional Director Benelux at Wyeth-Ayerst R&D (Belgium), VP Global Medical Affairs at GSK Biologicals (Belgium), VP Global Medical & Scientific Affairs at Sanofi Pasteur (France). She was in charge of the clinical development programs of multiple drug candidates and several viral vaccine candidates. She succeeded to develop a paediatric rotavirus vaccine, from bench to bed, that is currently used globally. She is author or co-author of multiple publications in international peer-reviewed journals and books, lecturer and speaker at several congresses, and advisor to several national and international companies and NGO's.

**Thierry Legon** is the CEO. Ir. Agronomy, MBA, Thierry Legon was in charge for ten years of the management of the intellectual property and technology transfer of the University of Brussels (ULB). Mr. Legon was also a member of the board of directors of Euroscreen (a drug discovery biotech company) for eight years. In May 1997, Mr. Legon founded the Company as a spin-off company of the ULB. As Company' CEO since 2000, Mr. Legon has demonstrated his capacity to design business plan, to raise the required funds and to lead the team to achieve the goals of the Company.

Gerd Zettlmeissl is the chairman of the Board of Directors since 14 March 2017. Gerd Zettlmeissl is holding a doctoral degree in biochemistry of the University of Regensburg and did a post-doctoral fellowship at the Institut Pasteur Paris in virology. Mr. Zettlmeissl has been working in various R&D and general management positions in the biopharmaceutical and vaccine industry since 1985. His last positions were managing director of Chiron Behring, a leading vaccine manufacturer in Germany, and until May 2011 CEO of Intercell in Austria. During his career, he made major contributions to the discovery, development and registration of a number of biologicals and vaccines. In 2010, he was named Vaccine Biotech CEO of the Year at the World Vaccine Congress. He currently serves as non-executive director of Aeras (USA). Until early 2015 he was chairman of GlycoVaxyn (Switzerland), an innovative vaccine company acquired by GlaxoSmithKline.

**Jean Duchâteau**. MD PhD, graduated in Internal Medicine and Clinical Biology, Honorary Professor of Mucosal Immunology at Université Libre de Bruxelles, Head Department of Clinical Biology at CHU-Brugmann and Hopital Universitaire des Enfants - Reine Fabiola (ULB) Professor Duchateau is one of the inventor of the first patents on tolerance induction to allergy and graft rejection, new LED tests, owned by Company. Professor Duchateau was cofounder of Company and he is now Honorary President.



**Yves Désiront** obtained a master degree as Ingénieur Commercial in Business Administration and Technology Interface from I.C.H.E.C. Brussels in 1994. He is the managing partner of a private equity fund based in Luxembourg and is acting, since October 2015, as group CFO of BGP Investment, a Luxembourg real estate group. Previously he acted as group CFO of Orco Property Group. Prior to this, he served in various functions at Groupe Bruxelles Lambert and Générale de Banque.

François Meurgey is working as independent consultant in pharmaceutical product strategic marketing. He has spent more than twenty-five years in the biopharmaceutical industry, almost equally divided between Europe and the United States, and between operational and staff functions. He has held important sales and marketing positions at Eli Lilly (Director of Global Marketing for Prozac®), Merck & Co. (Senior Director of Asia-Pacific Marketing) and UCB (Vice-President of Global Marketing), among others. He also teaches regularly at ESSEC in Paris, the ULB in Brussels, the Scandinavian International Management Institute (SIMI) in Copenhagen, and Columbia University Graduate Schools of Business and Public Health in New York. French national, he is a graduate of Reims Management School, received an MS in International Relations from Université de Paris-Sorbonne and holds an MBA from the Stern School of Business at New York University.

**Everard van der Straten Ponthoz** holds a Master Degree in applied economics from Solvay Business School. Everard van der Straten Ponthoz started a short career as auditor with Arthur and Anderson & Co, he has been the managing director of Metallo-chimique Group until March 2007 and then member of the Board of Metallum Group until December 2008. Since that time Mr. van der Straten acts as a business angel for SME's.

**Henri De Meyer** holds two Master Degrees, both from Solvay Business School (in Management and Taxation Management) and a post grade from Université Libre de Bruxelles (in Human Resources Management). He has been working for 18 years in the Venture Capital Sector as Investment Manager and, since 2000, as Crisis Manager in charge of restructuring companies and M&A assignments.

**Marc Foidart** obtained a Master in Business Engineering from the University of Liège. He is founder of Cide-Socran ASBL and has more than 15 years' experience in financial and management consulting for small and medium enterprises. Mr. Foidart is Vice-President of Meusinvest SA and CEO of Spinventure SA.

#### **8.4** Executive management

The executive management of the Company is led by Thierry Legon, the CEO, assisted by the chief financial officer, the marketing director, the human ressources director and the secretary. No executive management board (*comité de direction/directiecomité*) has been established by the Board of Directors of the Company.

**Everard van der Straten Ponthoz**, through his management company Espad-Services SA, has been appointed on 21 September 2015 by the Board of Directors as chief financial officer. His profile and professional experience are detailed above (see Section 8.3.4).

**François Meurgey**, through his management company Oukelos SPRL, has been appointed by the Board of Directors as marketing director of the Company with effect as from 1 December 2015. His profile and



professional experience are detailed above (see Section 8.3.4).

**Albert Vicaire** is the human ressources manager of the Company. As an industrial engineer, MBA, he uses his twenty years in human resources experience to manage the administrative aspects of the Company. His pragmatic problem solving approach and influence management skills help the members of the scientific team to focus on their own tasks. Mr. Vicaire is an employee of the Company.

**Grégory Nihon** is the secretary of the Company as well as the compliance officer. Grégory holds a Master Degree in applied economics from HEC-ULG. From January 2008 to November 2015 Gregory worked as auditor with BCG, PwC and Baker Tilly Belgium. Grégory works for the Company since January 2016.

#### 8.5 Committees

The Board of Directors has established two board committees which are responsible for assisting the Board of Directors and making recommendations in specific fields: the Audit Committee (in accordance with article 526bis of the BCC and provision 5.2 of the Code on Corporate Governance) and the Remuneration and Nomination Committee (in accordance with article 526quater of the BCC and provision 5.3 and 5.4 of the Code on Corporate Governance). The terms of reference of these board committees are primarily set out in the Charter.

#### 8.5.1 AUDIT COMMITTEE

The Audit Committee consists of at least three directors. As provided by article 526bis of the BCC all members of the Audit Committee are non-executive directors. According to the BCC, at least one member of the Audit Committee must be independent and must have the necessary competence in accounting and auditing. At the date of this Annual Report the following directors have been appointed as members of the Audit Committee: Yves Désiront (chairperson), Gerd Zettlmeissl and Bruservices SA (represented by Henri De Meyer). The Audit Committee of the Board of Directors is composed exclusively of non-executive directors, of which two are independent directors.

The members of the Audit Committee must have sufficient expertise in financial matters to discharge their functions. The chairperson of the Audit Committee is competent in accounting and auditing as evidenced by his previous and current roles. According to the Board of Directors, the other members of the Audit Committee also satisfy this requirement, as evidenced by the different senior management and director mandates that they have held in the past and currently hold.

The role of the Audit Committee is to supervise and review the financial reporting process, the internal control and risk management systems and the internal audit process of the Company. The Audit Committee monitors the audit of the statutory and consolidated financial statements, including the follow-up questions and recommendations by the statutory auditors. The Audit Committee also makes recommendations to the Board of Directors on the selection, appointment and remuneration of the external auditors and monitors the independence of the external auditor.

In principle, the Audit Committee meets as frequently as necessary for the efficiency of the operation of the Audit Committee, but at least four times a year. The members of the Audit Committee have full access to the management and to any other employee to whom they may require access in order to carry out their



responsibilities.

#### 8.5.2 REMUNERATION AND NOMINATION COMMITTEE

The Remuneration and Nomination Committee consists of at least three directors. All members of the Remuneration and Nomination Committee are non-executive directors. In line with the BCC, the Remuneration and Nomination Committee consists of a majority of independent directors. The Remuneration and Nomination Committee is chaired by the person appointed by the Board of Directors. At the date of this Annual Report the following directors have been appointed as members of the Remuneration and Nomination Committee: Gerd Zettlmeissl (chairperson), Jean Duchâteau and Meusinvest SA (represented by Marc Foidart). Pursuant to the BCC, the Remuneration and Nomination Committee must have the necessary expertise on remuneration policy, which is evidenced by the experience and previous roles of its current members. The CEO participates to the meetings of the Remuneration and Nomination Committee in an advisory capacity each time the remuneration of the management is being discussed.

The role of the Remuneration and Nomination Committee is to make recommendations to the Board of Directors with regard to the appointment of directors, make proposals to the Board of Directors on the remuneration policy and individual remuneration for directors and members of the executive management, and to submit a remuneration report to the Board of Directors. In addition, the Remuneration and Nomination Committee each year submits the remuneration report to the annual Shareholders' Meeting.

In principle, the Remuneration and Nomination Committee meets as frequently as necessary for the efficiency of the operation of the committee, but at least three times a year.

#### 8.6 ABSENCE OF CONVICTIONS AND OFFICIAL PUBLIC INCRIMINATIONS

All directors and members of the executive management have confirmed to the Company the absence of (i) any convictions in relation to fraudulent offenses during the past five years or (ii) any official public incrimination and/or sanctions of such members by statutory or regulatory authorities (including designated professional bodies), or disqualification by a court from acting as a member of the administrative, management or supervisory body of an issuer or from acting in the management or conduct of the affairs of any issuer during the past five years.

Mr. Thierry Legon was the managing director of Biotech Tools Factory SA that was put into voluntary liquidation in June 2015. Mr Thierry Legon was also manager of Thierry Legon BVBA that was put into voluntary liquidation in September 2014. Mr. Henri De Meyer was a director of Polygone International SA and Primo SA that were declared bankrupt. Mr. Marc Foidart was a director of Epimède SPRL, Majocepi SPRL and Faxim SPRL that have all been liquidated. Mr. Everard van der Straten was a director of Unijep SA that was declared bankrupt in September 2016. Mr. Albert Vicaire was a director of Biotech Tools Factory SA that was put into voluntary liquidation in June 2015. With the exception of the aforementioned cases, the Company is not aware of any bankruptcies, receiverships or liquidations of any entities in which the members of the Board of Directors or the members of the executive management held any office, directorships, or partner or senior management positions during the past five years.



#### 8.7 REMUNERATION AND BENEFITS

#### 8.7.1 DIRECTORS

#### General

Upon recommendation and proposal of the Remuneration and Nomination Committee, the Board of Directors determines the remuneration of the directors to be proposed to the Shareholders' Meeting.

Pursuant to Belgian law, the Shareholders' Meeting approves the remuneration of the directors, including inter alia, each time as relevant, (i) in relation to the remuneration of executive and non-executive directors, the exemption from the rule that share based awards can only vest during a period of at least three years as of the grant of the awards, (ii) in relation to the remuneration of executive directors, the exemption from the rule that (unless the variable remuneration is less than a quarter of the annual remuneration) at least one quarter of the variable remuneration must be based on performance criteria that have been determined in advance and that can be measured objectively over a period of at least two years and that at least another quarter of the variable remuneration must be based on performance criteria that have been determined in advance and that can be measured objectively over a period of at least three years, (iii) in relation to the remuneration of non-executive directors, any variable part of the remuneration, and (iv) any provisions of service agreements to be entered into with executive directors providing for severance payments exceeding twelve months' remuneration (or, subject to a motivated opinion by the Remuneration and Nomination Committee, eighteen months' remuneration).

#### Remuneration and compensation

Please refer to Section 14.15.8

#### 8.7.2 ASIT BIOTECH STOCK OPTION PLANS

Please refer to Section 6.7.

### 8.8 SERVICE AGREEMENTS OF THE DIRECTORS AND MEMBERS OF THE MANAGEMENT

The following service agreements have been entered into between the Company and companies relating to directors:

- a first service agreement was entered into with OUKELOS SPRL on 16 June 2009, a company linked to Mr. François Meurgey, relating to pharmaceutical marketing services; this first agreement was replaced by a second one, effective as of 1 December 2015 and relating to the position of marketing director of the Company. The consideration for these services is a daily fee of EUR 1,250; and
- a service agreement executed with ESPAD-SERVICES SA, a company linked to Everard van der Straten Ponthoz, relating to services of chief financial officer of the Company since 21 September



2015: the consideration for these services is a daily fee of EUR 1,250.

A service agreement had been entered into with BEJAMAD SPRL on 22 March 2013, a company linked to Mrs. Béatrice De Vos, relating to (i) advices and recommendations on the clinical development of the Company products in order to get their registration by the competent authority and (ii) business development; the consideration for the first mission consisted in a daily fee of EUR 1,120 up to 50 days/year and the consideration for the business development was a monthly fee of EUR 2,500. This service agreement was terminated with effect on 31 August 2015.

A service agreement had been entered into with JEAN DUCHATEAU SPRL on 4<sup>th</sup> July 2003, a company linked to Mr. Jean Duchâteau, relating to services on research program in the field of the diagnosis and treatment of autoimmune diseases, allergies and transplant rejection. The consideration for the mission was a yearly fee of EUR 15,000. This service agreement was terminated on 24 January 2017 with retroactive effect on 1<sup>st</sup> January 2016.

#### 8.9 SECURITIES HELD BY DIRECTORS AND MANAGEMENT

The table below provides an overview of the number of Shares and warrants held by the directors upon the date of this Annual Report:

Name	Number of shares	Number of warrants*	
Béatrice De Vos	15,607	175	
Thierry Legon	156,300	750	
Jean Duchâteau	181,700	0	
Gerd Zettlmeissl	3,000	175	
François Meurgey	28,415	175	
Everard van der Straten Ponthoz (through companies)	338,658	0	
RE Finance Consulting SA (represented by Yves Désiront)	0	0	
Bruservices SA (represented by Henri De Meyer)	0	0	
Meusinvest SA (represented by Marc Foidart)	391,100	0	
Grégory Nihon	137	50	
Albert Vicaire	11,393	250	

<sup>\*</sup> Further to the stock-split approved on 8 January 2016 the exercise of a warrant will give right to one hundred shares instead of one share.



#### 8.10 POTENTIAL CONFLICTS OF INTERESTS

Directors are expected to arrange their personal and business affairs so as to avoid conflicts of interests with the Company. Any director with a conflicting financial interests (as contemplated by article 523 of the BCC) on any matter before the Board of Directors must bring it to the attention of both the statutory auditors and fellow directors, and take no part in any deliberations or voting related thereto. The Charter contains the procedure for transactions between the Company and the directors which are not covered by the legal provisions on conflicts of interest. The Charter contains a similar procedure for transactions between the Company and members of the management.

All directors have declared that they are not under a position of potential conflicts of interests between any duties to the Company and their private interests and/or other duties.

There are no outstanding loans granted by the Company to any of the directors or the members of the management, nor are there any guarantees provided by the Company for the benefit of these persons.

None of the directors or members of the management has a family relationship with any other directors or members of the management.

#### 8.11 OTHER MANDATES

In the five years preceding the date of this Annual Report, the directors have held the following directorships and memberships of administrative, management or supervisory bodies and/or partnerships (apart from their functions within the Company):

Director	Current mandate	Past mandate
Thierry Legon	N/A	Biotech Tools Factory SA Thierry Legon BVBA
Gerd Zettlmeisl	Themis Bioscience GmbH Aeras Fundation Hilleman Laboratories Pvt. Ltd Biologicale Cureval (Germany)	GlycoVaxyn AG
Jean Duchâteau	Jean Duchâteau SPRL	N/A
Yves Désiront	FYP SA D&R Cambre SA RE Finance Consulting SA BGP AM GmbH Nabul Construmat SL Subsidiaries of Orco Property Group	
François Meurgey	Oukelos SPRL Eyed Pharma	N/A



	_			
Director	Current mandate	Past mandate		
Everard van der Straten	Espad-Services SA Teck Finance SA LBI Investissements SA REM 624 Recymet SA Chawiti SCI Altro SA Wilink SA	Strafer SA Unijep SA		
Henri De Meyer	Maison de la Radio Flagey SA MDG SA Bruservices SA Tumor Growth Control ASBL Bruservices SA GX Holding SPRL Gogolplex SPRL	Labima SA Autocab SA Polygone International SA Hello Agency SA Primo SA Weghsteen Capital Advice SA Sushi Factory SA		
Marc Foidart	Imcyse SA Centre d'Innovation Médicale SA Wallonia Biotech Coaching SA Cide-Socran ASBL Spinventure SA Lasea SA Amos SA Spacebel SA Pierre et Nature Luxembourg SA Ousia SPRL Ousia Operations SPRL Samtech SA Science Park Services SA Leansquare SA Arlinvest SPRL OZ-M-OZ ASBL EYED Pharma SA Accessia GMP SA Probiox SA Diagenode SA Integrated Therapeutic Systems SA	Arlenda SA Métal Déployé Belge SA MDB Holding SA Epimède SPRL Gambit Financial Solutions SA Uteron Pharma SA Themis Holding SA Pastificcio della Mamma SA Propac SAFS Majocepi SPRL Faxim SPRL Mithra Pharmaceuticals SA Craft Engineering SA Uteron Pharma		
Grégory Nihon	Track Inside SA N/A	N/A		
Albert Vicaire	N/A	Biotech Tools Factory SA		

#### 8.12 PRIVATE INVESTMENT TRANSACTIONS AND TRADING ON COMPANY'S SHARES

With a view to preventing market abuse (insider dealing and market manipulation), the Board of Directors has established a dealing code. The dealing code describes the declaration and conduct obligations of directors, members of the executive management, certain other employees and certain other persons with respect to transactions in shares or other financial instruments of the Company. The dealing code sets limits on carrying out transactions in Shares of the Company and allows dealing by the above mentioned persons only during certain windows. The dealing code is attached to the Charter.

The Dealing Code prohibits dealing in the Company's Shares or other financial instruments of the Compa-



ny during certain periods, including a designated period preceding the announcement of its financial results (closed periods). Furthermore the Dealing Code provides that any trading on Shares of the Company by any employee for their own accounts needs to be prior notified to the Compliance Officer.

#### 8.13 RELATED PARTY TRANSACTIONS

The Company has not entered into transactions with its principal Shareholders.

The Company has entered into transactions with companies relating to directors. Please see Section 8.8 for a description of such transactions.

Other than the transactions listed in such section of the Annual Report, the Company has not entered into any related party transactions with any Shareholders or directors or any persons or entities affiliated with any of the Shareholders or directors.

#### 8.14 DIVIDEND POLICY

The Company has never paid any dividends in the past and does not intend to pay dividends for the fore-seeable future. The Board of Directors expects to retain all earnings, if any, generated by the Company's operations for the development and growth of its business and does not anticipate paying any dividends to the Shareholders in the near future. Payment of future dividends to Shareholders will be subject to a decision of the annual Shareholders Meeting of the Company and subject to legal restrictions contained in Belgian Company law.



## 9 EMPLOYEES



The Company relies on a team of experienced professionals in all areas required to meet its strategic objectives including research and development, medical and regulatory, manufacturing, business development, product development, infrastructure, intellectual property and finance.

On 31 December 2016, the Company had a total of 22 permanent employees (full time equivalents) and 5 self-employed contractors (one full time equivalent and four part-times). About 81 % work in research and development activities (including clinical development and manufacturing), the remainder in corporate functions.

The headcount of the Company has evolved from 10 employees in 2012, 8 employees in 2013, 10 employees in 2014 and 19 employees in 2015.



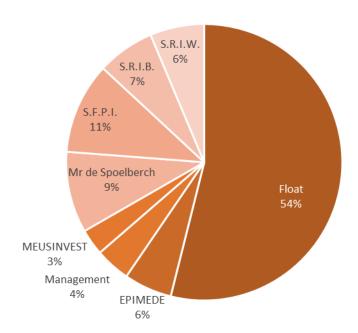
## 10 MAJOR SHAREHOLDERS

The share capital of the Company amounts to EUR 17,505,986.09 and is fully paid-up. It is represented by 12,806,100 Shares without nominal value and representing the same pro rata fraction of the share capital. The total number of outstanding warrants at the date of the present Registration Document is 3,270 allowing the warrants holders to subscribe to 327,000 new Shares.

The Company is not controlled within the meaning of Article 5 of the BCC.

The Company has not been informed of the existence of any shareholders' agreement relating to the Company (except as mentioned below regarding the appointment of directors).

The table below provides an overview of the shareholders that have notified the Company of their owner-ship of securities of the Company. This overview is based on the most recent transparency declaration submitted to the Company<sup>23</sup>.



<sup>&</sup>lt;sup>3</sup> The transparency declaration made by SRIB is a joint declaration by SRIB (for 4.21%) and by Brustart SA (for 2.54%). Brustart is a 100% subsidiary of SRIB.



<sup>&</sup>lt;sup>2</sup> The transparency declaration made by SRIW is a joint declaration by SRIW SA (for 2.99%) and by Sofipole SA (for 3.36%). SRIW owns 60% of the share capital of Sofipole ( 40% is owned by Sowalfin). Sofipole is controlled by SRIW within the meaning of Article 5 of the BCC.

#### 10 CORPORATE GOVERNANCE

Pursuant to the Company's Articles of Association, the Shareholders owning, individually or jointly, at least 15% of the share capital of the Company have the right to propose the names of two candidates for a position of director. Unless recommended otherwise by the Remuneration and Nomination committee of the Company, the Shareholders' Meeting shall appoint one of those two candidates as director. At the date of this registration documents, two groups of shareholders owning jointly more than 15% of the share capital have proposed the appointment of directors. M. Everard van der Straten has been appointed as director upon the proposal of M. Rodolphe de Spoelberch, M. Marc Nollet, Mrs. Martine van der Rest, Espad-Services SA (M. Everard van der Straten) and Teck-Finance SA (M. Everard van der Straten). Bruservices SA (represented by M. Henri De Meyer) and Meusinvest SA (represented by M. Marc Foidart) have been appointed as directors upon the proposal of Société Fédérale de Participations et d'Investissement (SFPI) SA, Participation du Bassin de Liège (Meusinvest) SA, Spinventure SA, Brustart SA, Epimède SA and Société Régionale d'Investissement de Bruxelles (SRIB) SA. Pursuant to these agreements, these shareholders are not acting in concert as defined by Belgian law.



## 11 FINANCIAL STATEMENTS: GENERAL



#### 11.1 GENERAL INFORMATION

On 7 April 2017, the Board of Directors made up the consolidated financial statements and the statutory financial statements of the Company with respect to the financial year ended on 31 December 2016, as well as the annual report on these consolidated and statutory financial statements.

The consolidated financial statements can be found in section 12.1 and 12.2; an extract of the statutory financial statements can be found in section 13.

The management report on the consolidated financial statements and on the statutory financial statements can be found in section 14.

The consolidated financial statements of the Company with respect to the financial years ended 31 December 2014, 31 December 2015 and 31 December 2016 were prepared in accordance with the International Financial Reporting Standards as endorsed by the European Union (IFRS). They have all been audited by the auditors. Their audit opinions can be found in section 12.3.

This registration document, together with the complete version of the statutory financial statements of the Company with respect to the financial year ended on 31 December 2016, the management report of the Board of Directors on the consolidated financial statements and the statutory financial statements, and the auditors' report on the statutory financial statements are made available on the website of ASIT biotech (<a href="https://www.asitbiotech.com">www.asitbiotech.com</a>) and can be obtained free of charge.

Certain financial information in this registration document has been subject to rounding adjustments and currency conversion adjustments. Accordingly, the sum of certain data may not be equal to the expressed total.

#### 11.2 STATEMENT BY THE BOARD OF DIRECTORS

In accordance with Article 12 §2 3°, a) and b) of the Royal Decree of 14 November 2007 on the obligations of the issuers of financial instruments admitted to trading on a regulated market, the Board of Directors of the Company states that, to the best of his knowledge:

- a) The annual financial statements prepared in accordance with the applicable accounting standards give a true and fair view of the assets, liabilities, financial position and profit or loss of ASIT biotech SA and of the undertakings included in the consolidation; and
- b) The management report includes a fair review of the development and performance of the business and the position of ASIT biotech and of the undertakings included in the consolidation, together with a description of the principal risks and uncertainties that it faces.



# 12 CONSOLIDATED FINANCIAL STATEMENTS

## 12.1 IFRS AUDITED FINANCIAL INFORMATION OF THE COMPANY FOR THE LAST 3 YEARS

#### **Consolidated statement of financial position (in EUR 000)**

		31 December		
	Note	2016	2015	2014
ASSETS				
Non-current assets				
Intangible assets			-	-
Property, plant and equipment	7	736	494	202
Other long term receivables	8	1.034	12	13
Current assets		1.770	506	215
Inventories	9	-	11	14
Trade receivables	10	3	2	18
Other receivables	11	323	277	84
Other current assets	12	72	57	8
Cash and cash equivalents	13	13,387	4,621	8,441
		13,785	4,968	8,565
Total assets		15,555	5,474	8,780
EQUITY AND LIABILITIES				
Capital and reserves				
Capital	14	17,506	11,625	11,625
Share premium	14	21,957	-	-
Cost of capital increase	14	(2,102)	593	
Share based payment reserve	15	216	591	573
Accumulated deficit		(24,445)	(12,481)	(4,766)
Total equity attributable to shareholders		13,132	(858)	7,432
LIABILITIES				
Non-current liabilities				
Financial debt	16	419	-	-
Other non-current liabilities	18			70
		419		70
Current liabilities				
Financial debt	16	12	4,232	
Trade payables	17	1,707	1,611	858
Other payables	18	285	489	421
		2,004	6,332	1,279
Total liabilities		2,423	6,332	1,349
Total equity and liabilities		15,555	5,474	8,780



#### Consolidated income statement and other comprehensive income (in EUR 000)

		31 December			
	Note	2016	2015	2014	
Revenue	19	-	4	5	
Other operating income / (expenses)	20	1,667	(3)	3	
Cost of goods sold		-	(3)	-	
Research and development expenses	21	(12,123)	(6,691)	(3,541)	
General and administrative expenses	22	(1,822)	(947)	(785)	
Operating loss for the period		(12,278)	(7,640)	(4,318)	
Financial income	25	42	33	6	
Financial expense	26	(102)	(108)	(117)	
Loss for the period before taxes		(12,338)	(7,715)	(4,429)	
Taxes	27	(1)	-	-	
Loss for the period		(12,339)	(7,715)	(4,429)	
Other comprehensive income					
Comprehensive loss for the period		(12,339)	(7,715)	(4,429)	
Loss for the year					
Attributable to owners of the Company		(12,339)	(7,715)	(4,429)	
Losses per share (in EUR per share)					
- basic and diluted	31	(1,10)	(0,91)	(0,76))	



#### **Consolidated Statement of changes in equity (in EUR 000)**

	Capital	Share premium	Share-based Payment reserve	Cost of capital increase	Accumulated deficit	Total equity attributable to the own- ers of the Company
As at 1st January 2014	14,293	5,413	374		(20,038)	42
Loss of the year	-	-	-		(4,429)	(4,429)
Share-based payment	-	-	199		-	199
Conversion of convertible bonds	4,531	-	-		-	4,531
Capital decrease	(19,700)	0	0		19,700	0
Capital increase	12,500	(5,413)				7,087
As at 31 December 2014	11,625		573		(4,766)	7,432
Loss of the year	-	-	-		(7,715)	(7,715)
Share-based payment	-	-	18		-	18
Costs of capital increase	-	-	-	(593)	-	(593)
As at 31 December 2015	11,625	-	591	(593)	(12,481)	(858)
Loss of the year					(12,339)	(12,339)
Share-based payment			(375)		375	-
Capital increase (IPO)	4,579	18,871		(1,509)		21,941
Capital increase (conversion of bond)	1,234	2,896				4,130
Capital increase (exercise of warrants)	67	191				258
As at 31 December 2016	17,506	21,957	216	(2,102)	(24,445)	13,132



#### **Consolidated Statement of cash flows (in EUR 000)**

	Note	2016	2015	2014
Loss of the period		(12,339)	(7,715)	(4,429)
Adjustments				
Depreciation on property, plant and equipment	7	141	80	20
Write-off inventories		11		
Share-based payments	15	-	18	199
Financial (income) / expense		60	75	111
Changes in working capital				
Increase of R&D Investment Tax Receivables		(1,016)		
Inventories		-	3	(1)
Trade receivables, other receivables and other current assets		(62)	(819)	(42)
Other non-current liabilities, trade payables and other payables		(492)	437	764
Cash flow from operating activities		(13,697)	(7,921)	(3,377)
Investing activities				
Purchase of property, plant and equipment	7	(383)	(372)	(182)
(Increase) / Decrease of long-term deposits		(6)	1	(10)
Cash flow from investing activities		(389)	(371)	(192)
Financing activities				
Capital increase	14	22,199	-	7,087
Issuance of convertible loan		-	4,130	3,678
Recoverable cash advance		815	314	
Interests received		42	33	6
Interests paid	26	(204)	(6)	(6)
Cash flow from financing activities		22,852	4,471	10,765
Net increase / (decrease) in cash and cash equivalents		8,766	(3,820)	7,196
Cash and cash equivalents at the beginning of the period	13	4,621	8,441	1,245
Cash and cash equivalents at the end of the period	13	13,387	4,621	8,441

#### 12.2 NOTES TO THE FINANCIAL STATEMENTS

#### 1. General information

ASIT biotech SA, a company incorporated in Belgium with corporate address 5, Avenue Ariane, 1200 Woluwe-Saint-Lambert in Belgium is a clinical-stage biopharmaceutical company focused on the development and commercialization of a range of immunotherapy products for the treatment of allergies. The lead product candidate gp-ASIT+TM is designed for treatment of grass pollen allergy. Besides this lead investigational product, the Company's product pipeline includes two other products in a clinical stage, hdm-ASIT+TM, intended for treatment of house dust mite allergy and rag-ASIT+TM intended for treatment of respiratory allergy to ragweed. Since recently the Company has also started pre-clinical development in food allergy.

These product candidates are being developed using the Company's innovative technology, ASIT+TM, allowing the production, the characterization and the quality control of truly new active ingredients. These new active ingredients are highly purified natural allergen fragments allowing faster injection regimen with higher doses resulting in short course treatment improving patient compliance and clinical efficacy.

ASIT biotech SA incorporated a subsidiary under the name Biotech Tools Factory SA, which was liquidated in June 2015. For the purpose of these notes, ASIT biotech SA and Biotech Tools Factory SA will be referred to together as the Company. The Company has so far been funded by a combination of private investors and funds from regional and national authorities. Complementary funding was raised in May at the occasion of the IPO. Several grants have been awarded to the Company to support its R&D activities.

The financial statements have been authorised for issue on 7 April 2017 by the board of directors of the Company.

#### 2. Summary of significant accounting policies

#### **Statement of compliance**

The financial statements of the Company for the year ended 31 December 2016 have been prepared in accordance with the International Financial Reporting Standards (IFRS) as issued by the International Accounting Standards Board (IASB) and as adopted by the European Union. Annual accounts have been prepared in accordance with IFRS for the first time for the accounting period ending 31 December 2015.

#### **Reminder of IFRS 1 Exemptions**

The Company established its financial statements in accordance with IFRS for the first time for the accounting period ending on December 31, 2015.

When doing, so, the Company made use of certain exemptions as allowed by IFRS 1 "First-time adoption of IFRS".



The exemption adopted by the Company are set out below:

Share-based payments (IFRS 2, "Share-based payments")

The Company has elected to apply IFRS 2 to all relevant share-based payment transactions granted but not fully vested at 1 January 2013.

Fair value or revaluation as deemed cost (IAS 16, "Property, Plant and Equipment" and IAS 38, "Intangible assets")

The Company has not elected to measure any item of property, plant and equipment or intangible asset at the date of transition to IFRS at its fair value.

#### **Principal accounting policies**

The principal accounting policies for preparing the financial statements are summarised below.

#### 2.1 Basis of preparation

The consolidated financial statements have been prepared on the historical cost basis. Historical cost is generally based on the fair value of the consideration given in exchange for assets or liabilities. All entries are made at historical cost, with the exception of the share based payments (not accounted for in Belgian GAAP), booked at fair value, as well as the recoverable cash advances which are initially recognised at fair value.

Fair value is the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. The fair value measurement is based on the presumption that the transaction to sell the asset or transfer the liability takes place either in the principal market for the asset or liability or in the absence of a principal market, in the most advantageous market for the asset or liability. The principal or the most advantageous market must be accessible by the Company. The fair value of an asset or liability is measured using the assumptions that market participants would use when pricing the asset or liability, assuming that the market participants act in their economic best interest.

All assets and liabilities for which fair value is measured or disclosed in the financial statements are categorised within the fair value hierarchy, described as follows, based on the lowest level input that is significant to the fair value measurement as a whole:

- Level 1 Quoted (unadjusted) market prices in active markets for identical assets or liabilities;
- Level 2 Valuation techniques for which the lowest level input that is significant to the fair value measurement is directly or indirectly observable;
- Level 3 Valuation techniques for which the lowest level input that is significant to the fair value measurement is unobservable.

The financial statements are presented in Euro (EUR) and all values are rounded to the nearest thousand (k



EUR), except when otherwise indicated.

The following standards and interpretations are published, issued but are not yet effective and have not been applied to the IFRS financial statements of the Company. Some may or may not affect the preparation of future annual reports. The Company will assess full impact of these standards in due course:

- IFRS 9 Financial instruments and subsequent amendments. The standard will replace the majority of IAS 39 and covers the classification, measurement, recognition and de-recognition of financial assets and financial liabilities, impairment of financial assets and provides a new hedge accounting model. It will be applicable for annual periods beginning on or after 1 January 2018.;
- IFRS 15 Revenue from Contracts with Customers. This standard provides a single principle based approach to the recognition of revenue from all contracts with customers. It focuses on the identification of the performance obligations in a contract and requires that revenue be recognised when such obligations are satisfied. The standard will be applicable for annual periods beginning on or after 1 January 2018. This standard shall impact the Company when it will generate revenue;
- IFRS 16 Leases. This standard provides a basis for the accounting of leasing contracts by lessees and lessors. Considering the nature of the lease agreements in which the Company is involved, this standard shall not significantly impact the Company. The standard will be applicable for annual periods beginning on or after 1 January 2019, but not yet endorsed in the EU
- Amendments to IAS 12 Recognition of deferred tax assets for unrealised losses (normally applicable for annual periods beginning on or after 1 January 2017, but not yet endorsed in the EU). As per analysis performed the Company shall not be impacted by this amendment.
- Amendments to IAS 7 Disclosure initiative (normally applicable for annual periods beginning on or after 1 January 2017, but not yet endorsed in the EU);
- Clarifications to IFRS 15 Revenue from contracts with customers (applicable for annual periods beginning on or after 1 January 2018, but not yet endorsed in the EU);
- Amendments to IFRS 2 Classification and measurement of Share-based payment transactions (applicable for annual periods beginning on or after 1 January 2018, but not yet endorsed in the EU);
- Amendments to IFRS 4 Applying IFRS 9 Financial Instruments with IFRS 4 Insurance contracts (applicable for annual periods beginning on or after 1 January 2018, but not yet endorsed in the EU);
- Annual improvements to IFRS Standards 2014-2016 Cycle (applicable for annual periods beginning on or after 1 January 2017 / on or after 1 January 2018, but not yet endorsed in the EU);
- IFRIC Interpretation 22 Foreign Currency Transactions and Advance Consideration (applicable for annual periods beginning on or after 1 January 2018, but not yet endorsed in the EU);
- Amendments to IAS 40 Transfers of Investment Property (applicable for annual periods beginning on or after 1 January 2018, but not yet endorsed in the EU).



It is not expected that the application of the above mentioned IFRS standards, interpretations and amendments will have a significant impact on the financial statements.

The Company consistently used the same accounting policies and throughout all periods presented in its IFRS financial statements. There is no impeding change in accounting policy.

#### 2.2 Consolidation principles

The financial statements comprise the financial statements of the Company and its subsidiaries (if any). The Company had a subsidiary that was liquidated in June 2015.

A subsidiary is an entity controlled by the Company. Control is achieved when the Company is exposed or has rights, to variable returns from its involvement with the investee and has the ability to affect those returns through its power over the investee.

The Company controls an investee if, and only if, the Company has:

- Power over the investee i.e., existing rights that give it the current ability to direct the relevant activities of the investee;
- Exposure, or rights, to variable returns from its involvement with the investee;
- The ability to use its power over the investee to affect its returns.

All transactions between group companies have been eliminated upon consolidation.

As at 31 December 2016 and 2015, the Company has no more subsidiary.

#### 2.3 Foreign currency translations

The financial statements are presented in Euro, which is the Company's functional and presentation currency.

Transactions in foreign currencies are recorded at the foreign exchange rate prevailing at the date of the transaction. Monetary assets and liabilities denominated in foreign currencies at the balance sheet date are translated at the foreign exchange rates prevailing at that date. Exchange differences arising on the settlement of monetary items or on reporting monetary items at rates different from those at which they were initially recorded during the period or in previous periods, are recognised in the income statement.

#### 2.4 Intangible assets

➤ Research and development costs

Research costs are expensed as incurred. Developments cost are recognised as intangible assets, if and only if, all of the following conditions are met:

• the technical feasibility of completing the intangible asset so that it will be available for use or sale;



- the intention to complete the intangible asset and use or sell it;
- the ability to use or sell the intangible asset;
- how the intangible asset will generate future economic benefits;
- the availability of adequate technical, financial and other resources to complete the development and to use or sell the intangible asset; and
- the ability to measure reliably the expenditure attributable to the intangible asset during its development.

At this stage, the Company is of the opinion that none of the projects currently undergone meet the recognition criteria.

#### ➤ Other intangible assets

Purchased intangible assets such as patents and licenses and purchased IT, are capitalised if it can be demonstrated that such assets will generate future economic benefits for the Company.

Intangible assets are amortised in accordance with the expected pattern of consumption of future economic benefits derived from each asset. Specifically, intangible assets are amortised on a straight line basis over their estimated useful life.

The Company has at this stage no intangible asset carried on the statement of financial position.

#### 2.5 Property, plant and equipment

Property, plant and equipment are initially recorded in the statement of financial position at their acquisition cost, which includes the costs directly attributable to the acquisition and installation of the asset.

Property, plant and equipment are recorded at their historical cost less accumulated depreciation and impairment, if any.

Property, plant and equipment are depreciated on a straight line basis over their estimated useful life. The estimated useful life of each category of property, plant and equipment is as follows:

IT and laboratory & manufacturing equipment	3 to 10 years
Leasehold improvements	The shorter of rent duration and 10 years
Other	10 years

Property, plant and equipment are derecognised upon disposal or when no future economic benefits are expected from its use or disposal. Any gain or loss arising on de-recognition of the asset, which is the difference between the net disposal proceeds and the carrying amount of the asset, is included in the income



statement when the asset is derecognised.

The residual values, useful lives and methods of depreciation of property, plant and equipment are reviewed at each financial year end and adjusted prospectively, if appropriate.

> Impairment of intangible assets and property, plant and equipment

At each reporting date, the Company assesses whether there is an indication that an asset may be impaired. If an indication of impairment exists, or when annual impairment testing is required (in the case of goodwill and intangible assets with an indefinite useful life), the Company estimates the asset's recoverable amount. The recoverable amount of an asset is the higher of the assets or cash-generating units (CGU) fair value less costs of disposal and its value in use.

The recoverable amount is determined for an individual asset, unless the asset does not generate cash inflows that are largely independent of those from other assets or group of assets. When the carrying amount of an asset or CGU exceeds its recoverable amount, the asset is considered as impaired and is written down to its recoverable amount.

In assessing value in use, the estimated future cash flows are discounted to their present value using a pretax discount rate that reflects current market assessments of the time value of money and the risks specific to the asset.

A previously recognised impairment loss is reversed only if there has been a change in the assumptions used to determine the asset's recoverable amount since the last impairment loss was recognised. The reversal is limited so that the carrying amount of the asset does not exceed its recoverable amount, nor exceeds the carrying amount that would have been determined, net of depreciation, had no impairment loss has been recognised for the asset in prior years. Such reversal is recognised in the income statement.

As the Company currently does not generate significant cash-inflows, it is to be noted that the recoverable amount of an asset is determined on basis of its fair value less cost of disposal.

#### 2.6 Inventory

Inventories are valued at the lower of cost and net realisable value. The cost of inventories is determined on a first in, first out basis (FIFO method).

Net realisable value is the estimated selling price in the ordinary course of business, less estimated costs of completion and estimated costs necessary to make the sale.

#### 2.7 Financial instruments

Financial assets and financial liabilities are recognised when the Company becomes a party to the contractual provisions of the instruments.

Financial assets and financial liabilities are initially measured at fair value. Transactions costs that are directly attributable to the acquisition or issue of financial assets and liabilities are added or deducted from



the fair value of the financial assets or financial liabilities, as appropriate, on initial recognition.

#### A) Financial assets

The Company has only loans and receivables which are non-derivative financial assets with fixed or determinable payments that are not quoted in an active market. Loans and receivables include trade receivables and other receivables which are measured at amortised cost using the effective interest method, less any impairment. Interest income is recognised by applying the effective interest rate, except for short-term receivables when the effect of discounting is immaterial.

#### Derecognition

A financial asset is derecognised when the contractual rights to receive cash flows from the asset have expired or when the Company transferred its rights to receive cash flows and substantially all risks and rewards of ownership of the financial asset to another party. If the Company neither transfers nor retains substantially all the risks and rewards of ownership and continues to control the transferred asset, the Company recognises its retained interest in the asset and an associated liability for amounts it may have to pay. If the Company retains substantially all the risks and rewards of ownership of a transferred financial asset, the Company continues to recognise the financial asset and also recognised a collateralised borrowing for the proceeds received.

#### Impairment of financial assets

The Company assesses, at each reporting date, whether there is objective evidence that a financial asset or a group of financial asset is impaired. An impairment exists if one or more events that has occurred since the initial recognition of the asset (an incurred "loss event"), has a negative impact on the estimated future cash flows of the financial asset or the group of financial assets that can be reliably estimated.

The carrying amount of the asset is reduced through the use of an allowance account and the loss is recognised in the income statement.

#### B) Financial liabilities

All financial liabilities are initially recorded at fair value, net of directly attributable transaction costs, if any.

After initial recognition, financial liabilities are subsequently measured at amortised cost using the effective interest rate method. Amortised cost is calculated by taking into account any discount or premium on acquisition and fees or costs that are an integral part of the effective interest rate. The effective interest rate amortisation is included as financial cost in the income statement.

The Company's financial liabilities include non-current liabilities (financial debt and other non-current liabilities) and current liabilities (trade and other payables).

#### Derecognition

The Company derecognises financial liabilities when, and only when, the Company's obligations are dis-



charged, cancelled or they expire. The difference between the carrying amount of the financial liability derecognised and the consideration paid and payable is recognised in income statement.

#### 2.7 Equity instruments

Equity instruments issued by the Company are recorded at the fair value of the proceeds received, net of transaction costs.

#### 2.8 Cash and cash equivalents

Cash and cash equivalents include cash in hand, deposits held at call with banks, other short-term deposits with a maturity of or less than 3 months, and which are subject to an insignificant risk of changes in value.

#### 2.9 Income taxes

Income taxes include current income tax and deferred income tax.

#### Current income tax

Current income tax assets and liabilities are measured at the amount expected to be recovered from or paid to the tax authorities. Tax rates and tax laws that are considered to determine the amount of tax assets or liabilities are those that are enacted or substantially enacted, at the reporting date.

#### Deferred income tax

Deferred tax is provided using the liability method on temporary differences between the tax bases of assets and liabilities and their carrying amounts for financial reporting purposes at reporting date. Deferred tax liabilities are recognised for all taxable temporary differences, except when the deferred tax liability arises from the initial recognition of an asset or liability in a transaction that at the time of the transaction affects neither the accounting profit nor taxable profit or loss.

Deferred tax assets are recognised for all deductible temporary differences, the carry forward of unused tax credits and any unused tax losses. Deferred tax assets are recognised to the extent that is probable that taxable profit will be available against which the deductible temporary differences, and the carry forward of unused tax credits and unused tax losses can be utilised, except when the deferred tax asset relating to the deductible temporary differences arises from the initial recognition of an asset or liability in a transaction that at the time of the transaction affects neither accounting profit nor taxable profit or loss.

The carrying amount of deferred tax assets is reviewed at each reporting date and reduced to the extent that it is no longer probable that sufficient taxable profit will be available to allow all or part of the deferred tax asset to be utilised. Unrecognised deferred tax assets are re-assessed at each reporting date and are recognised to the extent that it has become probable that future taxable profits will allow the deferred tax asset to be recovered.

Deferred tax assets and tax liabilities are measured at the tax rates that are expected to apply in the year when the asset is realised or the liability is settled, based on tax rates (and tax laws) that have been enacted or substantially enacted at the reporting date.



Deferred tax assets and deferred tax liabilities are offset if a legally enforceable right exists to set off current tax assets against current tax liabilities and the deferred taxes relate to the same taxation authority.

#### 2.10 Employee benefits

#### A) Short-term employee benefits

Short-term employee benefits include salaries and social security taxes, paid vacation and bonuses. They are recognised as expenses for the period in which employees perform the corresponding services. Outstanding payments at the end of the period are presented within current liabilities (other payables).

#### *B)* Post-employment benefits

Post-employment benefits include pensions and retirement benefits for employees, which are covered by contributions of the Company.

The Company has set up a pension scheme for its employees. Under such scheme, the Company pays contributions based on salaries to an insurance company responsible for paying out pensions and social security benefits, in accordance with the laws and agreements applicable in Belgium.

In Belgium, the pension plans are by law subject to minimum guaranteed rate of return, which was until recently 3.25% on employer contributions (for premiums until December 31, 2015) and between 1,75% and 3,75% for subsequent premiums (depending on the evolution of the OLO 10 years rate).

In theory, such pension scheme shall be treated in accordance with IAS 19 "Employee Benefits" as a defined benefit plan. The Company accounts for those plans as defined contribution plans and compare the "walk away liability" or the vested rights at reporting date with the fair value of the plan assets. If the vested rights are higher as compared to the fair value of the plan asset, a liability is recognised for the shortage at the reporting date. Outstanding payments at the end of the period, if any, are presented within current liabilities (other payable).

However, considering that (i) the Company is still in its start-up phase (ii) the current employees of the Company will remain or not within the Company depending on the outcome of the Phase III testing and (iii) the fact that the pension scheme is "young" and concerns a limited number of employees; the Company is of the opinion that the impact of accounting for the pension scheme as a "defined contribution plan" in place of a "defined benefit plan" is not material.

#### 2.11 Share-based compensation

There are several equity-settled share-based compensation plans in place. The fair value of the employee (or Director) services received in exchange for the grant of stock options or warrants is determined at the grant date using a Black & Scholes valuation model.

The total amount to be expensed over the vesting period, if any, with a corresponding increase in the « share-based payment reserve » within equity, is determined by reference to the fair value of the stock options or warrants granted, excluding the impact of any non-market vesting conditions. At each balance sheet date, the entity revises its estimates of the number of stock options that are expected to become exer-



cisable. It recognises the impact of the revision of original estimates, if any, in the income statement, and a corresponding adjustment to equity over the remaining vesting period.

The proceeds received net of any directly attributable transaction costs are credited to share capital when the stock options or the warrants are exercised.

When warrants granted under a share-based compensation plan are not exercised and have expired, the amount previously recognised under the share-based payment reserve is reclassified to the caption accumulated deficit, within equity.

#### 2.12 Provisions

A provision is set up by the Company if, at the reporting date, the Company has a present obligation, either legal or constructive, as a result of past events, when it is probable that an outflow of resources will be required to settle the obligation and when a reliable estimate of the amount can be made.

#### 2.13 Grants – Recoverable cash advances

Government grants are recognised if there is reasonable assurance that the Company will comply with the conditions attached to them and that the grants will be received.

The Company receives the support from the Regional Government under the form of recoverable cash advances. Recoverable cash advances are aimed at supporting specific development programs.

When a recoverable cash advance agreement is signed with the Walloon Region, the Company determines the fair value of the amount it will have to reimburse and accounts for it as a financial liability. To determine this fair value, the Company estimates future cash outflows it will have to support considering (i) the probability that the Company will notify the regional government whether it will decide or not to exploit the results of the research phase (ii) the estimation of the timing and the probability of the future sales and (iii) an appropriate discount rate.

Subsequently, at each closing date, the financial liability is accounted at amortised cost, using the effective interest rate method considering the initial discount and probability rate. When doing so, the Company reviews at least annually, or more frequently, if there are indicators, either positive or negative, influencing the estimation of the timing and the probability of the future sales of the products benefiting from the support of the Walloon Region and if necessary adjusts the amount of the financial liability accordingly either upwards or downwards respectively against financial expense or income.

Any difference between the cash advance and the fair value of the liability is considered as a government grant and until the cash is received from the Walloon Region, a receivable towards the Walloon Region is accounted for.

When the grant is received it is in first instance deferred within "Other Payables" under the caption "Deferred Grant Income". Subsequently, the grant is recognised in the income statement under the caption "other income" when the amount can be measured reliably (being when the costs eligible to benefit from the support of the Walloon Region are submitted and accepted by the Walloon Region).



Additional information related to the recoverable cash advance are further provided under note 5 below "Critical Accounting Estimate and Assumption" and under note 30 "Recoverable cash advances".

#### **2.14** Tax Credit relating to R&D expenditures

R&D expenditures of the Company, can benefit – subject to the fulfillment of certain conditions – from the so-called Tax-Credit mechanism. This mechanism grants the Company a reduction of its tax-base for an unlimited period and hence reduces the tax payments, if any. If the Company does not have a sufficient tax base to benefit from this reduction, the Company will receive in cash, the amount of the Tax-Credit after five years. This Tax-Credit is accounted for in accordance with IAS 20 Government Grants and not IAS 12 Income Taxes (i.e. a receivable is recognized for the amount of the Tax-Credit that the Company is entitled to receive in the future and the counterpart is accounted for within "Other Income" in the income statement). So far, eligible years for the Tax Credit are 2014, 2015 and 2016.

#### 2.15 Leases

A financial lease is a lease which transfers substantially all risks and rewards of ownership to the lessee. All other leases are operating leases. The Company is only involved in operating leases as a lessee. For such agreements payments made are expensed on a straight-line basis over the period of the lease.

#### 2.16 Borrowing costs

Borrowing costs are expensed as incurred as there is no qualifying asset for which capitalisation of borrowing costs may be required.

#### 2.17 Revenue

As of today the Company has only incidental revenue. The Company will develop accounting policies when it will begin to generate material revenues.

#### 2.18 Segments

To date, all Company's activities relate to research & development and as a consequence, there is only one operating segment. The reporting to the decision maker is currently done at the global level.

Assets of the Company are located in the country of domicile per 31 December 2016, except some items of manufacturing equipment purchased in 2014, 2015 and 2016 and located in the premises of the CMO in Europe.

The net book value of these assets as at 31 December 2016 is EUR 321,000, as at 31 December 2015 is EUR 316,000 compared with EUR 155,000 as at 31 December 2014.

#### 3. Capital Management

Capital comprises equity attributable to shareholders, borrowings and cash and cash equivalents. The Company's policy is to maintain a strong capital base in order to maintain investor confidence in its capacity to support the future development of its operations. The Company's objectives when managing capital are to



maintain sufficient liquidity to meet its working capital requirements and fund capital investment in order to safeguard its ability to continue operating as a going concern.

The Company monitors capital regularly to ensure that the legal capital requirements are met and may propose capital increases to the Shareholders' Meeting to ensure the necessary capital remains intact.

#### 4. Management of Financial Risks

#### • Financial risk factors

The Company's activities expose it to a variety of financial risks such as liquidity risk. The Company's finance department identifies and evaluates the financial risks in co-operation with the operating units.

#### ➤ Market risk

Market risk is the risk that the fair value of future cash flows of a financial instrument will fluctuate because of changes in market prices. The Company's activities may expose it to changes in foreign currency exchange rates and interest rates. The Company is not exposed to any equity price risk or commodity price risk as it does not invest in these classes of investments.

#### Foreign exchange risk

The Company may be exposed to foreign currency risks through its operating activities. To date, certain purchase transactions are undertaken in Swiss francs (CHF), in British Pounds (GBP), in US Dollars (USD) and in Swedish crowns (SEK). However, the magnitude of purchases in foreign currencies is currently limited; meaning that the Company's exposure to fluctuation of the exchange rate of the concerned currencies into Euro is limited. In the future, as the developments progress and particularly in view of the commercialisation of the product candidates, the foreign exchange risk may significantly increase, especially the foreign exchange risk linked to the USD.

#### ➤ Interest rate risk

The Company issued convertible borrowings in 2015. Such convertible bond was converted into shares in 2016. The interest rate risk of such operations was however limited as such borrowings were concluded with a fixed interest rate. Accordingly, changes in the market interest rates did not impact the cash-flow and the profit or loss of the Company.

#### ➤ Liquidity risk

The Company's main sources of cash inflows are obtained through capital increases, convertible loans and grants. Cash is invested in low risk investments such as short-term bank deposits or savings accounts. The Company mainly makes use of liquid investment in current accounts (in Euro) or short-term deposit accounts.

The ability of the Company to maintain adequate cash reserves to support its activities in the medium term is highly dependent on the Company's ability to raise additional funds. As a consequence, the Company is



exposed to significant liquidity risk in the medium term.

Analysis of contractual maturities of financial liabilities at 31 December is as follows:

		2016		2015			2014		
(in EUR 000)	Financial Debt	Trade Payables	Other Payables	Financial Debt	Trade Payables	Other Payables	Financial Debt	Trade Payables	Other Payables
Less than 1 month	-	1,707	369		1,611	489		858	353
1-3 months				-	-	-	-	-	-
3 months to 1 year	12			4,232	-	-	-	-	68
1-5 years	227			-	-	-	-	-	70
5+ years	192			-	-	-	-	-	-
TOTAL	431	1,707	369	4,232	1,611	489	-	858	491

#### > Fair value

The carrying amount of cash and cash equivalents, trade receivables, other receivables and other current assets approximate their value due to their short term character.

The carrying value of current liabilities approximates their fair value due to the short term character of these instruments.

The fair value of non-current liabilities (financial debt and other non-current liabilities) is evaluated based on their interest rates and maturity date. These instruments have fixed interest rates or no interest rate and their fair value measurements are subject to changes in interest rates. The fair value measurement is classified as level 2.

#### Fair value hierarchy

The Company uses the following hierarchy for determining and disclosing the fair value of financial instruments by valuation techniques:

- Level 1: quoted (unadjusted) market prices in active markets for identical assets or liabilities;
- Level 2: valuation techniques for which the lowest level input that is significant to the fair value measurement is directly or indirectly observable; and
- Level 3: valuation techniques for which the lowest level input that is significant to the fair value measurement is unobservable.

(in EUR 000)		Carrying value			Fair value			
	31/12/2016	31/12/2015	31/12/2014	31/12/2016	31/12/2015	31/12/2014		
Financial Assets								
Other long term receivables	1,034	12	13	1,034	12	13		
Loans and receivables meas- ured at amortised cost		_	_			_		



(in EUR 000)		Carrying value		Fair value			
,	31/12/2016	31/12/2015	31/12/2014	31/12/2016	31/12/2015	31/12/2014	
Trade and other receivables	326	279	102	326	279	102	
Other current assets	72	57	8	72	57	8	
Cash and cash equivalents	13,387	4,621	8,441	13,387	4,621	8,441	
Financial liabilities							
Recoverable cash advance	431			431			
Financial liabilities measured at amortised cost	-	4,232	-70		4,232	-70	
Trade and other payables	2,076	2,100	1,279	2,076	2,100	1,279	

#### 5. Critical accounting estimates and assumptions

When preparing the financial statements, judgments, estimates and assumptions are made that affect the carrying amount of certain assets, liabilities and expenses. These include the going concern assessment, the accounting for pension plans, the share-based payment transactions, the accounting for research and development expenses, the recoverable advances received and deferred taxes. These judgments, estimates and assumptions have been reviewed for each year and are reviewed on a regular basis, taking into consideration past experience and other factors deemed relevant under the then prevailing economic conditions. Changes in such conditions might accordingly result in different estimates in the Company's future consolidated financial statements.

#### 5.1 Critical judgments

#### Going concern

The financial statements have been prepared on a going concern basis.

On 31 December 2016, the Company had a cash position of EUR 13,387,349.76. This cash position is not sufficient if the Company to proceed to a full implementation of the development plan over the next twelve months. In order to implement such full development, the Company will need to raise funds by the end of 2017. If the Company is not able to raise enough funds in the appropriate delay, it has the capacity to reduce or slow down the scope of its development plan in order to make it fit to its financial capabilities (such reduction would probably lead to a delay in the research development plans or to a focus on specific products to the detriment of other products). However, the Company is confident that it will be capable to raise enough funds to secure its development plan, inter alia thanks to the satisfactory results of its Phase III clinical trial with gp-ASIT<sup>+TM</sup> in grass pollen rhinitis

Furthermore, EUR 5,995,748 recoverable cash advance was granted by the Walloon Region in January 2017. This cash position is not sufficient to implement the full development plan during the next twelve months and the Company shall raise funds during first half 2017 in order to secure its full development. If, during first half 2017, the Company is not able to raise enough funds to secure its full development plan, the Company shall reduce the scope of its development plan in order to make it fit to its financial capabilities (such reduction would probably lead to a delay in the research development plans or to a focus on specific products to the detriment of other products).

However, the Company is confident that it will be capable to raise enough funds to secure its development



plan, inter alia thanks to the positive results of its Phase III clinical trial with gp-ASIT<sup>+TM</sup> in grass pollen rhinitis as reported on 28 February 2017.

In accordance with Article 96, 6° of the BCC, taking into account two consecutive financial years of losses, the Board of Directors has decided, after consideration, to apply the valuation rules assuming "going concern", for the reasons set out above.

Since the Company (i) is currently able to satisfy all financial liabilities, (ii) is able to fulfil all payments and (iii) is able reduce the costs related to its development plan (by reducing the scope and the speed of the researches), the Board of Directors is of the opinion that the continuity of the Company is not threatened.

#### 5.2 Critical accounting estimates and assumptions

#### Share-based payments

The Company has several equity-settled share based payment plans in place. Estimating fair value for share-based payment transactions requires determination of the most appropriate valuation model, which is dependent on the terms and conditions of the option plan. This estimate also requires determination of the most appropriate inputs to the valuation model including the expected life of the share option, volatility and dividend yield and making assumptions about them.

#### Research & Development expenses

In line with market, the Company is of the opinion that research and development expenditures do not meet the capitalisation criteria until successful completion of phase III is achieved. Accordingly, no research and development asset has been recognised in the financial statements of the Company, yet.

#### Deferred tax assets

As a result of significant losses incurred by the Company, the Company enjoys tax losses that can be carried forward. However, no deferred tax asset has been recognised as at this stage it cannot be demonstrated that the tax losses will be compensated by future taxable income in the foreseeable future.

#### Recoverable cash advances and government grants

The Company benefits from recoverable cash advances granted by the Walloon Region. Recoverable cash advances are aimed at supporting specific development programs and typically functions as follows:

- an agreement is concluded with the Regional Government consisting in three distinct phases being a research phase, a decision phase and an exploitation phase.
- During the research phase, the Walloon Region supports part of the costs incurred by the Company for a specific development programs (up to 55% of an agreed budget). At the start of the program, the Walloon Region, makes a first down-payment of 30% of the agreed budget (the so-called "avance fonds de roulement"). During the Research Phase; which typically lasts two years, the Walloon Region pays additional amounts to the Company, as the program is realised by the Company. The additional payments are made on basis of costs statements submitted by the Company and ac-



cepted by the Walloon Region.

- At the end of the research phase, there is a decision phase of six months, allowing the Company to decide whether or not it will exploit the results of the research phase.
- If the Company decides not to exploit the results of the research phase, it has to notify the Region and transfer to the Region the rights associated with the research phase. Accordingly, the advances received are not to be re-imbursed at all.
- If the Company, decides to exploit the results of the research phase, it will enter into the exploitation phase. Such decision triggers the following obligations towards the regional government:
- 30% of the total cash advance received has to be re-imbursed unconditionally in accordance with a re-imbursement plan (typically covering a period of ten years);
- The Company has to pay to the regional government royalties based on the sales that will be generated by the products that have benefited from the cash advance (and this for a period of up to ten years);
- The maximum amount the Company may have to pay in accordance with this mechanism is capped to twice the total amount of the cash advance received.

A recoverable advance is thus in substance a financial liability of the Company towards the Walloon Region. The determination of the amount of the financial liability is subject to a high degree of subjectivity and requires the Company to make estimates of the future sales it will derive in the future from the products that benefited from the support of the Walloon Region. Based on these estimates, it may be concluded that the amount of the cash advance that the Company will receive from the Walloon Region exceeds the amount of the financial liability estimated by the Company. In such a situation, the difference is considered as a government grant.

#### 6. Subsidiary

The Company owned 100% of the shares of Biotech Tools Factory SA, a Belgian Company that was incorporated on April 8, 2009. Corporate address of Biotech Tools Factory was Rue des Chasseurs Ardennais 3 - B4031 Angleur. The Company was registered under number BE 0811.028.777 and had a share capital of EUR 181,926. Biotech Tools Factory was liquidated on 26 June 2015.

#### 7. Property Plant and Equipment

	ICT Equipment	Equipment	Furniture and fix- tures (in EUR 000)	Leasehold improvement	Total
2014					
Acquisitions	17	162	-	3	182
Depreciation	(5)	(14)	(1)	<u>-</u>	(20)
Net book value	33	165	1	3	202



	ICT Equipment	Equipment	Furniture and fix- tures	Leasehold improvement	Total
2015					
Acquisitions	14	328	30	-	372
Depreciation	(11)	(64)	(5)		(80)
Net book value	36	429	26	-3	494
As at 31 December 2015					
Cost	116	629	65	13	823
Accumulated depreciation	(80)	(200)	(39)	(10)	(329)
Net book value	36	429	26	3	494
2016					
Acquisitions	13	281	53	35	383
Depreciation	(12)	(115)	(12)	(2)	(141)
Net book value	37	595	67	36	736
As at 31 December 2016					
Cost	129	910	118	48	1,205
Accumulated depreciation	(92)	(315)	(51)	(12)	(470)
Net book value	37	595	67	36	736

In 2016, acquisitions were mainly related to manufacturing equipment (EUR 281,000) for the manufacturing of the drug substance for the product candidates, IT equipment (EUR 13,000), furniture (EUR 53,000) and leasehold improvements (EUR 35,000). There was no disposal during the year.

In 2015, acquisitions were mainly related to manufacturing equipment (EUR 328,000) for the manufacturing of the drug substance for the product candidates.

The yearly depreciation charge amounts to EUR 141,000 in 2016, EUR 80,000 in 2015 and EUR 20,000 in 2014.

#### 8. Other Long Term Receivables

Other long term receivables are summarised hereafter:

	31/12/2016	31/12/2015	31/12/2014
		(in EUR 000)	
Deposits	18	12	13
Tax credit related to R&D expenditures	1,016		
Total other long term receivables	1,034	12	13

Considering the activities of the Company, Asit Biotech is eligible to benefit from a cash refund from the tax authorities, notwithstanding the taxable position of the Company; calculated as a percentage of the expenditures made by the Company for certain R&D activities. The receivable recognized with respect to this



incentive, amounts to  $K \in 1,016$  and relates to expenditures made in 2014 ( $K \in 160$ ); in 2015 ( $K \in 302$ ) and 2016 ( $K \in 554$ ).

#### 9. Inventories

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	31/12/2016	31/12/2015	31/12/2014
		(in EUR 000)	
Inventories	<u> </u>	11	14
Total inventories		11	14

Income statement has been impacted as follows by inventories:

	2016	2015	2014
		(in EUR 000)	
Net increase / (decrease) in inventories		(3)	-
Write-off on inventories	(11)		

As the Company had no commercial activity in 2016 and sales of the so-called "Lupus" diagnostic test were stopped, the old inventory has been completely written off.

#### 10. Trade Receivables

	31/12/2016	31/12/2015	31/12/2014	
		(in EUR 000)		
Trade receivables (gross)	-	2	2	
Credit notes to be received	3	-	16	
Trade receivables	3	2	18	

Trade receivables include credit notes to be received for EUR 16,000 as at December 31, 2014 and for EUR 3,000 as at December 31, 2016.

#### 11. Other receivables

Other receivables are summarised in the following table:

	31/12/2016	31/12/2015	31/12/2014	
		(in EUR 000)		
VAT receivable	308	265	73	
Current tax receivable	11	10	5	
Other	4	2	6	
Other receivables	323	277	84	

#### 12. Other Current Assets

Other current assets relate to prepaid expenses and accrued income which amount to EUR 72,000 as at December 2016, EUR 57,000 as at 31 December 2015 and EUR 8,000 as at 31 December 2014.

#### 13. Cash and Cash Equivalents



	31/12/2016	31/12/2015	31/12/2014
_	(in EUR 000)		
Short term deposit	297	7	7
Savings accounts	12,460	26	1,327
Current accounts	630	4,588	7,107
Petty Cash	-	-	-
Total cash and cash equivalents	13,387	4,621	8,441

#### 14. Capital and Share Premium

On 31 December 2016 the share capital of the Company amounted to EUR 17,505,968.09 and has evolved as follows:

At the extraordinary Shareholders' Meeting of the Company held on 23 December 2014, the following operations were decided:

- A capital increase without issuance of new Shares of EUR 5,412,968.81 through the incorporation of the share premiums
- A capital decrease by absorption of the accumulated deficit of EUR 19,699,539.49 by way of absorption of carried forward losses;
- A capital increase of EUR 7,086,960 through a contribution in cash and the creation of 13,124 new Shares:
- A capital increase of EUR 854,100 as a result of the conversion into shares of convertible bonds issued in April 2013, and the creation of 3,275 new Shares;
- A capital increase of EUR 2,596,800 as a result of the conversion into shares of convertible bonds issued in May 2014, and the creation of 7,648 Shares; and
- A capital increase of EUR 1,081,100 as a result of the conversion into shares of convertible bonds issued in October 2014, and the creation of 3.182 Shares.

Following these transactions, the share capital of the Company amounts to EUR 11,625,136.35 at 31 December 2014, represented by 85,041 shares without nominal value.

In 2015, the amount of the share capital remained unchanged.

On 8 January 2016, following a decision of the shareholder's meeting, the number of shares was multiplied by 100. Consequently, at this date, the share capital of the Company (EUR 11,625,136.35) was represented by 8.504.100 shares.

The Company successfully launched an Initial Public Offering on 11 May 2016 on Euronext Brussels and Euronext Paris. The final offer price has been set at EUR 7.00 per share and 3,350,000 new shares were issued resulting in a capital increase of EUR 4,579,461.05 and a share premium of EUR 18,870,538.95.



Further to the realization of the Offering, the convertible bonds issued on 5 August 2015 were converted into equity for a total amount of EUR 4,130,000 divided into 902,700 shares (EUR 1,233,994 was included in the capital and EUR 2,896,006 was treated as issue premium).

Finally on 28/12/2016, further to the execution of the warrant plans 2009 and 2011, 493 warrants were execised resulting in a capital increase of EUR 67,393.20 and an increase of the share premium of EUR 190,642.92 and the issuance of 49,300 new additional shares has brought the Company to EUR 17,505,986.09 represented by 12,806,100 shares as of December 31, 2016.

The various capital increases that took place in 2016, and considering the related costs, resulted in a net cash inflow of EUR 22,198,587.86 as mentioned in the cash-flow statement under the line item "Capital increase"

#### 15. Share Based Compensation

Over the years the Company set up various warrants plans, which were accounted in accordance with IFRS 2 "Share-based payments". As most of the warrants granted under the various plans expired as at 31 December 2016, an amount of EUR 375,000 previously recognised among the share-based payment reserve has been reclassified within retained losses in 2016.

As at 31 December 2016, only some of the warrants granted under the 2014 and 2015 plans are still outstanding.

#### **2014 Plan**

On 15 October 2014 the Shareholders' Meeting of the Company approved the issuance of 5,300 warrants. These warrants are valid until 30 October 2024. The Shareholders' Meeting granted a special proxy to the Board of Directors of the Company in order to (i) identify the beneficiaries, (ii) offer the issued warrants to workers of the Company (employees, managers or directors) and (iii) to determine the exercise price of the concerned warrants before each offer with the approval of the auditor. It being understood that the beneficiaries shall be workers of the Company, the exercise price shall be equal to the real value of the underlying shares at the time of the offer and that a maximum of 2,000 warrants will be offered to beneficiaries who are not employees of the Company but exercise their services as self-employed people.

On 15 October 2014 the Board of Directors decided to offer 2,400 warrants to beneficiaries, and approved a warrants plan.

The exercise price of each warrant is EUR 300.

The key features of the warrants granted under the 2014 Plan are as follows (i) each warrant could be exercised for one share, it being understood that further to the stock-split approved on 8 January 2016 the exercise of a warrant after that date will give right to one hundred shares instead of one share, the conversion price of the warrant remaining unchanged, (ii) the warrants are granted for free, i.e. no consideration is due upon the grant of the warrants, (iii) the warrants have a term of five years since the grant, (iv) no vesting conditions, and (v) the warrants can be exercised between



1 November 2014 and 30 October 2019.

2,145 warrants have been accepted by employees, directors and members of the scientific committee.

At the date of these financial statements, 2,145 subscription rights are still outstanding under the 2014 Plan entitling the holders to subscribe 214,500 Shares of the Company.

#### 2015 Plan

On 10 March 2015, 14 April 2015 and 19 May 2015 the Board of Directors decided to offer 1,700 subscription rights (issued on 15 October 2014) to beneficiaries and approved a warrants plan. The exercise price of each subscription right is EUR 540.

The key features of the subscription rights granted under the 2015 Plan are as follows (i) each subscription right can be exercised for one share, it being understood that further to the stock-split approved on 8 January 2016 the exercise of a warrant will give right to one hundred shares instead of one share, the conversion price of the warrant remaining unchanged (ii) the subscription rights are granted for free, i.e. no consideration is due upon the grant of the subscription rights, (iii) the subscription rights have a term of five years since the grant, (iv) the subscription rights can only be exercised if the holder still exercise his professional activity in favour of the Issuer, and (v) the subscription rights can be exercised between 1 June 2017 and 30 April 2020.

Contrary to the previous plans, the 2015 plan foresees an employment condition. Accordingly, the fair value of the plan is expensed over the vesting period.

At the date of these financial statements 360 subscription rights are still outstanding under the 2015 Plan, entitling the holders to subscribe 36.000 shares of the Company.

#### Accounting for share-based payment

The share-based compensation expense recognised in the income statement is, EUR 199,000 for 2014, EUR 18,000 for 2015 and nihil in 2016 as the Company reviewed downwards the number of warrants that it expects that will ultimately vest.

The fair value of each option or subscription right is estimated on the date of grant using the Black & Scholes model and the following assumptions:

#### 2011 granting of warrants

Number of warrants granted*:	1,948
Exercise price	EUR 523.40
Expected dividend yield	0%
Expected stock price volatility	35%
Risk-free interest rate:	3,50%
Expected duration	5 years
Forfeiture rate:	0%
Fair Value	EUR 374,000



Out of the 1,948 warrants granted under the 2011 plan, 493 warrants were exercised on December 28, 2016. The remaining 1,455 warrants expired as at December 31, 2016.

Plan 2014	
Number of warrants granted*:	2,145
Exercise price	EUR 300
Expected dividend yield	0%
Expected stock price volatility	35%
Risk-free interest rate:	0,30%
Expected duration	5 years
Forfeiture rate:	0%
Fair Value	EUR 199,000
* to employees, Directors and members of the scientific committee	
2015 granting of warrants	
Number of warrants granted**:	1,700
Exercise price	EUR 540
Expected dividend yield	0%
Expected stock price volatility	35%
Risk-free interest rate:	-0,01%
Expected duration	
•	4 years
Forfeiture rate:	4 years 0%

<sup>\*\* 1,160</sup> warrants accepted and outstanding as at December 31,2015 and 360 warrants still outstanding as at December 31, 2016.

As at the date of these financial statements, and considering the 2015 plan, there are 2,505 warrants entitling the holders to subscribe to 250,500 new Shares or 2% of the existing Shares of the Company.



#### 16. Financial Debts

#### 16.1 Recoverable cash advances

The financial debts relate to the cash advances received from the Walloon Region.

	31/12/2016	31/12/2015	31/12/20134
		(in EUR 000)	
Non-current cash advances received	419	-	-
Current cash advances received	12	-	-
Total	431	<u> </u>	

In January 2016 the Company has signed with the Walloon Region an agreement to enjoy a cash advance for a total amount of EUR 1,254,000 to cover a maximum of 55% of eligible expenses incurred by the Company during a research phase of two years (from January 1, 2015 until December 31, 2016) for the development of the house dust mite treatment. This cash advance is not bearing any interest. Pursuant to that agreement, a decision from the Company, between 2017 and 2026 to proceed with the commercialization of the product resulting from the subsidised R&D program would trigger the non-revocable repayment of 30% of the advance granted (EUR 376,000). In addition the Walloon Region is entitled to a fee of 0,12% on the sales during the first 120 months of commercial exploitation up twice the initial refundable advance amount or EUR 2,508,000 taking into account the first repayment of 30%. When determining the amount to be reimbursed in the future to the Walloon Region under this agreement – and which is recognised among financial debts for a total of EUR 431,000 as at December 31, 2016 - Management of the Company has considered different scenario with respect of the possible outcomes of the program currently benefiting from the support of the Walloon Region.

Based on the scenarios management has considered that:

- 1) The probability to have to reimburse the 30% non-revocable repayment between 2017 and 2026 has a probability of 100% to occur. Company has therefore accounted for the NPV (at 8% discount rate) of this debt, amounting to KEUR 250 as of December 31 2016
- 2) The probability to have to reimburse the variable part (royalty of 0,12% calculated on future sales) has been fixed at 15%. This probability rate correspond to the rate of success generally accepted by the market for product in early clinical development. Taking into account this probability of success and discounting the royalty future flows at a discount rate of 8% permit to estimate the NPV as of 31 12 2016 of the variable part of the grant to be reimburse at KEUR 181.

As a consequence it is possible but not probable that the Company will generate in the future sales from products currently benefiting from the Walloon Region support to an extent such as the Company may have to reimburse the Walloon Region an amount in excess of the financial debt currently recognised.



The determination of the amount to be eventually paid to the Walloon Region under the signed agreement is subject to a high degree of uncertainty as it depends on the amount of the future sales that the Company will generate or not in the future. Shall the Company review the probability to have to reimburse the variable part by an additional 10% (25% probability instead of 15 %) the amount to be paid to the Walloon Region would need to be increased by KEUR 121.

#### 16.2 Other financial debts measured at amortised cost

The Company issued several convertible loans, which were all converted into capital on 23 December 2014:

- Convertible loan of EUR 854,000 issued on April 28, 2013;
- Convertible loan of EUR 2,597,000 issued on May 23, 2014; and
- Convertible loan of EUR 1,081,000 issued on October 15, 2014.

On 5 August 2015, the Company issued 413 convertible bonds with a nominal value of EUR 10,000 each (the *Convertible Bonds*). The Convertible Bonds were in registered form and beard an interest of 6% p.a. Interest was computed on the basis of a 360-day basis and the actual number of days that have lapsed since the issuance of the Convertible Bonds. The maturity date of the Convertible Bonds was 15 May 2016. As of 31 December 2015, accrued interest on such bonds amounted to EUR 102,000.

As the Offering was completed and the book fully subscribed at 7 €/share on May 2016, the number of new Shares issued upon conversion of one bond equalled to 153% of EUR 10,000 divided by the Offer Price of 7€ per share. The 413 convertible bond gave therefore right to 902.700 new shares representing a total value of 4,130,000 €.

The corresponding capital increase was officialised by an act from notary van Halteren on May 12 2016 for an amount of 1,233,994 €, the remaining 2,896,006 € were booked as share premium.

#### 17. Trade Payables

Trade payables as at the end of each financial year can be presented as follows:

	31/12/2016	31/12/2015	31/12/20134
		(in EUR 000)	
Payables	1,025	335	671
Invoices to be received	682	1,276	187
Total	1,707	1,611	858

As the research activities of the Company increased significantly we note an increase of the trade payable as from 2015 on.

This increase is more specifically relating to the productions of the drug substance and drug product batch-



es to be used in the forthcoming phase III clinical study with its gp-ASIT+TM product candidate.

#### 18. Other Non-Current Liabilities & Other Payables

Other non-current liabilities and other payables can be presented as follows:

-			
_	31/12/2016	31/12/2015	31/12/2014
	_	(in EUR 000)	
Other non-current liabilities			
Bonus to be paid (long term part)	-	-	70
Total other other non-current liabilities		<u> </u>	70
Other payables			
Withholding taxes	8	4	17
Social security	2	28	51
Bonus to be paid (short term part)	83	-	140
Holiday pay accrual	157	142	68
Deferred grant income	34	314	
Accrued expenses & interests	-	0	144
Total other payables	285	489	421
Total	285	489	491

The other non-current liability and other payables as at 31 December 2016 comprise a deferred grant income of EUR 34,000 as at 31 December 2016 (EUR 313,500 as at 31 December 2015) which relates to a recoverable cash advance with the Walloon Region for a research project. EUR 313,500 were received in December 2015 and booked as an advance received awaiting signature of the agreement (no other income recognised at all in 2015). In 2016, a further amount of EUR 815,100 was received by the Company. The total amount received as at today is thus EUR 1,128,600 out of which (i) financial debts have been recognised for a total of EUR 431,000 (see note 16) and (ii) an amount of EUR 663,246 has been recognised as other income. Corresponding costs incurred by the Company amount to EUR 1,838,075 (of which 1,212,311 incurred in 2015 and 625,764 in 2016).

#### 19. Revenue

Revenue is incidental and represents sales of Lupus' diagnostics in 2015 and 2014.

(in EUR 000)	31/12/2016	31/12/2015	31/12/2014
Revenue	-	4	5
Total revenue		4	5

#### 20. Other income and expenses

Other income totals EUR 1,683,157 in 2016 and comprises the following items:

• the grant from the Walloon Region for an amount of EUR 663,246 which is described under caption 18 Other payables;



- the R&D investment tax receivables for an amount of EUR 1,016,376 as described under caption 8 Other long term receivables;
- other immaterial amounts (EUR 3,535).

Other expenses totals EUR 15,530.

#### 21. Research and development costs

Research and development costs can be summarised as follows:

(in EUR 000)	31/12/2016	31/12/2015	31/12/2014
Staff costs	(1,312)	(1,135)	(638)
Share-based payment	-	(17)	(84)
Studies & analyses	(9,663)	(4,498)	(2,276)
Laboratory supplies	(460)	(450)	(254)
Depreciation and amortisation	(121)	(72)	(16)
Rent	(107)	(67)	(26)
Patents	(158)	(154)	(153)
Facilities	(138)	(82)	(41)
External advice	(32)	(156)	(44)
Other	(133)	(60)	(9)
Total research and development costs	(12,123)	(6,691)	(3,541)

Staff costs include payroll expenses of people dedicated to the R&D activities of the Company. Payroll expenses are allocated to research and development activities based on an analysis of the function of the employees. Studies & analyses and laboratory supplies are directly attributable to research & development activities, whereas other indirect costs such as rent are allocated to the different activities based on an allocation key reflecting headcount dedicated to the different activities.

#### 22. General and Administrative Expenses

General and administrative expenses can be summarised as follows:

	31/12/2016	31/12/2015	31/12/2014
	31/12/2010		31/12/2014
		(in EUR 000)	
Staff costs	(499)	(405)	(426)
Share-based payment	-	(1)	(116)
External advice	(1,087)	(429)	(178)
Facilities	(34)	(25)	(21)
ICT	(10)	-	-
Depreciation and amortisation expense	(30)	(8)	(4)
Laboratory supplies	(7)	(5)	(5)
Rent	(27)	(6)	(10)



	31/12/2016	31/12/2015	31/12/2014
Other	(129)	(67)	(25)
Total general and administrative expenses	(1,822)	(947)	(785)

#### 23. Pension Schemes

The total expense recognised in the consolidated income statement for contributions made by the Company under the pension scheme in place amounts to EUR 52,000 in 2016, EUR 38,000 in 2015and EUR 27,000 in 2014.

Considering the fact that in Belgium, the pension plans are by law subject to minimum guaranteed rate of return, there is a risk that the Company may have to pay additional contributions related to past services. However, in the case at hand, the Company has taken up insurance to cover any potential shortfall. Therefore, the risk of any liability is considered remote by the Company.

At 31 December 2016, 2015 and 2014, no such net liability was recognised in the balance sheet as the minimum guaranteed reserves equal the fair value of the plan assets or the underfunding is immaterial.

At the date of the financial statements, and according to actuarial calculation from the Company's insurer, an additional amount of EUR 2,905.67 would need to be paid by the Company in order to meet the minimum guaranteed reserves. Considering the fact that this amount is immaterial, it has not been accounted for as at 31 December 2016.

Employee benefits can be summarised as follows:

•	31/12/2016	31/12/2015	31/12/2014
•		(in EUR 000)	
Salaries	(1,525)	(1.372)	(902)
Social charges	(56)	(13)	(63)
Fringe benefits	(106)	(11)	(40)
Pension scheme	(52)	(38)	(27)
Share-based payment	-	(18)	(150)
Holiday pay accrual	(15)	(74)	-
Other	(56)	(32)	(32)
Total employee benefits	(1,811)	(1,558)	(1,214)

As the Company reviewed its best estimate of the warrants that will ultimately vest downwards, no share-based payment has been accounted for in 2016.

#### 24. Financial Income

Financial income can be summarised as follows:

31/12/2016	31/12/2015	31/12/2014



_	31/12/2016	31/12/2015	31/12/2014
_		(in EUR 000)	
Interests	38	31	6
Other	4	2	<u> </u>
Total financial income	42	33	6

#### 25. Financial Expense

Financial expense can be summarised as follows:

<del>-</del>	31/12/2016	31/12/2015	31/12/2014	
		(in EUR 000)		
Interests on convertible loan	(92)	(102)	(112)	
Exchange differences	(6)	(4)	(3)	
Other	(4)	(2)	(2)	
Total financial expense	(102)	(108)	(117)	

Considering that the interests accrued on the convertible loan as at December 31, 2015 were paid in 2016, an amount of EUR 204,000 has been paid in 2016 as mentioned in the cash-flow statement under line item "interests paid".

#### **26. Taxes**

Tax expense for the year can be reconciled to the accounting loss as follows:

_	31/12/2016	31/12/2015	31/12/2014
_		(in EUR 000)	-
Loss before taxes	(11,992)	(7,715)	(4,429)
Income tax credit calculated at 33,99%	4,076	2,622	1,505
Effect of unused tax losses not recognised as deferred tax asset	(4,076)	(2,622)	(1,505)
Income tax expense (profit) recognised in income statement		-	-

The tax rate used in the reconciliation is the corporate tax rate of 33, 99 % applicable in Belgium.

#### Unrecognised deferred tax assets

Due to the uncertainty surrounding the Company's ability to realise taxable profit in the future, the Company has not recognised any deferred tax assets on tax losses that can be carried forward and on notional interest deductions.

Tax losses of the Company that can be carried forward amount to EUR 40,685,000 as at December 31,



2016, EUR 24,685,000 as at 31 December 2015 and EUR 20,501,000 as at 31 December 2014.. Tax losses that can be carried forward are determined on the basis of the statutory financial statements and local Belgian tax rules. Accordingly, the yearly variations in tax losses carried forward cannot be compared to the IFRS results for the same period. In Belgium, tax losses can be carried forward indefinitely. Notional interest deductions prior to 2012 can be carried forward for a limited period of seven years. Notional interest that can be carried forward amount to EUR 303,000 as at 31 December 2016. These notional interests will expire in 2017 for EUR 149,000 and in 2018 for the remaining EUR 154,000. After 2012 notional interests' deduction has to take place within the tax year and it is not possible anymore to carry them forward.

#### 27. Contingencies

#### Legal claims:

The Company is currently not involved in any litigation that might have an adverse significant impact on the Company's financial position.

#### Grants:

The Company benefited between 1998 and 2007 from operation subsidies granted by the Brussels-Capital Region for an aggregate amount of EUR 2,167,000 for its research project in the field of grass pollen-induced allergic rhino conjunctivitis. These subsidies were accounted for as investment grants and no amount has been recognised with respect to these grants in the financial statements for financial years 2013, 2014 and 2015.

In order to continue satisfying the conditions for the maintenance of the grant of these subsidies, i.e. ensuring the industrial and commercial development in the interest of the economy, employment and the environment in the Brussels-Capital Region, the Company agreed to pursue activity on the territory of the Brussels-Capital Region in the 10 years following the end date of the agreements granting subsidies (i.e., until March 2018).

#### 28. Commitments

#### > Capital commitments

There are no commitments related to capital expenditures at the balance sheet date.

#### > Operating leases

The Company has entered into operating leases in relation to its offices as well as in relation to employee cars for which the average lease term is 48 months.

The Company's future payments as per 31 December 2015 under its leasing contracts are summarised in the table below:

	31/12/2016	31/12/2015	31/12/2014
		(in EUR 000)	•
Within 1 year	120	78	74



	31/12/2016	31/12/2015	31/12/2014
Between 1 and 5 years	111	119	52
More than 5 years	<u>-</u>	<u>-</u>	
Total	232	198	126

Payments under operating leases recognised as an expense:

•	31/12/2016	31/12/2015	31/12/2014	
•		(in EUR 000)		
Expense	170	130	41	
Total	170	130	41	

#### 29. Related party transactions

Transactions between the Company and its subsidiary have been eliminated on consolidation and are not disclosed in the notes.

#### > Remuneration of the key management

The remuneration of the senior management consists mainly of the remuneration of the CEO of the Company (fixed salary of EUR 263,000 in 2016 and a variable remuneration of EUR 83,300)

	31/12/2016	31/12/2015	31/12/2014
		(in EUR 000)	
Short-term remuneration & compensation*	347	282	328
Long-term remuneration & compensation		-	70
Share based payment		-	70
Total	347	282	468

<sup>\*</sup> In 2014 it Included the short term remuneration of EUR 188,000 effectively charged and paid in 2014, and a guarantee bonus for an amount of EUR 140,000 to be paid in 2015

No loans or other guarantees have been given to a member of the executive management team.

#### > Transactions with non-executive directors and shareholders

Subscription rights have been granted to non-executive directors, shareholders and members of the scientific Committee. The share based payment expense relating to these related is nihil in 2016 and 2015 and, EUR 49,000 in 2014.

Non-executive Directors are remunerated as from June 2016. They received a compensation of EUR 66,000 for their participation at the Boards of Directors of the Company.

#### 30. Events after the balance-sheet date

#### RECOVERABLE CASH ADVANCE



On 17 February 2017 the agreement between the Company and the Walloon Region for the house-dust mite treatment – support of the Walloon Region of up to  $K \in 1,254$  – see point 16.1 - has been amended. As per the amendment, the research phase who initially covered a period from January 1, 2015 until 31 December 2016 has been extended until 31 May 2017.

In addition, the Company was granted on 12 January 2017 with a recoverable cash advance of about EUR 6 million from the Walloon Region to finance 55% of the food allergy drug development program of the Company. The conditions of this grant are in substance similar to the one received for the house-dust mite program and disclosed in Section 2.4 at the difference that the percentage of the royalties to be paid during the exploitation phase is 0,11% of the future sales of the Company. As per contract, if the company decided to continue to exploit the founding's of the research in 2019 and beyond , the minimum amount of 30% refund will be trigger and payable during the next 10 years. Royalties payments will only occur if company is able to sell successfully the product designed. As the discovery phase has only begun early 2017 , the company has no view whether the outcome of the research will be fruitful or not and , whether she will decide or not in 2019 to continue to exploit it's founding's neither if sales will be generated .

Therefore, at the date of this report, in management's opinion, the recoverable cash advance has a fair value of Nil.

#### GP-ASIT+TM PHASE III CLINICAL TRIAL RESULTS

The results of gp-ASIT<sup>+TM</sup> phase III clinical trial were released on 28 February 2017. See Section 14.2.5 for more information.

#### LAST PATIENT LAST VISIT IN THE hdm-ASIT+TM PHASE IIa clinical trial

On 24 January 2017 the Company announced the Last Patient Last Visit in the phase IIa clinical study with its hdm-ASIT<sup>+TM</sup> product candidate for treating house dust mite rhinitis.

This first phase IIa double-blind placebo-controlled clinical study in house dust mite-induced rhinoconjunctivis was undertaken by the team led by Professor Bettina Hauswald, principal investigator at the Carl Gustav Carus University in Dresden, Germany. Of the 36 patients who began the treatment with hdm-ASIT<sup>+TM</sup>, 33 attended the last visit to the allergist, giving a retention rate of 89%.

The main objectives of this study are to evaluate the drag candidate's safety and tolerability profile and to determine the maximum cumulative dose tolerated by house dust mite allergic patients. The secondary objectives of this study are the assessment of the impact of hdm-ASIT<sup>+TM</sup> on the immune system and on the reduction of the reactivity to a conjunctival provocation test.

During the trial, no major treatment-related adverse event was observed, even at the highest allergen dose, which is 200 times greater than the first dose administered.

#### 31. Earnings per Share

The Company has warrants plans and Convertible Bonds that may be settled in common shares of the Company which are anti-dilutive considering the loss of the year. As such the basic and diluted earnings



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per share are equal.

The basis for the basic and diluted earnings per share is the net loss for the year attributable to the owners of the Company.

	31/12/2016	31/12/2015	31/12/2014
	(in EUR 000)		
Loss for the year attributable to the owners of the Company	(12,339)	(7,715)	(4,429)
Weighted average number of shares for basic and diluted loss per share (in number of shares)	11,219,242	8,504,100	5,848,200
Losses per share basic and diluted (in EUR per share)	(1,10)	(0,91)	(0,76)



#### 12.3 FACTORS AFFECTING THE RESULTS OF OPERATIONS

#### 12.3.1 Revenue and other income

To date, the Company's revenue has been incidental and was not sufficient to allow the Company to be profitable. The Company is currently conducting several research and development projects and is as such facing uncertainties with respect to the future commercialisation of any of its product candidates and the generation of future revenues, if any.

#### 12.3.2 Research and development expenses

The Company's research and development expenses primarily consist of costs directly incurred for the development of its product candidates, which include:

- internal expenses associated with direct employee-related expenses, including salaries, benefits, travel and share-based compensation expense of the Company's research and development personnel laboratory materials and consumables, and depreciation of the laboratory and manufacturing equipment; and
- external services incurred under agreements with Contract Research Organisations (*CRO*'s) and investigation sites that conduct the Company's clinical trials, costs for clinical laboratories' analyses, costs of manufacturing preclinical and clinical study materials and developing manufacturing processes including subcontracting costs to CMO's, costs associated with discovery and preclinical activities, costs for filing patents and maintaining the Company's intellectual property, professional scientific consultancy fees and costs of regulatory activities.

To date, research and development costs have mainly consisted of the development of the ASIT+TM platform, the gp-ASIT+TM product candidate, currently in clinical phase, and the hdm-ASIT+TM product candidate.

The application of the ASIT+TM platform to the development of allergen fragments from other respiratory allergens and food allergens has been explored in a discovery phase for the last three years, representing a limited cost.

Contract manufacturing expenses, which are included in research and development expenses, primarily consist in costs incurred for the process development, manufacturing, quality control, stability control and storage of the active pharmaceutical ingredients (*APIs*) and drug products. The Company expects these costs to significantly increase in the future as the Company advances the clinical development of its product pipeline.

Accordingly, the R&D staff has been strongly reinforced since 2014. The headcount of the Company has evolved from 10 employees in 2012, 8 employees in 2013, 10 employees in 2014, 19 employees in 2015 and 22 employees in 2016.



A detail of the costs for research and development is provided under Section 14.9.

#### 12.3.3 General and administrative expenses

General and administrative expenses consist primarily of salaries and related costs for personnel, including share-based compensation and travel expenses of the Company's employees in executive, finance, business development and support functions together with intellectual property (IP) expenses and other general and administrative expenses including rent, directors' fees and professional fees for accounting, audit and legal services. In 2016, the Company has incurred EUR 1,822,000 in general and administrative expenses.

The table below summarises the main items of general and administrative expenses for the years 2015, 2014 and 2016:

As at 31 December In EUR (000) 2016 2015 (in EUR 000) ..... 2014 Employee benefits & remuneration\*.... (499)(406)(542)Professional fees ..... (1,087)(429)(178)(236)(112)(65)Total general and administrative expenses..... (1,822)(947)(785)

The Company anticipates that its general and administrative expenses will increase in the future as the Company increases its headcount to support its continued research and development of its product pipeline. The general and administrative expenses have also increased since the Offering as a consequence of operating as a listed company, which induces increased expenses related to accounting, audit, legal and regulatory services associated with maintaining compliance with exchange listing and FSMA and AMF requirements, and investor relations costs associated with being a listed company.

As at 31 December 2016, the Company incurred limited marketing and distribution expenses, as operations were in a pre-commercial phase. Marketing consultancy fees were however incurred as from 2012 and categorised under general and administrative expenses. Marketing and distribution expenses should strongly increase when and if any of the company's products candidate were to be approved for marketing, which should be in 2018 at the earliest.

#### 12.3.4 Taxation

Since its inception, the Company has not made profits and, as a result, has not paid any corporate taxes. As of 31 December 2016 the Company had cumulative tax losses carry-forward for income tax purposes of EUR 40.7 million which can be carried forward to offset future taxable income, if any. However, no deferred tax assets have been recorded to date because of the early stage of development of the Company and the current uncertainty that the Company will generate profits in the future. As of 31 December 2016, the Company had also notional interests that can be carried forward for a limited period, for an amount of EUR 0.3 million. No deferred tax has been recorded for the same reasons and due to the limitation in time.

#### 12.4 LIQUIDITY AND CAPITAL RESSOURCES

#### **12.4.1** General



<sup>\*</sup> including share-based payment.

The Company's liquidity requirements primarily relate to the funding of research and development expenses, general and administrative expenses, capital expenditure and working capital requirements. Historically, the Company was funded by equity capital, convertible loans and grants.

Since the Offering and the application of the proceeds as described the Offering prospectus, the Company's principal sources of funds are expected to be cash and cash equivalents.

Given the relatively long period (around 2 years) before sales income are generated, and depending on the speed of the Company's development, the Company will have to further finance its research and development costs, its general and administrative expenses, and its sales and marketing efforts through further external funds from the market or through a private placement, or through strategic collaborations or partnerships. As described in the risk factors (section 1), the Company expects that it will have to raise new funds before the commercialisation of its lead product candidate.

#### 12.4.2 Cash flow statements

The following table includes information relating to the Company's cash flow statements for the years ended 31 December 2013, 2014 and 2015.

	Year ended 31 December		
	2016	2015	2014
		(in EUR 000)	
Cash flow from operating activities	(13,697)	(7,921)	(3,377)
Cash flow from investing activities	(389)	(371)	(192)
Cash flow from financing activities	22,852	4,471	10,765
Net increase / (decrease) in cash and cash equivalents	8,766	(3,820)	7,196

#### 12.4.3 Cash flow from operating activities

Cash used for operating activities amounted to EUR 13,697,000 in 2016, compared to EUR 7,921,000 in 2015 and EUR 3,377,000 in 2014. The increase of cash used in operating activities between 2014 and 2015 was primarily due to an increase of the research and development expenses, and in particular the higher costs related to the clinical study of phase IIb on the gp-ASIT+TM product candidate and manufacturing costs for the clinical batches to be used for the first phase III clinical trial. This trend was accelerated in 2016 with a cash burn of EUR 13,697,000 for the year mainly due to the phase III on the gp-ASIT+TM product candidate.

#### 12.4.4 Cash flow from investing activities

Investing activities consist primarily of purchase of property, plant and equipment, in particular laboratory equipment, manufacturing equipment, ICT equipment. Cash used for investing activities in 2016 amounts to EUR 389,000compared to 2015 (EUR 371,000). This is mainly due to capital expenditures for laboratory equipment, machinery and equipment for manufacturing, and ICT equipment. The capital expenditure investments were very limited before 2014.

#### 12.4.5 Cash flow from financing activities



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Financing activities consist of net proceeds from the Company's capital increases and proceeds from convertible loans. Interest paid on the convertible loans and interests received from the placements of the Company's cash and cash equivalents and short term deposits are also taken into account in the financing activities.

Cash flow from financing activities represented a net inflow of EUR 22,852,000 in 2016 as a result of the Offering.

Cash flow from financing activities represented a net inflow of EUR 4,157,000 in 2015 and EUR 10,765,000 in 2014. In 2015, the Company received EUR 4,130,000 through the issuance of 413 convertible bonds. In 2014, the Company received EUR 10,765,000 as a result of the capital increase that took place on 23 December 2014 for EUR 7,087,000 and of the issuance of two convertible loans in 2014 (which were eventually converted into capital in 2014) for a total amount of EUR 3,678,000.

## 12.5 AUDITORS' REPORT ON THE CONSOLIDATED FINANCIAL STATEMENTS PER 31 DECEMBER 2016

(See next page)







Company number: BE 0460.798.795

# STATUTORY AUDITOR'S REPORT TO THE GENERAL SHAREHOLDERS' MEETING ON THE CONSOLIDATED FINANCIAL STATEMENTS OF THE COMPANY ASIT BIOTECH SA AS OF AND FOR THE YEAR ENDED 31 DECEMBER 2016

As required by law, we report to you in the context of our statutory auditor's mandate. This report includes our opinion on the consolidated financial statements, as well as the required additional statement. The consolidated financial statements comprise the consolidated statement of financial position as at 31st December 2016, and the consolidated statement of comprehensive income, the consolidated statement of changes in equity and the consolidated statement of cash flows for the year ended 31st December 2016 and the explanatory notes.

#### Report on the consolidated financial statements - Unqualified opinion

We have audited the consolidated financial statements of the company Asit Biotech SA for the year ended 31st December 2016, prepared in accordance with the International Financial Reporting Standards (IFRS) as adopted by the European Union, which show a consolidated statement of financial position total of 15.555.(000) EUR and a consolidated income statement showing a consolidated loss for the year of 12.339.(000) EUR.

Responsibility of the board of Directors for the preparation of the consolidated financial statements

The board of Directors is responsible for the preparation of consolidated financial statements that give a true and fair view in accordance with the International Financial Reporting Standards as adopted by the European Union, and for such internal control as the board of Directors determines is necessary to enable the preparation of financial statements that are free from material misstatement, whether due to fraud or error.

Responsibility of the statutory auditor

Our responsibility is to express an opinion on these consolidated financial statements based on our audit. We conducted our audit in accordance with International Standards on Auditing (ISAs) as adopted in Belgium. Those standards require that we comply with the ethical requirements and plan and perform the audit to obtain reasonable assurance about whether the consolidated financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the consolidated financial statements. The procedures selected depend on the statutory auditor's judgment, including the assessment of the risks of material misstatement of the consolidated financial statements, whether due to fraud or error. In making those risk assessments, the statutory auditor considers the company's internal control relevant to the preparation of consolidated financial statements that give a true and fair view, in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the entity's internal control. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of accounting estimates made by the board of Directors, as well as evaluating the overall presentation of the consolidated financial statements.

We have obtained from the board of Directors and company officials the explanations and information necessary for performing our audit.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.





Company number: BE 0460.798.795

#### Unqualified opinion

In our opinion, the consolidated financial statements of the company Asit Biotech SA give a true and fair view of the group's equity and financial position as at 31st December 2016, and of its results and its cash flows for the year then ended, in accordance with the International Financial Reporting Standards as adopted by the European Union.

# Emphasis of Matter

Without qualifying our opinion, we draw attention to Note 5.1 Going concern in the financial statements which describes the uncertainty with regard to the Company's ability to attract additional funding to further develop its operations in the long run and the ability of the Company's management to reassess its development plan.

# Report on other legal and regulatory requirements

The board of Directors is responsible for the preparation and the content of the Director's report on the consolidated financial statements.

In the context of our mandate and in accordance with the Belgian standard which is complementary to the International Standards on Auditing (ISAs) as applicable in Belgium, our responsibility is to verify, in all material respects, compliance with certain legal and regulatory requirements. On this basis, we provide the following additional statement, which does not modify the scope of our opinion on the consolidated financial statements:

The Director's report on the consolidated financial statements includes the information required by law, is consistent with the consolidated financial statements and is free from material inconsistencies with the information that we became aware of during the performance of our mandate.

Brussels, 21 April 2017

Mazars Réviseurs d'Entreprises SCRL

Statutory Auditor

Represented by

RSM Réviseurs d'entreprises SCRL

Statutory Auditor

represented by

Luis LAPERAL

# AUDITORS' REPORT ON THE CONSOLIDATED FINANCIAL STATEMENTS PER 31 DECEMBER 2015, 2014 AND 2013

We report on the consolidated financial statements set out in the Prospectus of ASIT BIOTECH SA (the "Company" and, together with its subsidiary, the "Group") (the "Prospectus"). This financial information has been prepared for inclusion in the Prospectus on the basis of the accounting policies set out in note 20.1 to the financial information. This report is required by Annex I item 20.1 of the Commission Regulation (EC)  $N^{\circ}$  809/2004 (the "Prospectus Directive Regulation") and is given for the purpose of complying with that requirement.

# Report on the consolidated financial statements – unqualified opinion

We have audited the consolidated financial statements of ASIT BIOTECH SA for the years ended 31 December 2015, 31 December 2014 and 31 December 2013 prepared in accordance with the International Financial Reporting Standards as adopted by the European Union, which show a consolidated statement of financial position total of 5.474 (000) EUR (31/12/2015), 8.780 (000) EUR (31/12/2014) and 1.369 (000) EUR (31/12/2013) as well as a consolidated income statement showing a consolidated loss for the year of 7.715 (000) EUR (31/12/2015), 4.429 (000) EUR (31/12/2014) and 2.319 (000) EUR (31/12/2013).

Responsibility of the board of Directors for the preparation of the consolidated financial statements

The board of Directors is responsible for the preparation of consolidated financial statements that give a true and fair view in accordance with the International Financial Reporting Standards, and for such internal control as the board of Directors determines is necessary to enable the preparation of annual accounts that are free from material misstatement, whether due to fraud or error.

# Responsibility of the statutory auditor

Our responsibility is to express an opinion on these consolidated financial statements based on our audit. We conducted our audit in accordance with International Standards on Auditing (ISAs). Those standards require that we comply with the ethical requirements and plan and perform the audit to obtain reasonable assurance about whether the consolidated financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the consolidated financial statements. The procedures selected depend on the statutory auditor's judgment, including the assessment of the risks of material misstatement of the consolidated financial statements, whether due to fraud or error.

In making those risk assessments, the statutory auditor considers the company's internal control relevant to the preparation of consolidated financial statements that give a true and fair view, in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the entity's internal control. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of accounting estimates made by the board of Directors, as well as evaluating the overall presentation of the consolidated financial statements.

We have obtained from the board of Directors and company officials the explanations and information



necessary for performing our audit.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

# Unqualified opinion

In our opinion, the consolidated financial statements of the company ASIT BIOTECH SA give a true and fair view of the group's equity and financial position as at 31 December 2015, 31 December 2014 and 31 December 2013 and of its results and its cash flows for the years then ended, in accordance with the International Financial Reporting Standards as adopted by the European Union.

# Emphasis of Matter

Without qualifying our opinion, we draw attention to Note 5.1 Going concern in the financial statements which describes the uncertainty with regard to the Company's ability to attract additional funding to further develop its operations in the long run and the ability of the Company's management to reassess its development plan.

Brussels, 13 April 2016

Mazars Réviseurs d'Entreprises

RSM Interaudit

Statutory auditor Represented by Xavier DOYEN Statutory auditor Represented by Luis LAPERAL



# 13 STATUTORY FINANCIAL STATEMENTS 2016 - 2015 - 2014

ASIT Biotech Balance Sheet B GAAP (K €)	31/12/2016	31/12/2015	31/12/2014
ASSETS			
Intangibles assets	5,180	7,128	2,662
Property plant & equipment	613	422	170
Other LT receivables	18	12	13
Non-current assets	5,811	7,562	2,845
Inventories		10	14
Receivable	323	280	102
Cash & cash equivalents	13,387	4,621	8,411
Deffered charges / Accrued income	1,088	57	7
Current assets	14,798	4,968	8,534
TOTAL ASSETS	20,609	12,530	11,379
EQUITY AND LIABILITIES			
Capital	17,506	11,625	11,625
Share premium	21,957		
Other reserves	-21,427	-5,426	-1,384
Capital Subsidy	500		
Capital & Reserves	18,536	6,199	10,241
Financial debt		4,130	
Trasde payables	1,788	1,611	858
Social and taxes related liabilities	168	175	137
Other current liabilities	118	313	1
Accrued charges		102	142
Liabilities	2,073	6,331	1,138
TOTAL EQUITY AND LIABILITIES	20,609	12,530	11,379

ASIT Biotech Income Statement BGAAP (K €)	31/12/2016	31/12/2015	31/12/2014
Revenue		4	5
R&D capitalize expenses (own production)	1,023	820	558
Other Operating Income	1,020		3
Operating Income	2,043	824	566
Cost of Sales		-3	
Sundry expenses (G&A and R&D)	2,928	-1,656	-483
Payroll expenses	-1,296	-1,088	-636
Depreciation charges	-14,254	-2,069	-718
Other operating charges	-16	-1	-2
Operating Expenses	-16,451	-3,993	-1,273
Financial income	552	34	6
Financial charges	-102	-108	-117
Result before taxes & exceptional	-16,001	-4,067	-1,384
Exceptionnal Income (+) / Charges (-)	1	25	
Taxes			
Net Result for the period	-16,001	-4,042	-1,384

The information included in this section is an extract from the statutory accounts that will be submitted to the annual shareholders meeting of 8 June 2017 and that will be filed with the Belgian National Bank, and does not include all information as required by Articles 98 and 100 of the BCC.

An unqualified audit opinion, with emphasis of matter, has been issued by the statutory auditors on 21 April 2017. The emphasis of matter made by the auditors is the following: "Without qualifying our opinion, we draw attention to Note 5.1 Going concern in the financial statements which describes the uncertainty with regard to the Company's ability to attract additional funding to further develop its operations in the long run and the ability of the Company's management to reassess its development plan".

#### ACCOUNTING POLICIES (BELGIAN GAAP)

The valuation rules have been prepared in accordance with the provisions of Chapter II of the Belgian Royal Decree of January 30, 2001 relating to the implementation of the Belgian Companies Code (*Koninklijk besluit tot uitvoering van het wetboek van vennootschappen / Arrêté royal portant exécution du code des sociétés*). However, being recognise as a "small company", whatsoever the date of acquisition is, one full year of amortisations and depreciations is recognise in the year of acquisition.

# Formation expenses and costs relating to capital increases

These expenses, included the issuance costs, historically were recognised as assets and were amortised by 20% annually.

# Intangible fixed assets

# Research and development costs



As from the accounting year 2016 research costs are no more recognized as intangible assets. However, in order to comply with the legislation relating to the granting of tax credit, research costs are in first instance booked as intangible assets then directly fully depreciated in the income statement. The amounts recognised as intangible assets in the years 2014 and 2015 are depreciated over 5 years.

Development costs are recognized as intangible assets if it is probable that the assets developed will generate future economic benefits and if the development costs can be measured reliably. Development costs are amortized on a straight-line basis over their estimated useful life from the moment that they are available for use.

In the case the recoverable amount of the capitalized research and development costs is no longer justified by expected future economic benefits an impairment should be recorded. Impairment losses on intangible fixed assets are shown in the extraordinary charges.

# Patents, licenses and similar rights

These costs are capitalised at purchase value or, if lower, at their useful value and are depreciated on a straight-line basis over a period of 5 years.

# Tangible fixed assets

These assets are capitalised and depreciated on a straight-line basis:

- IT equipment: over a period of 5 years;
- Installations : over a period of 10 years
- Misc Equipment & Furniture: over a period of 5 years;
- Laboratory equipment: over a period of 5 years;
- Leasehold improvements: in the line with the lease agreement period;
- Leasing: in the line with the lease agreement period.

In the event where the carrying value exceeds the recoverable value, the Company should record additional or exceptional depreciations.

# Financial fixed assets

These assets are capitalised at purchase value excluding any miscellaneous costs.

The value of shares and participations are impaired in case of reduction in value as a result of the situation, the profitability or the prospects of the Company related to those shares of participation. Impairment is recorded in the income statement as extraordinary charge.



The value of long-term receivables is reduced in case the recoverability becomes uncertain at its due date.

#### **Inventories**

Inventories are valued at their acquisition cost (weighted average, LIFO or FIO) or at the market value, whatever the lowest.

#### Amounts receivable

The amounts receivable do not carry any interest and are capitalised at their nominal value.

# **Treasury placements**

Placements with financial institutions are valued at their purchase value. Additional costs relating to the purchase of these assets are expensed as incurred.

Reductions in value are recorded in the event where the realisation value at the date of the closing of the financial year is below the purchase value.

# **Debts** (payable after one year – payable within one year)

All debts are capitalised at their nominal value at the date of the closing of the financial year.

The interests relating to the outstanding debts are accrued on the regularisation accounts if not paid yet during the year. Interest expenses are presented with the financial expenses.

# **Regularisation accounts**

# Regularisation accounts on the assets side

These accounts include:

- The *pro rata* parts of the charges incurred during the financial year or during a previous financial year but that are related to one or more subsequent financial years.
- The *pro rata* parts of the proceeds that will only be received during a subsequent financial year but that relate to a previous financial year.

# Regularisation accounts on the liabilities side

These accounts include:

• The *pro rata* parts of the charges that will only be paid during a subsequent financial year but that relate to a previous financial year



• The *pro rata* parts of the proceeds received during the financial year or a previous financial year but that relate to one or more subsequent financial years.

# **Currencies**

The amounts receivable and debts in other currencies are converted at the applicable exchange rate at the date of the closing of the financial year.

Currency losses are recorded in the income statement.



# 14 MANAGEMENT REPORT

# MANAGEMENT REPORT OF THE BOARD OF DIRECTORS ON THE CONSOLIDATED FI-NANCIAL STATEMENTS AND THE STATUTORY FINANCIAL STATEMENTS PER 31 DE-CEMBER 2016

Dear shareholders,

We are pleased to present to you the consolidated financial statements and the statutory financial statements for the fiscal year ended 31 December 2016. More extended information on the Company and its activities can be found in our annual report or in the IPO prospectus available on the website of the Company (<a href="www.asitbiotech.com">www.asitbiotech.com</a>). This management report is a combination of the reports to be drafted pursuant to Articles 96 and 119 of the BCC.

#### 14.1 STRATEGIC HIGHLIGHTS

# Current operations and principal activities of the Company and the principal markets in which it competes

The Company is a clinical-stage biopharmaceutical company, focused on the research, development and future commercialisation of a range of immunotherapy products for the treatment of allergies, but has to date no product approved or commercialised. The Company believes that its breakthrough immunotherapy product candidates, based on the Company's innovative technology, ASIT+TM, have the potential to address the risks and limitations of current allergy immunotherapy treatments. Whole allergen immunotherapy is the only current therapy available on the market that targets the cause of allergy. However, it often causes significant side-effects and requires a lengthy and inconvenient course of treatment resulting in limited real-life effectiveness. The Company therefore believes that there is a large and attractive market for its immunotherapy product candidates.

ASIT+TM platform

The ASIT+TM platform allows the production, characterisation and quality control of truly new active ingredients consisting of highly purified natural allergen fragments, in an optimal size selection. In the framework of phase I, phase II and phase III clinical studies, it has been demonstrated that the gp-ASIT+TM:

- triggers a rapid immune response without the need for an adjuvant, leading to the potential for at least one-year protection;
- induces minimal side-effects;
- reduces the reactivity to an allergen provocation test; and
- allows for a faster injection regimen of higher doses, compared to treatments with whole allergens, resulting in a reduced course of treatment with four doctor visits over 3 weeks.

Therefore, the Company believes that:



- the absence of an adjuvant improves the overall safety profile and represents a real advantage with respect to long-term safety; and
- the reduced course of treatment will improve patient compliance and, therefore, real-life clinical effectiveness.

The Phase III gp-ASIT + TM preliminary results released on 28 February 2017 confirmed the efficacy of our product.

#### 14.1.1 PORTFOLIO

The Company has demonstrated clinical proof-of-concept for its candidate lead product, gp-ASIT+TM with compelling and statistically significant phase IIa and phase IIb clinical study results. The Company currently finalises the phase III clinical study for the same and preliminary results are available for this phase III clinical study since 28 February 2017. On the basis of the results of such study, the Company intends to file a first marketing authorisation application for gp-ASIT+TM in Germany (to the Paul Ehrlich Institute, the "*PEI*") by Q2 2017 and obtain it one year later in order to launch the product for the 2019 pollen season.

The Company intends to initiate a clinical development in the United States as soon as possible. Contact has been initiated with the FDA in Q2 2016. On the basis of the phase III clinical trial results, ASIT biotech will interact with the FDA during 2017 in order to file an approval application for a clinical trial whose phase will depend on the conclusion of the Company's interaction with the FDA. Moreover, ASIT biotech has reached an agreement with SynteractHCR, a CRO (Contract Research Organization) acknowledged for its expertise in running clinical trials in the field of respiratory disorders. ASIT biotech is therefore ready – subject to the FDA's definitive approval – to initiate its first clinical trials in the United States.

Lastly, in order to address the specificities of North American clinical developments, ASIT biotech has set up a Committee of experts notably comprising Dr. Linda Cox, Past President of the American Academy of Allergy, Asthma & Immunology (AAAAI) and of the immunotherapy and allergy diagnostics committees of both the AAAAI and the ACAAI (American College of Allergy, Asthma & Immunology), and Dr. Peter Creticos, former Director of the Division of Allergy and Clinical Immunology of the Johns Hopkins University School of Medicine, and now clinical Director of research for his own entity and who has worked with governmental agencies and industry to design, develop, and conduct clinical research on the therapeutic efficacy of new drugs or underlying mechanisms of allergen immunotherapy. These recognized leaders in the field of allergy and immunology will contribute their extensive expertise to the preparation and monitoring of the clinical trials undertaken by ASIT biotech in the United States.

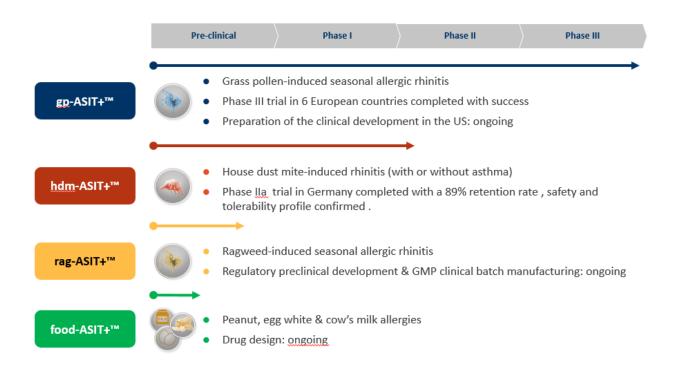
The nature and the timing of the starts of US clinical studies will depend of the outcome of the discussions and of the results of the European grass pollen phase III study. The completion of the clinical development in the United States will require additional funding as from Q4 2017.

In addition, the Company has started in September 2016 a phase IIa study with hdm-ASIT+TM for the treatment of house dust mite allergy. Results have been released on 4 April 2017. On the basis of these results, the Company will assess its clinical development. The Company is also developing product



candidates for the treatment of other respiratory allergies (ragweed) and, thanks to an important grant from the Walloon Region, a development program on food allergies will start in 2017.

# 14.1.2 OVERVIEW OF THE COMPANY'S PORTFOLIO



# **❖ GP-ASIT+**<sup>TM</sup>

# > Product description

The product candidate consists of a mixture of natural allergen fragments obtained from a purified specific proteinic extract from *Lolium perenne* pollen. In contrast to the synthetised peptides, the natural peptides (70% of the fragments ranging from 1,000<MW<10,000) include a wide range of epitopes that stimulate the immune system with optimal complexity. It consists in a ready to use, sterile and stable solution (18 months at 4°C according to ICH stability guideline requirements). As the allergic reactions is the consequence of the cross bridging of IgE bound on mast cells by allergens, the size distribution has been selected to remove large allergen fragments capable to bridge these IgE while keeping the allergen fragments capable to activate the immune system with the optimal complexity by activating B-cells and T-cells. On the other side, the peptides have kept the information required to stimulate the immune system as reflected by the induction of grass-pollen specific immunoglobulins after injection to animals or allergic patients.

The administration schedule of the treatment is of short duration compared with currently commercialised treatments. This constitutes a major competitive advantage to improve the acceptance and the compliance of the patients. In addition, the administration schedule includes successive injections with half of the visit dose in both arms, an innovative solution that enables the delivery of the total dose necessary for the thera-



peutic effect in a faster and safer way. Finally, the product candidate is formulated without adjuvant, which increases the long-term safety of the product by decreasing the local and general reactogenicity as well as the frequency of the adverse events, which represents a further advantage in markets less permissive to adjuvanted formulations (e.g. US).

The product is supplied as aqueous buffered solutions and should be stored at 2-8°C until use.

# > Target product profile

The target product profile of gp-ASIT+TM product candidate consists among others of:

- a ready to use natural allergen-fragment based product;
- an adjuvant free product;
- a safety profile in line with best-in-class products;
- a very short treatment schedule with a maximum of 4 treatment visits over 3 weeks, prior to allergen exposure;
- a rapid onset of action, both on symptomatic and immunological parameters; and
- a superior real life effectiveness during natural grass pollen exposure.

All the above-mentioned characteristics have been demonstrated in the conducted clinical studies.

As a result, the Company believes that gp-ASIT+TM is the only short course treatment AIT product without adjuvant with significant efficacy results.

# Clinical results

Current clinical development with gp-ASIT+TM demonstrated its good tolerability. Treatment with gp-ASIT+TM had a positive impact on the humoral immune.

To date, the Company conducted 4 clinical trials with subcutaneous applications of gp-ASIT+TM including in total 844 treated patients. All the studies were performed according to Good Clinical Practices (*GCP*) and ICH Guidelines.

Study results suggested that gp-ASIT+TM is safe and can stimulate the production of grass pollen specific antibodies.



#### **♦** HDM-ASIT+TM

# > Product description

The product candidate consists in a mixture of natural peptides (ranging from 1,000 to 10,000 kDa) obtained from the purified specific allergen extracted from Dermatophagoïdes pteronyssinus.

# > Preclinical development and key results

The characterisation and quality control tests of the manufacturing process have been developed and were qualified by the CMO by the end of Q4 2015. The manufacturing process was transferred to the CMO, which has released a GMP clinical batch during Q1 2016. No scaling-up is necessary at this stage of development.

Preclinical studies include assessment of the immunogenicity and toxicity of the investigational product manufactured under the same procedures and meeting the same specifications as products intended for use in human studies (*ex vivo* study and planned clinical trial). The first phase of regulatory required preclinical development of hdm-ASIT+TM was successfully completed by the end of 2015.

The animal model confirm the capacity of hdm-ASIT+<sup>TM</sup> to stimulate the B-cell and the T-cell compartments of immune system in a sensitised animal model. They also suggest that a treatment with hdm-ASIT+<sup>TM</sup> of house dust mite allergic patients may result in a T-cell mediated induction of house dust mite allergen-specific IgG.

# ➤ Clinical development First human stduy (Phase IIa - hdmASIT001)

Following the completion and evaluation of the first phase of regulatory required preclinical studies completed in Q4 2015, the Company has filed in Q2 2016 the clinical trial documentation for the phase IIa clinical study with hdm-ASIT+TM in Germany. The Company has received the approval of the Paul Ehrlich Institute (German Regulatory Authority) for this first human clinical study in September 2016. The primary objective of this study is the determination of the maximum tolerated dose of hdm-ASIT+TM in adult patients with a clinical history of house dust mite allergy. The following endpoints have been assessed:

- determination of the maximum tolerated dose;
- safety and clinical tolerability of the product;
- impact of the treatment on immunological parameters;
- impact of the treatment on the reactivity to an allergen provocation test.

The patients have received increasing doses of hdm-ASIT+TM under close medical supervision. The comparison of the reactivity of the patients to the allergen provocation tests performed before and after treatment will provide the first evidence of the effect of the product candidate on house dust mite allergy.

40 patients have been screened on the basis of a positive house dust mite allergen skin prick test with



detectable house dust mite-specific IgE in the blood and positive baseline allergen provocation test. Out of them 36 patients have been randomized and 33 patients finished the study mid january 2017.

The Company announced on 4 April 2017 that it has achieved the primary endpoint of the phase I/IIa clinical trial with its hdm-ASIT $^{+TM}$  product candidate for house dust mite rhinitis. The trial's primary endpoint was achieved, insofar as hdm-ASIT $^{+TM}$  showed, at this stage, a good safety and tolerability profile for the product candidate. No serious or unexpected adverse treatment-related event was observed during the trial, even at the highest allergen dose of 200  $\mu$ g, which was 200 times greater than the first dose administered. The two groups were comparable at baseline for all the tested parameters, with the exception of house dust mite allergen-specific IgE antibodies, which were substantially lower in the treated group than in the place-bo group.

#### ❖ RAG-ASIT+TM

# Product description

The product candidate consists in a mixture of natural peptides (ranging from 1,000 to 10,000 kDa) obtained from the purified specific allergen extracted from ragweed (Ambrosia ambrosioides) pollen.

# > Preclinical development and key results

The characterisation and quality control tests of the manufacturing process have been developed and were qualified by the CMO by the end of Q3 2016 at an industrial scale. The manufacturing process was transferred to the CMO, which has released a GMP clinical batch during Q1 2017. No further scaling-up is anticipated at this stage of development. The manufacturing of the drug product is on-going.

Preclinical studies include assessment of the immunogenicity and toxicity of the investigational product manufactured under the same procedures and meeting the same specifications as products intended for use in human studies (*ex vivo* study and planned clinical trial). The first phase of regulatory required preclinical development of rag-ASIT+<sup>TM</sup> was completed by the end of 2016.

First, the capacity of the rag-ASIT+<sup>TM</sup> allergen fragments to stimulate the humoral and cellular responses following subcutaneous injections has been illustrated in animal model. As for gp-ASIT+<sup>TM</sup> and hdm-ASIT+<sup>TM</sup>, the purposes of the pharmacological study in animal model was to demonstrate the capacity of rag-ASIT+<sup>TM</sup> to stimulate the B- and T-cells compartment of the immune system in mice pre-sensitised with native ragweed proteins.

These data confirm the capacity of rag-ASIT+<sup>TM</sup> to stimulate the B-cell and the T-cell compartments of the immune system of a sensitized animal model. They also suggest that a treatment with rag-ASIT+<sup>TM</sup> of ragweed allergic patients may result in a T-cell mediated induction of ragweed allergen-specific IgG. In addition, the reduced title of IgE in the polled serum of ragASIT+<sup>TM</sup> treated group may results from the inhibition of the production of ragweed allergen specific IgE or the competition between the IgE induced by the presensitization and blocking antibodies induced by the **ragASIT**+<sup>TM</sup> treatment..

# ➤ Clinical development First Human studuy (Phase I/IIa rag -ASIT001)



Clinical developmeny with rag-ASIT+<sup>TM</sup> will be postponed until equivalence of immunoligical properties of rag-ASIT+<sup>TM</sup> and the ones of gp-ASIT+<sup>TM</sup> would have been confirmed. This confirmation is intended to be performed ex vivo on the blood cells of allergic patients in the framework of a rational design program performed in close collaboration with Dr M. Shamji from the Imperial College of London. Complementary preclinical testings are currently ongoing in animal.

In the meantime, no commercial ragweed CPT solution has been validated, an in house ASIT CPT solution would be designed and validated in order to have an early stage clinical trial surrogate efficacy marker. Considering the high prevalence of ragweed induced rhinoconjonctivitis in the US, the clinical development of rag-ASIT+<sup>TM</sup> will start in the US. US KOL have already been contacted in order to start feasability studies The first clinical development would intend to validate in the US a CPT solution to be used as clinical efficacy surrogate marker in further rag-ASIT+<sup>TM</sup> clinical studies.

#### ❖ FOOD-ASIT+™

# Product description

The product candidate consists in a mixture of natural peptides (ranging from 1,000 to 10,000 kDa) obtained from the purified specific allergen extracted from:

- peanut
- cow's milk
- egg white.

# Competitor products in food immunotherapy

There is currently no approved immunotherapy treatment aimed to induce tolerance for food allergens. The only available solution for patients suffering from food allergies is strict avoindance of the culprit allergen and use of antihistamines or epinephrin auto-injector in case of accidental exposure.

# > Target product profile

Will be similar to the gp-ASIT+TM product issued from the same ASIT+TM platform. All these characteristics need to be confirmed during the preclinical and clinical development of the three product candidates.

# > Development programme

An important 3 years developpement program on food allegy will be initiated in 2017 by ASIT thanks to a Recoverable Cash Advance of 6M€ granted by the Walloon Region .

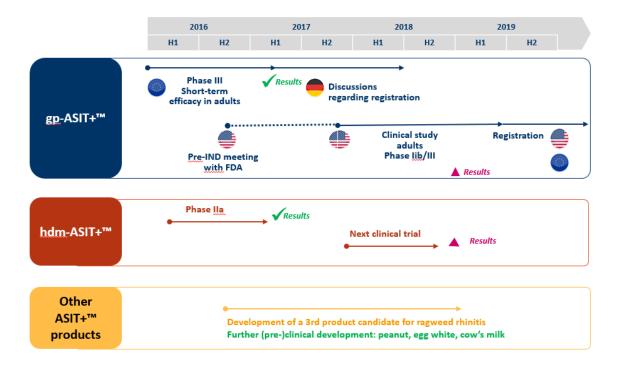
The food-ASIT+<sup>TM</sup> product candidates will be designed in collaboration with Dr M. H. Shamji (Senior Lecturer in Immunology and Allergy) who has established the Immunomodulation and Tolerance Group established by within Allergy and Clinical Immunology Department at Imperial College of London lead by



Professor Stephen Durham. The objective of this collaboration is to test the allergenicity and antigenicity of food-ASIT+<sup>TM</sup> product candidates on human ex-vivo food allergy model and optimize the safety/efficacy ratio of its new product candidates.

When the food-ASIT+<sup>TM</sup> product candidates with optimal safety/efficacy ratio will be selected, their immunogenicity and toxicity will be tested in animal model as required by regulatory authorities to be allowed to start in man clinical study. In parallel to the preclinical development, the production process and quality control procédure will be transferred to an appropriate CMO to produce GMP clinical batches of drug subsntances and drug products.

Afterwards, the selected product candidates will be tested in the frame of clinical trials that will be performed in the framework of a collaboration with Dr Stephen Till who is one of few specialist doctors accredited in Adult Allergy by the General Medical Council His current research interests include immunotherapy (desensitisation) and food allergy. The objective of this collaboration is to assess the safety and clinical impact of the product candidates on a food allergen provocation test



#### 14.1.3 COMMERCIALISATION

To date, none of the product candidates of the Company has been approved or commercialised. The Company believes that, if approved, the attractive product profile of its immunotherapy product candidates will increase the number of patients (i) to whom the treatment is offered, (ii) accepting treatment and (iii) completing the course of therapy. The Company has retained all commercial rights to its product candidates.



Germany is currently the first worldwide market in terms of sales of subcutaneous immunotherapy products and the United States are currently the first worldwide market in terms of patients treated with subcutaneous immunotherapy products. Therefore, these two markets are the first markets targeted by the Company. Given the limited number of allergists in these first target markets, the Company intends to build or acquire its own sales and marketing infrastructure to commercialise these product candidates. The Company may also consider alternative ways of commercialising its product candidates in these countries, including partnering with or acquiring other companies that have the requisite infrastructure. In the rest of the world, the Company plans to market its product candidates via licensing or other forms of partnership.

#### 14.2 MAJOR EVENTS DURING THE FINANCIAL YEAR 2016

#### 14.2.1 LAUNCH OF THE INITIAL PUBLIC OFFERING

The Company successfully completed its initial public offering on 11 May 2016 on Euronext Brussels and Euronext Paris. The final offer price has been set at EUR 7.00 per share, giving the Company a market capitalization of approximately EUR 93.1 million. Gross proceeds from the Offering amounts to EUR 23.5 million. The over-allotment option has not been exercised.

# 14.2.2 CONVERSION OF BONDS

Further to the realization of the initial public offering, the convertible bonds issued on 5 August 2015 were converted into share capital on 12 May 2016 for a total amount of EUR 4,130,000 divided into 902,700 shares (EUR 1,233,994 was included in the capital and EUR 2,896,006 was treated as issue premium).

# 14.2.3 TAX CREDIT WALLOON REGION

On 28 June 2016, the Company was informed by the Walloon Region that the research and development expenditures of the Company were eligible for the so-called research Tax-Credit. It has been confirmed that the tax credit is not only applicable to the current year but also for 2014 and 2015. Based on the Company's investments from 2014 to 2016, the applicable Tax-Credit would be of EUR 160,000 for 2014, EUR 302,000 for 2015 and EUR 554,000 for 2016.

# 14.2.4 RECOVERABLE CASH ADVANCE BY THE WALLOON REGION

On 2 December 2015, the Walloon Region granted to the Company a recoverable cash advance subject to the execution of an amendment relating to IP rights. Such amendment was signed on 5 February 2016. The amount of the refundable cash advance amounts to EUR 1,254,000 and relates to the development of the house dust mite treatment researches (EUR 313,500 was received in December 2015 and EUR 815,100 was received in 2016).

# 14.2.5GP-ASIT+TM PHASE III CLINICAL STUDY STATUS

The Company is finalizing its first Phase III clinical study with gp-ASIT+<sup>TM</sup> for the treatment of grass pollen rhinitis in six European countries (Belgium, Czech Republic, France, Germany, Italy and Spain).



The first objective of this phase III clinical study (BTT009) was to demonstrate the clinical efficacy of gp-ASIT+<sup>TM</sup> over one grass pollen season with the treatment administered subcutaneously prior to the grass pollen season in patients suffering from hay fever.

The primary endpoint was the reduction of the daily rhinoconjunctivitis symptom score and the daily intake of rescue symptomatic medications over the peak of grass pollen season (defined as 2 consecutive weeks with highest pollen count). This reduction is assessed by using a validated Combined Symptom and Medication Score ("CSMS").

554 patients have been randomised in 57 sites. 517 patients have completed the treatment phase. These 517 patients have been followed up over the summer to collect their rescue medication consumption and their daily rhinoconjunctivis symptoms used to calculate the CSMS. All these patients underwent the medical visits planned during the pollen season. All the necessary measures were implemented to maximize retention of the study participants over the summer follow-up visits.

The results of the phase III show that gp-ASIT+TM induced a 15% to 21 % reduction in the CSMS, which is only slightly below an originally defined 20% threshold corresponding to an acceptable real-life clinical benefit as mentioned in the Offering prospectus. Furthermore, complementary analysis performed on blood cells of a subset of the patients (10 placebo and 22 gp-ASIT+TM treated patients) at the Imperial College of London elucidate a clear and consistent mechanism of action of gp-ASIT+TM.

These results are considered as positive by the Company because they confirm with a good consistency :a clinical efficacy in real life conditions, the,safety and immunogenicity of gp-ASIT+<sup>TM</sup>. Moreover, these results are in line with the data reported for competing products and also with the data of the previous studies.

The very good consistency of the overall results of the Company's lead product clinical development will allow further discussions with German authorities towards regulatory approval and with US authorities regarding the clinical development strategy for this important market. The Company is currently submitting to the PEI a briefing package including the results of the Phase III for scientific advice on the sufficiency of these results to support a marketing authorization. Depending on the opinion of the PEI on the results, the Company could be requested to proceed to a complementary Phase III clinical study in adult before the issuance of the marketing authorization. Considering the delay in the discussion with the FDA and the incertainty on the clinical development in the US, a second phase III can be planned before 2019. Therefore, if the PEI is of the opinion that a second Phase III is needed, it would be performed in adult in several European countries in 2018.

Finally, the Company is in the opinion that these results reduce the risk related to the future development of gp-ASIT+<sup>TM</sup>.

Should the Company be authorised by the PEI to submit a marketing authorization application for its products in Germany, the next study to be performed in Europe would be a pediatric Phase III study. Such study could be used to support a Mutual Recognition Procedure in France, Sapin and Italy.



#### 14.2.6 HDM-ASIT+TM PHASE IIA CLINICAL STUDY STATUS

ASIT Biotech has initiated its phase IIa with hdm-ASIT+<sup>TM</sup>. The trial has been approved by the German Competent Authority (Paul Ehrlich Institute) and the Ethic Committee of the Technical University Dresden. This clinical trial is performed at the Carl Gustav Carus University Hospital of Dresden in collaboration with Prof. B. Hauswald. The Investigators Meeting – which gives the required training to all the trial contributors and is therefore the kick of date of the study, took place on 8 September 2016.

This clinical trial aims to assess the safety and clinical tolerability of this new ASIT+<sup>TM</sup> product candidate in house dust mite allergic patients. The impact of the product candidate on the immune system and the reactivity to a conjunctival provocation test are set as secondary endpoints.

During the course of the study, a Data Safety Monitoring Board will monitor the safety of study participants and provide the clinical investigator with the necessary feedback to pursue the clinical trial according to the highest safety standards.

40 patients have been screened on the basis of a positive house dust mite allergen skin prick test with detectable house dust mite-specific IgE in the blood and positive baseline allergen provocation test. Out of them 36 patients have been randomized and 33 patients finished the study mid January 2017.

The Company announced on 4 April 2017 that it has achieved the primary endpoint of the phase I/IIa clinical trial with its hdm-ASIT<sup>+TM</sup> product candidate for house dust mite rhinitis. The trial's primary endpoint was achieved, insofar as hdm-ASIT<sup>+TM</sup> showed, at this stage, a good safety and tolerability profile for the product candidate. No serious or unexpected adverse treatment-related event was observed during the trial, even at the highest allergen dose of 200  $\mu$ g, which was 200 times greater than the first dose administered. The two groups were comparable at baseline for all the tested parameters, with the exception of house dust mite allergen-specific IgE antibodies, which were substantially lower in the treated group than in the placebo group.

Assessing hdm-ASIT<sup>+TM</sup>'s impact on the immune system and on the reduction in reactivity to a conjunctival provocation test (CPT) were amongst the secondary objectives. An effect was observed on the immune system in a limited number of patients. However, there was no difference overall between the treated group and the placebo group with regard to immunogenicity parameters. Lastly, the trial showed a somewhat stronger reduction in CPT reactivity in the treated group compared to the placebo group. The study was not empowered to show statistical significance. The absence of a larger reduction can be explained by a substantial response to placebo (55%), the limited number of patients, the short observation period in this perennial disease and/or the nature of the product. For further information relating to further clinical developments in hdm-ASIT<sup>+TM</sup> please see section 7.9.3 of the Annual Report.

# 14.2.7 OTHER

In June 2016, Dr. Mohamed Shamji, an internationally recognized expert on allergy immunotherapy, was appointed as Scientific Advisor for the discovery of new drug candidates and for pre-clinical activities.

In November 2016, a Partnership with Synteract HCR, an US CRO specialized in running clinical trials in the field of respiratory disorders was signed. Furthermore, the Company 2 allergy ex-



perts, Dr. Linda Cox and Dr. Peter Creticos, to the opinion leaders Committee for the US development.

# 14.3 IMPORTANT EVENTS SUBSEQUENT TO THE ACCOUNTING REFERENCE DATE

#### 14.3.1 RECOVERABLE CASH ADVANCE

The company was granted on 12 January 2017 with a recoverable cash advance of about EUR 6 million from the Walloon Region to co-finance on a 50/50 basis the food allergy drug development program.

# 14.3.2 Gp-ASIT+TM PHASE III CLINICAL TRIAL RESULTS

The preliminary results of gp-ASIT<sup>+TM</sup> phase III clinical trial were released on 28 February 2017. See Section 14.2.5 for more information.

# 14.3.3 LAST PATIENT LAST VISIT IN THE hdm-ASIT+TM PHASE IIA CLINICAL TRIAL

On 24 January 2017 the Company announced the Last Patient Last Visit in the phase IIa clinical study with its hdm-ASIT<sup>+TM</sup> product candidate for treating house dust mite rhinitis.

This first phase IIa double-blind placebo-controlled clinical study in house dust mite-induced rhinoconjunctivis was undertaken by the team led by Professor Bettina Hauswald, principal investigator at the Carl Gustav Carus University in Dresden, Germany. Of the 36 patients who began the treatment with hdm-ASIT<sup>+TM</sup>, 33 attended the last visit to the allergist, giving a retention rate of 89%.

The main objectives of this study were to evaluate the drag candidate's safety and tolerability profile and to determine the maximum cumulative dose tolerated by house dust mite allergic patients. The secondary objectives of this study were the assessment of the impact of hdm-ASIT<sup>+TM</sup> on the immune system and on the reduction of the reactivity to a conjunctival provocation test.

During the trial, no major treatment-related adverse event was observed, even at the highest allergen dose, which is 200 times greater than the first dose administered. See section 14.2.6 for more information.

# 14.3.4 INVESTMENT PREMIUM

On 15 February 2017 the Company has been informed by the Walloon Region that it will benefit from an investment premium corresponding to 23% of the total investment costs (EUR 620,852) relating to the set-up of its laboratory in Liège. The total amount of the premium, corresponding to EUR 142,795.96, is composed of a regional premium for EUR 85,677.58 (13.8%) and of a European premium for EUR 57,118.38 (9.2%).

#### 14.4 GROUP STRUCTURE

At the date of this report, the Company does not have any subsidiaries nor branches.

The Company had a subsidiary named Biotech tool factory, but such subsidiary was liquidated on 26 June 2015.



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# 14.5 DISCUSSION AND ANALYSIS OF THE CONSOLIDATED FINANCIAL STATE-MENTS

The consolidated financial statements have been prepared in accordance with IFRS and have been drawn up by the Board of Directors on 7 April 2017. The financial statements will be communicated to the shareholders at the annual general shareholders' meeting on 8 June 2017.

# 14.5.1 COMPARISON OF THE YEARS ENDED 31 DECEMBER 2016, 2015 AND 2014

# Consolidated income statement and other comprehensive income (in EUR 000)

	31 December		
	2016	2015	2014
Revenue	-	4	5
Other operating income / (expenses)	1,667	(3)	3
Cost of goods sold	-	(3)	-
Research and development expenses	(12,123)	(6,691)	(3,541)
General and administrative expenses	(1,822)	(947)	(785)
Operating loss for the period	(12,278)	(7,640)	(4,318)
Financial income	42	33	6
Financial expense	(102)	(108)	(117)
Loss for the period before taxes	(12,338)	(7,715)	(4,429)
Taxes	(1)	-	-
Loss for the period	(12,339)	(7,715)	(4,429)
Other comprehensive income			
Comprehensive loss for the period	(12,339)	(7,715)	(4,429)
Loss for the year			
Attributable to owners of the Company	(12,339)	(7,715)	(4,429)
Losses per share (in EUR per share)			
- basic and diluted	(1,10)	(0,91)	(0,76))
- Nb of Employees	22	20	10

Due to the fact that the Company is mostly engaged in research activities, over 95% of the IFRS loss of the year is related to research costs (KEUR 12,123, as of December 2016) with the balance being general and administrative as well as financial expenses.

The amount of research costs incurred on a yearly basis is quite variable as the bulk of these expenses relates to amounts spent on outside contracts depending of the type of study the Company intends to perform. As the Company does not generate any revenue, its spending level is directly related to its ability to raise



# funds.

Therefore as the Company's funding improved between 2013 and 2016, its spending on research and development has also increased in parallel from KEUR 3,541 in 2014, to KEUR 6,691 in 2015 to reach KEUR 12,123 as of December 2016. In 2016, due to the execution of the phase III clinical study in grass pollen, research spending has been allocated up to 80% to gp-ASIT+TM, the Company's most developed product. Hdm-ASIT+TM represents up to 15% of the spending, the residue is allocated to other product candidates (eg. ragweed, egg white).

The KEUR 1?667 "other operating income" mainly results of (i) the HDM recoverable cash advance granted by the Walloon Region for an amount of KEUR 663 qualified as an income (with a balance of cash received and to be further recognised as income of KEUR 34 booked in current liabilities awaiting final acceptance by the Walloon Region of all the costs incurred ) – see also section 12, note 18 section - and (ii) the R&D investment tax receivables for an amount of KEUR 1,016 as described under section 12, note 8.



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# **Consolidated statement of financial position (in EUR 000)**

	31 December	
2016	2015	2014
ASSETS		
Non-current assets		
Intangible assets	-	-
Property, plant and equipment	5 494	202
Other long term receivables		13
1,770	506	215
Current assets	11	1.4
Inventories	- 11 3 2	14 18
Other receivables 32		84
Other current assets		8
Cash and cash equivalents		8,441
13,78	<del></del>	8,565
Total assets	- ——	8,780
EQUITY AND LIABILITIES		
Capital and reserves		
Capital	5 11,625	11,625
Share premium	7 -	-
Cost of capital increase (2,102	)	
Share based payment reserve	5 591	573
Accumulated deficit	(13,074)	(4,766)
Total equity attributable to shareholders	2 (858)	7,432
LIABILITIES		
Non-current liabilities		
Financial debt	-	-
Other non-current liabilities	<u> </u>	70
419	<u> </u>	70
Current liabilities		
Financial debt 12	4,232	
Trade payables	7 1,611	858
Other payables 28:	489	421
	6,332	1,279
Total liabilities 2,42	6,332	1,349
Total equity and liabilities	5,474	8,780

The Company has always had a very low level of investments in tangible assets. Acquisitions made in prior years amounted respectively to KEUR 182 in 2014, KEUR 372 in 2015 and KEUR 383 in 2016 consisting mainly in laboratory equipment (KEUR 281) and furnitures (KEUR 53) due to our installation in Liège. As



of 31 December 2016, the total value of our tangible assets amount to KEUR 736, oh which 80% is laboratory equipment.

At the date of this Annual Report, the Company has no investment commitments outstanding.

The amount of KEUR 1,034 "long term receivable" is mainly due to the recognition of a tax credit, calculated as a percentage of the R&D expenditure made in 2014, 2015 and 2016. Such tax credit amounts to respectively KEUR 160 in 2014, KEUR 302 in 2015 and KEUR 554 in 2016. The KEUR 18 balance is related to a rental guarantee déposit.

As the company had no commercial activity in 2016, the old Inventory of "lupus" has been completely written off and the amount of trade receivale is marginal. The amount of KEUR 323 "other receivable" is mainly recoverable VAT (KEUR 308).

As of 31 December 2016, the KEUR 13,387 cash available is located on a saving bank account. This amount has to be compared to the financial debt reduced to zero (thanks the conversion of the bonds into shares) and to the amount of the current liabilities of KEUR 2,004 (of witch KEUR 1,707 is trade payables).

Total equity attributable to shareholders amounts to KEUR 13,132. The increase of the equity amount during the analyzed period is mainly due to the realization of the subscription to the Offering, the conversion of the 4,130 bonds into registered capital and the exercise of warrants that occurred in December 2016.

The financial debts (non-cuurent & current) amount to KEUR 431 and represent the best estimate considering available information of the amount that the Company will have to reimburse in the future to the Walloon Region in accordance with the recoverable cash advances received.

It is to be noted that in BGAAP, during the years 2014 and 2015, the Company was allowed to capitalize research costs and production for its own. This was not allowed anymore during 2016. The amount capitalized as intangible assets was depreciated over 5 years. Such point explains the reason why IFRS Equity attributable to shareholders amounts only to KEUR 13,277, compared to a BGAAP net Equity of KEUR 18,626 as of 31 December 2016.

# Consolidated statement of cash flows (in EUR 000)

	2016	2015	2014
Cash flow from operating activities	(13,697)	(7,921)	(3,377)
Cash flow from investing activities	(389)	(371)	(192)
Cash flow from financing activities	22,852	4,471	10,765
Net increase / (decrease) in cash and cash equivalents	8,766	(3,820)	7,196
Cash and cash equivalents at the end of the period	13,387	4,621	8,441



As the company exercise no commercial activities at this stage, the financing of its operating occurs only through registered capital contributions and other external financing means (grants, cash advance refundable, etc.).

# Capitalisation, indebtedness and financial indebtedness (in EUR 000)

	2016	2015	2014
<u>Capitalisation and Indebtedness (K <math>\epsilon</math>)</u>			
Total Current debt	2,004	6,332	1,279
Total non-current debt	419		70
Capitalisation	13,132	-858	7,432
Financial Indebtedness (K $\epsilon$ )			
Cash	13,387	4,621	8,441
Current financial debt	12	4,232	
Net current financial Indebtedness	-13,375	-389	-8,441
Non current financial debts	419		
Net financial Indebtedness	-12,956	-389	-844

The net cash available to the Company increased from KEUR 389 as of December 2015 to KEUR 12,956 at the closing of the present accounting year.

# 14.5.2 CRITICAL ACCOUNTING POLICIES

Our financial statements are prepared in accordance with IFRS as issued by the IASB. The preparation of our financial statements in accordance with IFRS as issued by the IASB requires us to make judgments, estimates and assumptions that affect the reported amounts of assets, liabilities, revenue, cost of sales, operating expenses and related disclosures. We consider an accounting policy to be critical if it is important to our financial condition or results of operations, and if it requires significant judgment and estimates on the part of management in its application. We base our estimates on historical experience and on various other assumptions that we believe to be reasonable under the circumstances, and we evaluate our estimates on an ongoing basis. Our actual results may differ from these estimates under different assumptions or conditions. If actual results or events differ materially from the judgment and estimates that we have made in reporting our financial position and results of operations, our financial position and results of operations could be materially affected. The summary of significant accounting policies and critical judgements and key sources of estimation uncertainty can be found in note 5 of the consolidated financial statements.

# 14.5.3 GOING CONCERN

For the reasons set out in section 14.11 of this report below, the Board of Directors decided to maintain the valuation rules in the assumption of the continuity of the Company.



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# 14.6 DISCUSSION AND ANALYSIS OF THE STATUTORY FINANCIAL STATE-MENTS

ASIT Biotech Income Statement BGAAP (K $\epsilon$ )	31/12/2016	31/12/2015	31/12/2014
Revenue		4	5
R&D capitalize expenses (own production)	1,023	820	558
Other Operating Income	1,020		3
Operating Income	2,043	824	566
Cost of Sales		-3	
Sundry expenses (G&A and R&D)	-2,928	-1,656	-483
Payroll expenses	-1,296	-1,088	-636
Depreciation charges	-14,254	-2,069	-718
Other operating charges	-16	-1	-2
Operating Expenses	-16,451	-3,993	-1,273
Financial income	552	34	6
Financial charges	-102	-108	-117
Result before taxes & exceptional	-16,001	-4067	-1,384
Exceptionnal Income (+) / Charges (-)	1	25	
Taxes	-1		
Net Result for the period	-16,001	-4,042	-1,384

Accounting wise since 01 January 2016 capitalisation of R&D cost is not permitted anymore. The same restriction applies for the recognition of "own production "on payroll expenses related to research personnel". However, in order to be able to benefit from investment tax credit, tax regulation requires that an intangible asset is recognised. In order to reconcile these two views, accounting practice allows the capitalisation of such expenses and or recognitions of own production, providing that the recognised asset is depreciate at once. Consequently, as of 31 12 2016, the Company has recognised and capitalised KEUR 11,079 R&D expenses and KEUR 1,023 production for its own and has depreciated them at once for the full amount of KEUR 12,103 (included in the KEUR 14,254 depreciation charges).

The Other operating incomes mainly relate to the revenue recognition on the investments tax credit for the years 2014, 2015 and 2016 for a total amount of KEUR 1,016.

The profit realised on the recoverable advance received from the Walloon Region (HDM programme) is booked as financial incomes in BGAAP (and not as operating incomes as in IFRS). The amount of financial income recognised in relation to the latter is only KEUR 510 (and not KEUR 663 like in IFRS) as the difference is booked in BGAAP on a liability account and will only be recognized prorata temporis on the remaining life of the underlying asset according to its depreciation schedule.

The R&D as well as G&A expenses increased materially in 2016 due to the increasing of the clinical activities performed (mainly the phase III study on grass Pollen who represents a big bulk of these costs). The



costs relating to the Offering are also included in this caption. In order to properly compare 2015 and 2016, it has to be taken into account that EUR 7 millions of R&D expenses have been capitalised in 2015.

ASIT Biotech Balance Sheet B GAAP (K $\epsilon$ )	31/12/2016	31/12/2015	31/12/2014
ASSETS			
Intangibles assets	5,180	7,128	2,662
Property plant & equipment	613	422	170
Other LT receivables	18	12	13
Non-current assets	5,811	7,562	2,845
Inventories		10	14
Receivable	323	280	102
Cash & cash equivalents	13,387	4,621	8,411
Deffered charges / Accrued income	1,088	57	7
Current assets	14,798	4,968	8,534
TOTAL ASSETS	20,609	12,530	11,379
EQUITY AND LIABILITIES			
Capital	17,506	11,625	11,625
Share premium	21,957		
Other reserves	-21,427	-5,426	-1,384
Capital Subsidy	500		
Capital & Reserves	18,536	6,199	10,241
Financial debt		4,130	
Trasde payables	1,788	1,611	858
Social and taxes related liabilities	168	175	137
Other current liabilities	118	313	1
Accrued charges		102	142
Liabilities	2,073	6,331	1,138
TOTAL EQUITY AND LIABILITIES	20,609	12,530	11,379

The value of intangible assets decreased from KEUR 7,128 in 2015 to KEUR 5,180 in 2016 as in net amount no new capitalisation of the R&D expenses took place in 2016 (the usual depreciation continued to be applied on the historical amounts). The increase of the Property plant & equipment value is mainly due to investments made in laboratory materials and some furniture in relation to the setting up of Company's new offices and laboratory in Liège.

Inventories have been fully written off as the Company did not performed activities in relation to the sales of "lupus" in 2016. "Other receivable" of KEUR 323 consists mainly into VAT receivable.

The accrued income of KEUR 1.088 is mainly due to the investment tax credit of KEUR 1,016 to be cashed in with the next 5 years.



# 14.7 CAPITAL INCREASES, DECREASES AND ISSUANCE OF FINANCIAL IN-STRUMENTS

# 14.7.1 CAPITAL INCREASES AND DECREASES

The following capital increases occurred in 2016:

- Increase of the registered capital of the Company decided by the Shareholders' Meeting on 8 January 2016 and subscribed in cash on 12 May 2016 for an amount of EUR 23,450,000 through the issuance of 3,350,000 shares pursuant to the Offering.
- Increase of the registered capital of the Company acknowledged on 12 May 2016 for an amount of EUR 4,130,000 and the issuance of 902,700 new shares, through the conversion of 413 convertible bonds issued on 5 August 2015;
- Increase of the registered capital of the Company acknowledged on 28 December 2016 for an amount of EUR 258,036.20 and the issuance of 49,300 new shares, through the exercise of 493 warrants.

No capital decrease occurred in 2016.

#### **14.7.2 WARRANTS**

No warrants were issued in 2016.

# 14.7.3 CONVERTIBLE BONDS

413 convertible bonds issued on 5 August 2015 were converted into registered capital for a total amount of EUR 4,130,000 divided into 902,700 shares.

#### 14.8 RISK FACTORS

The risk factors relating to the Company and its activities are detailed under Chapter 1 of the Annual Report and available on the website of the Company (<a href="www.asitbiotech.com">www.asitbiotech.com</a>).

De main risks and uncertainties involved in the Company's business include the following:

- The Company may experience delays or failure in the preclinical and clinical development of its product candidates and in particular of gp-ASIT<sup>+TM</sup> (end of phase III see section 7.9.2 of the annual report), hdm-ASIT<sup>+TM</sup> (phase IIa see section 7.9.3), rag-ASIT<sup>+TM</sup> (phase I/IIa see section 7.9.4) and food-ASIT<sup>+TM</sup> (preclinical see section 7.9.5).
- Regulatory approval of the Company's product candidates may be delayed, not obtained or not maintained, in particular with respect to the gp-ASIT<sup>+TM</sup> phase III results and discussion to occur with the PEI and FDA in 2017.



The preliminary results of the gp-ASIT<sup>+TM</sup> phase III clinical study show that gpASIT<sup>+TM</sup> induced a 15% to 21 % reduction in the CSMS, which is below the 20% CSMS reduction threshold corresponding to an acceptable real life clinical benefit as mentioned in the Offering prospectus. However, taking into consideration an atypical pollen season, these results are considered as postive by the Company as the efficacy and safety data of the Phase III clinical study are in line with the data reported for competing products as described above. Immunogenicity data are also in line with the data of the previous studies and with the data reported for competing products. Furthermore, complementary analysis performed on blood cells of a subset of the patients (11 placebo and 21 gpASIT<sup>+TM</sup> treated patients) at the Imperial College of London elucidate the mechanism of action of gpASIT+<sup>TM</sup>. These data are of major importance for the further development of the other ASIT+<sup>TM</sup> products and will be fully disclosed at the next EAACI meeting.

- The positive Phase III CSMS data, confirmation of Phase II CPT efficacy data, good safety and tolerability and the fact that no adjuvant treatment for gp-ASIT+ is required, should provide in the opinion of the Company the necessary leverage for discussions with the PEI for the filing of a MAA.
- If the Company fails to obtain additional financing before end 2017, it may be unable to complete the development and commercialization of its product candidates (or such development and commercialization may be delayed).

# 14.9 RESEARCH AND DEVELOPMENT

Research and development costs can be summarised as follows:

(in EUR 000)	31/12/2016	31/12/2015	31/12/2014
Staff costs	(1,312)	(1,135)	(638)
Share-based payment	-	(17)	(84)
Studies & analyses	(9,663)	(4,498)	(2,276)
Laboratory supplies	(460)	(450)	(254)
Depreciation and amortisation	(121)	(72)	(16)
Rent	(107)	(67)	(26)
Patents	(158)	(154)	(153)
Facilities	(138)	(82)	(41)
External advice	(32)	(156)	(44)
Other	(133)	(60)	(9)
Total research and development costs	(12,123)	(6,691)	(3,541)

Staff costs include payroll expenses of people dedicated to the R&D activities of the Company. Payroll expenses are allocated to research and development activities based on an analysis of the function of the employees. They are more or less attributable on a 50/50 ratio basis between the 2 main products of the Company, gp-ASIT+<sup>TM</sup> and hdm-ASIT+<sup>T</sup>.



Studies & analyses and laboratory supplies are directly attributable to research & development activities, whereas other indirect costs such as rent are allocated to the different activities based on an allocation key reflecting the headcount dedicated to the different activities.

Costs booked as Studies & analysis are sub-contracted to an outside source.

#### 14.10 BRANCHES

The Company does not have any branches.

# 14.11 CONTINUITY OF THE COMPANY

On 31 December 2016, the Company had a cash position of EUR 13,387,349.76. Furthermore, EUR 5,995,748 recoverable cash advance was granted by the Walloon Region in January 2017. This cash position is not sufficient to implement the full development plan during the next twelve months and the Company shall raise funds by the end of 2017 in order to secure its full development.

If the Company is not able to raise enough funds to secure its full development plan in the appropriate delay, it has the capacity to reduce or slow down the scope of its development plan in order to make it fit to its financial capabilities (such reduction would probably lead to a delay in the research development plans or to a focus on specific products to the detriment of other products).

However, the Company is confident that it will be capable to raise enough funds to secure its development plan, inter alia thanks to the positive results of its Phase III clinical trial with gp-ASIT<sup>+TM</sup> in grass pollen rhinitis as reported on 28 February 2017.

In accordance with Article 96, 6° of the BCC, taking into account two consecutive financial years of losses, the Board of Directors has decided, after consideration, to apply the valuation rules assuming "going concern", for the reasons set out above.

Since the Company (i) is currently able to satisfy all financial liabilities, (ii) is able to fulfil all payments and (iii) is able reduce the costs related to its development plan (by reducing the scope and the speed of the researches), the Board of Directors is of the opinion that the continuity of the Company is not threatened.

The Company is not able, at the date of this report, to establish a finalised business plan since the discussions with the PEI and FDA regarding the results of the phase III clinical study BTT009. There are too many possible scenarios depending on the discussions to take place with the PEI and the FDA. More information will be provided by the Company as soon as it has a clear view on this.

#### 14.12 USE OF FINANCIAL INSTRUMENTS

Besides investments in term deposits, the Company did not use any financial instrument during 2016.

# 14.13 TRANSACTIONS WITHIN THE AUTHORIZED CAPITAL

At the date of this report, there has been no transaction within the authorized capital.



# 14.14 INDEPENDENCE AND EXPERTISE OF A LEAST ONE MEMBER OF THE AUDIT COMMITTEE

The Audit Committee consists of at least three directors. As provided by article 526bis of the BCC all members of the Audit Committee are non-executive directors. According to the BCC, at least one member of the audit committee must be independent and must have the necessary competence in accounting and auditing.

At the date of this report the following directors have been appointed as members of the Audit Committee: Yves Désiront (chairperson), Gerd Zettlmeissl and Bruservices SA (represented by Henri De Meyer). The Audit Committee of the Board of Directors is composed exclusively of non-executive directors, of which two are independent directors.

The three members of this committee have a very good expertise in audit and finance. Their profile and professional experience are summarised in the Annual Report.

# 14.15 CORPORATE GOVERNANCE STATEMENT

# 14.15.1 CORPORATE GOVERNANCE CODE

The Company has adopted a Charter that is in line with the Belgian Code on corporate governance of 12 March 2009 (the *Code on Corporate Governance*) and that entered into force at the Offering. The Charter describes the main aspects of the corporate governance of the Company, including its governance structure, the terms of reference of the Board of Directors and its committees and other important topics. The Charter must be read together with the Articles of Association.

#### 14.15.2 COMPLIANCE WITH CORPORATE GOVERNANCE CODE

The Company complies with the nine corporate governance principles contained in the Code on Corporate Governance, but believes that certain deviations from its provisions are justified in view of the Company's particular situation. These deviations are the following:

- the severance pay to be awarded to Mr Thierry Legon, as CEO of the Company, in the event of early termination of his contract which exceeds the 12 months' basic and variable remuneration limitation set forth in Article 7.18 of the Code on Corporate Governance. The Company justifies such derogation by the fact that the service agreement of Mr Thierry Legon has been negotiated and signed a long time before the decision of the Company to comply with the Code on Corporate Governance. The Company does not intend to force the amendment of the existing service agreement but will consider such modification if the service agreement of Mr Thierry Legon is renegotiated in the future;
- the Company intends to award stock based incentives to the non-executive directors, upon advice of the Remuneration and Nomination Committee. This is contrary to provision 7.7 of the Code on Corporate Governance that provides that non-executive directors should not be entitled to performance-related remuneration such as (amongst others) stock related long-term incentive



schemes. The Company justifies this as it allows to limit the portion of remuneration in cash that it would otherwise need to pay to attract or retain (internationally) renowned experts with the most relevant skills, knowledge and expertise, and as it is customary for directors active in companies in the biotech and life industry, and as the portion of the remuneration payable in warrants is limited.

What constitutes good corporate governance will evolve with the changing circumstances of a company and with the standards of corporate governance globally, and must be tailored to meet those changing circumstances. The Board of Directors intends to update the Charter as often as required to reflect changes to the Company's corporate governance.

The Articles of Association and the Charter are made available on the Company's website (www. asitbiotech.com) and can be obtained free of charge at the Company's registered office.

#### 14.15.3 INTERNAL CONTROL

The role of the executive directors and of the management team is to develop and maintain an adequate control system to assure:

- The realization of the Company objectives;
- The reliability of financial information;
- The adherence to applicable laws and regulations;
- Monitor the internal and external impact of the risks identified by its Committees, and the management of the risks identified.

The Audit Committee has a guiding, supervisory and monitoring role with respect to the executive Directors and the management team, as regards the development, maintenance and execution of internal controls. The Committee also:

- Assists the Board of Directors in respect of control issued in general; and
- Acts as the interface between the Board of Directors and the external auditors of the Company when needed.

An internal audit role has been assigned to M. Gregory Nihon. He works in strict collaboration with the CFO and the CEO. M. Nihon has also been appointed as compliance officer of the Company.

The Audit Committee met 2 times in 2016. During the second meeting held on 19 December 2016, the Committee established the risk matrix relating to the risks faced by the Company and to the actions to be implemented in order to cover these risks as much as possible.

Furthermore, the Company decided to acquire a new ERP with an analytical accounting. The Audit Committee participated to the definition of the analytical axes in order to optimalize the costs structure of the Company.



#### 14.15.4 SHAREHOLDER STRUCTURE

To the Company's best knowledge, based on the transparency declarations most recently received by the Company, the shareholders' structure is as follows on the date of publication of this report:

Shareholder	Number of Shares declared in transparency declaration	Percentage of shares at time of transparency declaration
SFPI	1,363,243	10.69 %
Rodolphe de Spoelberch	1,212,428	9.5 %
SRIB and BRUSTART4	861,114	6.75 %
SRIW SA and SOFIPOLE SA5	809,971	6.35 %
EPIMEDE SA	718,524	5.63 %

The Company is not controlled within the meaning of Article 5 of the BCC.

The Company has not been informed of the existence of any shareholders' agreement relating to the Company (except as mentioned below regarding the appointment of directors).

Pursuant to the Company's Articles of Association, the Shareholders owning, individually or jointly, at least 15% of the share capital of the Company have the right to propose the names of two candidates for a position of director. Unless recommended otherwise by the Remuneration and Nomination committee of the Company, the Shareholders' Meeting shall appoint one of those two candidates as director. At the date of this registration documents, two groups of shareholders owning jointly more than 15% of the share capital have proposed the appointment of directors. M. Everard van der Straten has been appointed as director upon the proposal of M. Rodolphe de Spoelberch, M. Marc Nollet, Mrs. Martine van der Rest, Espad-Services SA (M. Everard van der Straten) and Teck-Finance SA (M. Everard van der Straten). Bruservices SA (represented by M. Henri De Meyer) and Meusinvest SA (represented by M. Marc Foidart) have been appointed as directors upon the proposal of Société Fédérale de Participations et d'Investissement (SFPI) SA, Participation du Bassin de Liège (Meusinvest) SA, Spinventure SA, Brustart SA, Epimède SA and Société Régionale d'Investissement de Bruxelles (SRIB) SA. Pursuant to these agreements, these shareholders are not acting in concert as defined by Belgian law.

<sup>&</sup>lt;sup>5</sup> The transparency declaration made by SRIW is a joint declaration by SRIW SA (for 2.99%) and by Sofipole SA (for 3.36%). SRIW owns 60% of the share capital of Sofipole (40% is owned by Sowalfin). Sofipole is controlled by SRIW within the meaning of Article 5 of the BCC



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<sup>&</sup>lt;sup>4</sup> The transparency declaration made by SRIB is a joint declaration by SRIB (for 4.21%) and by Brustart SA (for 2.54%). Brustart is a 100% subsidiary of SRIB.

# 14.15.5 BOARD OF DIRECTORS AND BOARD COMMITTEES

# Composition of the Board of Directors

On the date of publication of this Registration Document, the Board of Directors consists of the following eight (8) members:

Name	Position	Term (1)
Thierry Legon	Managing Director (executive) / CEO	2020
Jean Duchâteau	Independent director	2020
Gerd Zettlmeissl	Independent director	2020
François Meurgey	Director (executive)	2020
Everard van der Straten	Director (executive)	2020
RE Finance Consulting represented by Yves Désiront	Independent director	2020
Bruservices SA represented by Henri De Meyer	Director (not independent)	2017
Meusinvest SA represented by Marc Foidart	Director (not independent)	2020

<sup>(1)</sup> The term of the mandates of the directors will expire immediately after the annual shareholder's meeting held in the year set forth next to the director's name

# Functioning of the Board of Directors in 2016

In 2016, the Board of Directors met 19 times.

Name	Number of meetings attended
Béatrice De Vos	19 / 19
Thierry Legon	19 / 19 – represented one time
Jean Duchâteau	17/19 – represented three times
Gerd Zettlmeissl	17/19 – represented one time
François Meurgey	19/19 – represented one time
Everard van der Straten	19/19



RE Finance Consulting	18/19 – represented one time	
Bruservices	19/19	
Meusinvest	13/19 – represented one time	

#### > Audit Committee

The following directors are members of the Audit Committee:

Name	Position
RE Finance Consulting, represented by Yves Désiront	Chairman of the Audit Committee; Independent director
Gerd Zettlmeissl	Member of the Audit Committee ; Independent director
Bruservices SA, represented by Henri De Meyer	Member of the Audit Committee (non-executive)

The Audit Committee met 2 times in 2016. At all 2 meetings, all members of the Audit Committee were present.

#### Nomination and Remuneration Committee

The following directors are members of the Nomination and Remuneration Committee:

Name	Position
Gerd Zettlmeissl	Chairman of the Nomination and Remuneration Committee; Independent director
Jean Duchâteau	Member of the Nomination and Remuneration Committee; Independent director
Meusinvest SA, represented by Marc Foidart	Member of the Nomination and Remuneration Committee (non-executive)

The Nomination and Remuneration Committee met 2 times in 2016. At all 2 meetings, all members of the Nomination and Remuneration Committee were present or represented.

#### Evaluation process of the Board of Directors, Committees and directors

A self-assessment relating to the composition and the functioning of the Boards of Directors and of the Committees has been initiated in November 2016. It consists in a formal evaluation of its own size, composition and performance and that of the Committees and of its interaction with the executive management.

The main features of this process consist in:

- Personal interview with a third party specialist (M. Joseph Sadis);



- Establishment and discussions around a self-assessment questionnaire established on the basis of the Code on Corporate Governance;
- Global discussion between the directors, coordinated by a third party specialist.

The purpose of this evaluation is to assess how the Board of Directors and its Committees operate, to check whether important issues are suitably prepared and discussed, to evaluate whether each director makes a constructive contribution to the decision making, and to check the Board's or the Committees' current composition and functioning against the Board's or the Committees' desired composition and functioning. The main criteria used for this evaluation process are the ones provided by the Code on Corporate Governance.

## 14.15.6 OVERVIEW OF THE EFFORTS MADE TO ENSURE THAT AT LEAST ONE THIRD OF THE BOARD MEMBERS IS OF ANOTHER GENDER THAN THE OTHER MEMBERS

The Nomination and Remuneration Committee intends to drawn up a plan to ensure that the composition of the Board of Directors timely complies with the requirements that at least one third of the board members is of another gender than the other members. Pursuant to Article 518bis §3 of the BCC, at least one third of the board members of the Company shall be of another gender than the other members on 1<sup>st</sup> January 2022.

#### 14.15.7 MARKET ABUSES AND CONFLICTS OF INTEREST

With a view to preventing market abuse (insider dealing and market manipulation), the Board of Directors has established a dealing code. The dealing code describes the declaration and conduct obligations of directors, members of the executive management, certain other employees and certain other persons with respect to transactions in shares or other financial instruments of the Company. The dealing code sets limits on carrying out transactions in Shares of the Company and allows dealing by the above mentioned persons only during certain windows. The dealing code is attached to the Charter and available on www.asitbiotech.com.

Based on section 3.6 of the Code on Corporate Governance, the Board of Directors is currently contemplating to establish a policy for transactions or other contractual relationships between the Company and the members of the Board of Directors, which are not covered by the legal provision of the BCC. This policy will be disclosed in the Charter. This policy will be finalized in the framework of ongoing the self-assessment process.

#### 14.15.8 REMUNERATION REPORT

Procedure for establishing remuneration policy and setting remuneration for members of the Board of Directors and for members of executive management

The remuneration policy is established and the remuneration for members of the Board of Directors and members of the executive management is set by the Board of Directors on the basis of proposals from the Nomination and Remuneration Committee.

Warrant plans are determined by the Board of Directors on proposal from the Nomination and Remunera-



tion Committee.

#### > Remuneration of directors

#### Remuneration policy

Only the non-executive directors shall receive a fixed remuneration in consideration of their membership or chairmanship of the Board of Directors and Board Committees.

The non-executive directors do not in principle receive any performance related remuneration, nor will any option or warrants be granted to them in their capacity as director. However, upon advice of the Nomination and Remuneration Committee, the Board of Directors may deviate from the latter principle in the board's reasonable opinion the granting of any performance related remuneration would be necessary to attract or retain directors with the most relevant experience and expertise.

The Nomination and Remuneration Committee recommends the level of remuneration for directors, including the Chairperson of the Board, subject to the approval by the Board of Directors and, subsequently, by the Shareholders' Meeting.

The Nomination and Remuneration Committee benchmarks directors' compensation against peer companies to ensure that it is competitive. Remuneration is linked to the time committed to the Board of Directors and its various committees. The Directors' remuneration has been last determined by the Shareholders' Meeting of 30 June 2016.

The remuneration policy for directors is the following:

- a fixed annual fee of EUR 15,000 is granted to each non-executive Director;
- an additional fixed annual fee of EUR 5,000 is granted to the chairperson of the Audit Committee;
- an additional fixed annual fee of EUR 3,000 is granted to the chairperson of the Nomination and Remuneration Committee.
- a fixed annual fee of EUR 30,000 is granted to the of the Board (not cumulative).

The above remuneration policy became effective on 1<sup>st</sup> June 2016. Before that date, the directors were not remunerated for their mandates as directors.

In 2017 and 2018 the remuneration of the members of the Board of Directors will be on the same basis.

Apart from the above, all directors are entitled to a reimbursement of out-of-pocket expenses actually incurred to participate to Board meetings.

The Board of Directors could set and revise, from time to time, the rules and level of compensation for directors carrying out a special mandate or sitting on one of the Board committees.

Remuneration of the members of the Board of Directors in 2016



In 2016, the following fees have been paid to the directors as members of the Board of Directors (not as member of a Board committee) for the performance of their mandate during the financial year 2016:

Name	Fee (Euro)	
Béatrice De Vos	17,500	
Thierry Legon	- -	
Jean Duchâteau	8,750	
Gerd Zettlmeissl	8,750	
François Meurgey	-	
Everard van der Straten	-	
RE Finance Consulting	8,750	
Bruservices	8,750	
Meusinvest	8,750	

No warrants were granted to the directors in 2016.

The Company has not made any loans to the members of the Board of Directors.

#### Remuneration of the Audit Committee in 2016

In 2016, the following fees have been paid to the directors as members of the Audit Committee for the performance of their mandate during the financial year 2016:

Name	Fee (Euro)	
RE Finance Consulting	2,916	
Bruservices	-	
Gerd Zettlmeissl	-	

#### Remuneration of the Nomination and Remuneration Committee in 2016

In 2016, the following fees have been paid to the directors as members of the Nomination and Remuneration Committee for the performance of their mandate during the financial year 2016:

Name	Fee (Euro)	
Gerd Zettlmeissl	1,750	
Jean Duchâteau	-	
Meusinvest	-	



#### Shares and warrants held by the directors

Name	Number of shares	Number of outstanding warrants <sup>(1)</sup>
Béatrice De Vos	15,607	175
Thierry Legon	156,300	750
Jean Duchâteau	181,700	0
Gerd Zettlmeissl	3,000	175
François Meurgey	28,415	175
Everard van der Straten	338,658	0
RE Finance Consulting	0	0
Bruservices	0	0
Meusinvest	391,100	0

<sup>(1)</sup> Each warrant gives the right to subscribe to 100 shares

#### > Remuneration of the management

#### **Remuneration policy**

The remuneration of the members of the management is determined by the Board of Directors upon recommendation by the Nomination and Remuneration Committee. The remuneration of the CEO is based on the conditions provided by a services agreement and by a license agreement signed in July 2014.

The remuneration of the management is designed to attract, retain and motivate managers.

At this stage, the Board has not established a clear remuneration policy for the members of the management and their remuneration has been arrested on a case-by-case basis.

If it is decided by the Board of Directors to grant warrants or shares to the members of the management, the essential conditions of the concerned plan will be prior approved by the Shareholders' Meeting.

#### Remuneration of the management

Espad-Services SA, a company controlled by Everard van der Straten Ponthoz, is the chief financial officer (CFO) of the Company since 21 September 2015. A service agreement has been executed in that respect on 16 December 2015. The services are invoiced at a daily rate of EUR 1,250. In 2016, a total amount of EUR 72,965 was paid to Espad-Services SA in that respect. Furthermore, Espad-Services SA was granted in 2016 with an exceptional bonus of EUR 25,000.00 for having participated to the roadshows of the Offering.

Oukelos SPRL, a company controlled by François Meurgey, is the marketing director of the Company



since 1 December 2015. A service agreement has been executed in that respect on 5 January 2015. The services are invoiced at a daily rate of EUR 1,250. In 2016, a total amount of EUR 28,700 was paid to Oukelos SPRL in that respect. Furthermore, Oukelos SPRL was granted in 2016 with an exceptional bonus of EUR 25,000.00 for having participated to the roadshows of the Offering.

Mr. Albert Vicaire is employee of the Company. His yearly gross annual compensation in 2016 is EUR 66,519.18. The employment agreement of Mr. Vicaire was entered into for an indefinite period of time and can be terminated by either Mr. Vicaire or the Company at any time subject to a prior notice. Mr. Vicaire benefits from a pension scheme paid by the Company (4% of the yearly gross annual compensation is paid on that scheme – i.e. EUR 3,205 paid in 2016), he also benefits from a DKV hospitalization insurance and a company car is made available to him.

Mr. Gregory Nihon as employee of the Company. His yearly gross annual compensation in 2016 is EUR 40,660. The employment agreement of Mr. Nihon was entered into for an indefinite period of time and can be terminated by either Mr. Nihon or the Company at any time subject to a prior notice. Mr. Nihon benefits from a pension scheme paid by the Company (4% of the yearly gross annual compensation is paid on that scheme – i.e. EUR 1,988.40 paid in 2016), he also benefits from a DKV hospitalization insurance and a company car is made available to him.

Except for the CEO, the employment or services agreements executed between the Company and the members of the management do not provide for any variable remuneration related to the performance of the Company.

#### **Remuneration of the CEO**

The remuneration of the CEO prior to the Offering consisted of the following main remuneration components:

- annual base fee (fixed at EUR 161,000.00);
- licensing for know-how and assignment of IP right: on the basis of an agreement signed on 14 July 2014 the Company pays annually a lump sum amount of EUR 55,000 to Mr. Thierry Legon for the licensing of scientific know-how as well as the transfer of his IP rights. Pursuant to such agreement Mr. Thierry Legon makes available to the Company its scientific expertise and assigns to the Company all intellectual property rights, including copyrights that may result from his daily activities to the benefit of the Company;
- annual variable remuneration (linked to scientific performance (such as the finalisation of the phase III clinical studies or the development of new indications) and economic performances (new subsidies, financing and commercial income) and capped at EUR 50,000.00);
- exceptional and non-recurring bonus; and
- participation in stock option plans, depending on the final decision of the Remuneration and Nomination Committee to implement new stock option plans in the future. No decision has yet been taken for the future at this stage.



The CEO does not benefit from any pension scheme nor from any other advantages.

The Company decided to increase, further to the Offering, the level of remuneration and compensation of the CEO to align it with the remuneration paid to CEO's in comparable listed companies. Upon a decision of the Board of Directors, the following remuneration has been decided for the CEO:

- annual base fee (fixed at EUR 195,000.00);
- licensing for know-how and assignment of IP right (together with the annual base fee, the annual fee): on the basis of an agreement signed on 14 July 2014 the Company pays annually a lump sum amount of EUR 55,000 to Mr. Thierry Legon for the licensing of scientific know-how as well as the transfer of his IP rights. Pursuant to such agreement Mr. Thierry Legon makes available to the Company its scientific expertise and assigns to the Company all intellectual property rights, including copyrights, that may result from his daily activities to the benefit of the Company;
- annual variable remuneration (linked to performance and capped at 33% of the annual fee, ie. EUR 83,300.00);
- participation in stock option plans.

In 2016, the CEO received a total remuneration of EUR 440,000.00 detailed as follow:

- Annual base fee: EUR 195,000.00;
- License on IP rights: EUR 55,000.00;
- Variable remuneration (objectives 2015): EUR 50,000.00;
- Exceptional bonus relating to phase IIb: EUR 70,000.00;
- Exceptional bonus relating to the Offering (paid after the Offering): EUR 70,000.00.

The CEO does not benefit from any other advantage and did not received any warrants in 2016.

The CEO is entitled to a variable remuneration in cash dependant on individual and Company objectives. The individual and Company objectives that determine the amount of the bonus are determined at the beginning of each year and are all formulated in such a way that they are measurable and that it can be clearly concluded whether or not, or to what extent, they have been met. The duration of these objectives is one year. At this stage, no measure has been taken in order to ensure a recovery of the variable remuneration if such remuneration is granted on the basis of incorrect financial information.

For 2016, the variable bonus of the CEO (of maximum EUR 83,300) is based on the following objectives:

50% for Phase III gpASIT Technical finalisation of Phase III Production of a FDA batch before YE 10% hdmASIT Finalisation of PhI/II before YE



30% Financing

Implementation of an appropriate news flow, including trimestral communication

10% Development of the technology platform
Before YE new indication end of preclinical development

On 7 April 2017, upon the recommendation of the Remuneration Committee, the Board of Directors decided to fix the amount of the 2016 bonus of the CEO to EUR 90,000 (the Board thus exceptionally deviated from the 33% cap mentioned above).

Pursuant to Article 520ter of the Company Code "Unless provided otherwise in the articles of association or approved by the annual general shareholders' meeting, (a) variable remuneration for leader must be base, at least for 25%, on performance criteria measured over a period of a least two years and for (another) 25% on performance criteria measured over a period of a least three years and (b) shares may only be definitively acquired by Directors and leaders and stock-options or other rights to acquire shares may only be exercised by leaders at the earliest three years after they have been granted to them". It is expressly proposed to the annual Shareholders' Meeting to approve a full derogation to this provision regarding the grants (of variable remuneration or stock-options) to occur for the benefit of Directors or the CEO until the annual shareholders' meeting to be held in 2018.

The amount of the remuneration of the CEO will be annually evaluated on the basis of a benchmark with comparable Belgian biotech companies.

#### **Termination payments**

Thierry Legon (CEO) is engaged as CEO of ASIT biotech on the basis of a services agreement. This services agreement was entered into for an indefinite period of time and can be terminated at any time by the Company subject to the payment of a lump sum amount corresponding to two years of remuneration calculated on the basis of the fixed and variable remuneration paid by the Company to Mr. Legon for the last two years before the termination. Furthermore, the Company may terminate the services agreement with immediate effect subject to the payment of a lump sum amount corresponding to six months of the base fee if Mr. Legon is not able to exercise the services due to incapacity or sickness of more than sixty consecutive working days. The services agreement of Thierry Legon can be terminated at any time by Mr. Legon without indemnification but subject to a prior notice of 12 months. Finally, either the Company or Thierry Legon may terminate the services agreement with immediate effect and without indemnification in certain cases (serious breach, etc.).

Everard van der Straten (CFO) is engaged as CFO of ASIT biotech on the basis of a services agreement which can be terminated by either parties at any time without indemnification.

François Meurgey (CMO) is engaged as CMO of ASIT biotech, through his management company OUKELOS SPRL, on the basis of a services agreement which can be terminated by either parties at any time without indemnification.

Albert Vicaire (HRD) has an employment contract with ASIT biotech. The employment contract is for an indefinite term and may be terminated at any time by the Company, subject to a notice period and a



severance payment in accordance with applicable law.

Grégory Nihon (Compliance Officer) has an employment contract with ASIT biotech. The employment contract is for an indefinite term and may be terminated at any time by the Company, subject to a notice period and a severance payment in accordance with applicable law.

#### > Remuneration of the Statutory Auditors

The Company has a college of Statutory Auditors composed of two auditors: Mazars-Réviseur d'Entreprises SCRL represented by Xavier Doyen and RSM Réviseurs d'Entreprises SCRL represented by Luis Laperal.

In 2016, the total amount of the remuneration paid to the Statutory Auditors was EUR 24,855.00 (EUR 15,000.00 for the review of the accounts and EUR 9,855.00 for specific missions).

#### 14.16 CONFLICT OF INTEREST

In 2016, during 3 Board meetings, decisions were taken that required the application of the conflict of interests' procedure pursuant to Article 523 of the Belgian Companies Code. The relevant part of the minutes are copied below (English translations).

#### Minutes of the board of the 8 February 2016

(...) The President of the Board reminds that this point needs to be discussed in accordance with article 523 of the BCC concerning conflicts of interest. (...)

#### 1. Report of the remuneration committee which was held on Monday 8 February at 10:30

Mr Zettlmeissl, President of the remuneration committee submits the works of the committee

#### 1. Bonuses 2015 and 2016 of the managing director

#### 1.a. Variable bonus 2015

For 2015, the variable bonus of the managing director was based as follows:

50.000 € 40% for Phase III gpASIT

Release of product for Phase III Approve of Phase III before YE

20% hdmASIT

Approve of PhI/II before year end

30% Financing

Before YE finance enough to guarantee gpASIT009 and hmdASIT001

10% Staffing

Before YE build up the team to face future development of BTT in the new facilities of Liège

Mr Legon submits his achievements and then leaves the meeting.



During the discussion, the board notes that all the objectives, except for the phase I/II for the treatment of asthma due to mites have been achieved. The hdm project, although delayed in time, is now ready, therefore, the board acknowledges the efforts achieved, the actions implemented and approves at unanimity the entire payment of the variable bonus of 2015.

#### 1b. IPO bonus for the CEO

The President of the Remuneration Committee submits the benchmark studies and proposes a bonus if an IPO occurs before 30 June 2016. This new deadline reflects the possibilities of IPOs due to the situation of the markets.

The amount raised	The amount of the bonus
< 30.000.000 €	70.000 €
>40.000.000 €	120.000 €

Between 30 and 40 million euro raised, the amount of the bonus shall be proportional to the amount raised following the formula:

Bonus =  $70.000 \in +50.000 \in *$  (raised amount - 30 million)/10million.

The bonus shall not in any case exceed the amount of 120.000€.

The Board unanimously approves this proposal, notes that the CEO is not the only one to carry the project and requires that the remuneration committee think about the compensations of the other staff members.

(...)

#### 1.c. Variable bonus 2016

For 2016, the variable bonus of the CEO will be based as follows:

EUR 50,000 (without IPO) 50% for Phase III gpASIT

Technical finalisation of Phase III

If appropriate financing, production of a FDA batch before end 2016

10% hdmASIT

Technical finalisation of PhI/II before YE

30% Financing

Without IPO, alternative financing in order to secure a registration in 2017

10% Development of the technology platform

Before YE new indication end of preclinical development

EUR 83,300 (with IPO) 50% for Phase III gpASIT

Technical finalisation of Phase III Production of a FDA batch before YE



10% hdmASIT Finalisation of PhI/II before YE 30% Financing

Implementation of an appropriate news flow, including trimestral communication

10% Development of the technology platform Before YE new indication end of preclinical development

#### Minutes of the board of the 10 May 2016

Article 523 of the BCC states in its first paragraph "if a director has, directly or indirectly, a conflicting interest of a financial nature to a decision or an operation for which the board of directors is competent, he needs to communicate it to the other directors before the deliberation of the board of directors. His statement, as well as the reasons justifying the conflicting interest which exists regarding the concerned director, needs to figure in the minutes of the meeting of the board of directors that will need to take the decision. The auditor shall also be informed".

Mrs Béatrice De Vos, Mr Everard van der Straten, Mr François Meurgey, Mr Yves Désiront and Bruservices SA represented by Mr Henri De Meyer inform the other directors that they are respectively in a situation of conflict of interest given that they have a conflicting interest of a financial nature regarding the decision concerning the price of the Offering mentioned on the agenda of this meeting of the Board.

Indeed, each of them has subscribed, directly or indirectly (through related companies or companies in which they have financial interests), to convertible bonds issued by the Company on 5 August 2015 and to the subscription commitment attached to it. The conversion value of the above-mentioned convertible bonds and the subscription attached to it depend directly, on the one hand, of the completion of the Offering on 15 may 2016 at the latest and, on the other hand, of the final price per share retained.

The terms under which the convertible bonds are issued expressly provide for the following: (...)

The consequences of the decisions to be adopted by the Board of Directors on the financial situation of the Company are described in the Offering prospectus (Part 3 – Use of proceeds).

The Board of Directors takes note of this statement. It will be communicated to the Auditors and indicated in the annual management report. The directors who made the statements described above shall refrain to participate to the deliberations and to the vote relating to the price fixing of the Offering.

(...)

### 2. Price fixing of the Offering per share, of the final number of new shares to be issued and of the allocation

Based on the data submitted by the banks and following the discussions held in session, the Board decides at unanimity to:

- Fix the price of the Offering per share at 7 EUR;



- Fix the number of shares to be issued at 3,350,000. Furthermore, the greenshoe is fixed at 10%, which means that the additional number of shares that can result from the exercise of the Overallotment Warrant corresponds to a maximum of 335.000 shares;
- The allocation table applicable to shares asked by private investors is given in annex.

(...)

#### Minutes of the meeting of the board of 7 November 2016

*(...)* 

#### 2. Review of the report of the remuneration committee

#### **Prior statements:**

Article 523 of the Belgian companies code states in its first paragraph "if a director has, directly or indirectly, a conflicting interest of a financial nature to a decision or an operation for which the board of directors is competent, he needs to communicate it to the other directors before the deliberation of the board of directors. His statement, as well as the reasons justifying the conflicting interest which exists regarding the concerned director, needs to figure in the minutes of the meeting of the board of directors that will need to take the decision. The auditor shall also be informed.

(...) For companies who have made or who are making a public call for investment, the director referred to in the first paragraph may not attend to the deliberations of the board of directors relating to such operations or decisions, nor take part to the vote".

Mr Everard van der Straten and Mr François Meurgey inform the other directors that they are respectively in a situation of conflicting interests regarding the point 2.1 of the agenda. The situation of conflicting interest lies in the fact that the Board of Directors considers to allocate to the companies Espad Services SA and Oukelos SPRL exceptional bonuses of 25.000 euros each. Everard van der Straten is the majority shareholder of Espad Services SA and François Meurgey is the majority shareholder of Oukelos SPRL.

Mr Everard van der Straten, Mr François Meurgey, Mr Gerd Zettlmeissl, Mr Thierry Legon, Mr Jean Duchâteau and Mrs Béatrice De Vos inform the other directors that they are respectively in a situation of conflict of interest regarding the point 2.1 of the agenda. The situation of conflict of interest lies in the fact that the Board of Directors considers to allocate warrants in the context of a new incentive plan to be implemented. In that context, the remuneration committee proposes to allocate 100 warrants to Mr van der Straten, 100 warrants to Mr Meurgey, 175 warrants to Mr Legon and a number of warrants to be determined for Mrs De Vos, Mr Zettlmeissl and Mr Duchâteau.

The Board of Directors takes note of these statements. They well be communicated to the Auditors and mentioned in the annual management report of the Company.

The concerned directors will withdraw from the deliberation room and of the conference call during the deliberations and the votes on these allocations.



#### 2.1. Exceptional Bonuses to Espad Services and Oukelos SPRL

Mr van der Straten and Mr Meurgey temporarily leave the session.

Mr Zettlmeissl, President of the Remuneration Committee submits the report of the Remuneration Committee as set out in <u>annex 1a</u>.

It is suggested to allocate an exceptional bonus to the members of the management having actively participated to the preparation *roadshows* of the Offering.

The Remuneration Committee therefore suggests to allocate an exceptional bonus of 25.000 € to the Chief Financial Officer (Espad Services SA) and to the Chief Marketing Officer (Oukelos SPRL).

The Board discusses the opportunity of the allocation of these bonuses, not in regards of the merit of the beneficiaries (which is absolutely not discussed) but in regards of the fact that these bonuses intervene *a posteriori* without any mention made in the Offering prospectus nor in the report of the remuneration report communicated during the ordinary general meeting.

After taking note, on the one hand, that the Board has the power to allocate exceptional bonuses to the management or staff members, on the other hand, that the allocation of these bonuses is justified in the present case and, finally, that the payment of such bonuses is frequent in practice, the Board proceeds to the vote:

Positive vote of 4 directors: Mr Foidart, Mr Zettlmeissel, Mr Duchateau and Mr Legon

Negative vote of 3 directors: Mrs De Vos, Mr Désiront and Mr De Meyer

The Board therefore approves at a majority of 4 votes against 3 the proposal suggested by the Remuneration Committee and consisting in allocating two bonuses of  $25.000 \in \text{to Espad Services SA}$  and Oukelos SPRL. (...)

#### b. Allocation of warrants to the management

In view of the next fundraising and other important operational activities, an exceptional effort is requested from the management. In this context, the Remuneration Committee suggests to allocate the following number of warrants to the management:

- Everard van der Straten in his capacity of representative of Espad Services SA, CFO of the Company: 100 warrants;
- François Meurgey in his capacity of representative of Oukelos SPRL, CMO of the Company: 100 warrants;
- Thierry Legon, CEO of the Company: 175 warrants.

(...)



With regard to the allocation of warrants to Mr van der Straten, Mr Meurgey and Mr Legon, the Board underlines that 5.300 warrants were issued in 2014 and that a maximum number of 2.000 warrants had been set aside for the self-employed people. The balance, namely 3.300 warrants, was set aside for the staff members (employees). Various allocations have intervened in 2014 and 2015.

Mr De Meyer points out that it would be in the interest of the Company to not allocate immediately all the warrants still owned by the Company in order to be able in the following months to allocate warrants to other people who would come to join the Board, in particular regarding the preparation of a *secondery of-fering*.

Given that there is still an uncertainty on the number of warrants that can be allocated, the Board decides to postpone the question of the allocation of warrants to Mr van der Straten, Mr Meurgey and Mr Legon, likewise for the allocation of warrants to other directors as provided for in the point 2.2 (d) of the agenda.

(...)

#### 14.17 STATEMENTS REQUIRED BY ARTICLE 34 OF ROYAL DECREE OF 14 NO-VEMBER 2007

According to Article 34 of the Royal decree of 14 November 2007, the Company hereby discloses the following items, elements which by their nature would have consequences in case of a public take-over bid on the Company:

- The share capital of the Company amounts to 17,505,986.09 EUR and is fully paid-up. It is represented by 12,806,100 Shares.
- The Shares existing before the Offering as well as the Shares issued further to the conversion of the bonds issued on 5 August 2015 are subject to a lock-up period of 12 months until 11 May 2017. The Shares issued in the framework of the Offering are not subject to such lock-up provision.
- Other than the lock-up period mentioned above the Company's Articles of Association do not contain any other restriction on the transfer of shares.
- There are no agreements between the shareholders which are known by the Company and may result in restrictions on the transfer of securities and/or the exercise of voting rights.
- There are no holders of any Shares with special voting rights.
- There is no external control over the employee incentive plans; warrants are granted directly to the beneficiary.
- Each shareholder of the Company is entitled to one vote per Share. Voting rights may be suspended as provided in the Company's Articles of Association and the applicable laws.
- The rules governing the appointment and replacement of Board members and amendment to Articles of Association are set out in the Company's Articles of Association.



• The powers of the Board of Directors, more specifically with regard to the power to issue or redeem Shares are set out in the Company's Articles of Association. The Board of Directors was not granted the authorization to purchase its own shares to "avoid imminent and serious danger to the Company". The Company's Articles of Association do not provide for any other specific mechanisms against public takeover bids.



# 15 DEFINITION AND GLOSSARY

#### 15.1 DEFINITONS

AIA American Invents Act

**Articles of Association** the articles of association of the Company

Audit Committee the audit committee of the Company

**BCC** Belgian Companies Code

**Board of Directors** the board of directors of the Company

**Brussels Grants** the grants received by the Company from the Brussels-Capital Region and

further described under Section 7.14 "Grants and Subsidies"

**Charter** the corporate governance charter of the Company

Code on Corporate Gov-

ernance

the Belgian Code on corporate governance of 12 March 2009

**Company** ASIT biotech SA (it being understood that, for the purpose of the notes to

the consolidated financial statements, the term "Company" will be used to refer as a whole to ASIT biotech SA and its now liquidated subsidiary, Bio-

tech Tools Factory SA)

Competent Regulatory

Authorities

the government bodies regulating the international pharmaceutical and medical technology industry and competent ethical committees, including the FDA, the EMA, national regulatory authorities in the EEA and other regula-

tory authorities in relevant markets.

Convertible Bonds the 413 convertible bonds issued by the Company on 5 August 2015 and

further described in Section 6.8 "Convertible Bonds"

**CTD** the common technical document

Draft Directive the EU Commission adopted a proposal for a Council Directive on a com-

mon financial transaction tax

**EEA** the European Economic Area

**EFA** The European Federation of Allergy and Airways Diseases Patient's Associ-

ation

**EMA** the European Medicine Agency

FDA the US Food and Drug Administration

Financial Promotion Or-

der

the UK Financial Services and Markets Act 2000 (Financial Promotion)

Order 2005, as amended

Financial Statements the audited consolidated financial information of the Company as of and for

the years ended 31 December 2016, 2015 and 2014

FSMA the Belgian Financial Services and Markets Authority

FTT financial transaction tax



FTT Directive the EU directive to be adopted on FTT

GCP Good Clinical Practices

*IFRS* International Financial Reporting Standards

Medicinal Products Di-

rective

Directive 2001/83/EC on the Community code relating to medicinal prod-

ucts for human use

Offering the initial offering (the Offering) of the Company that occurred on 11 May

2016

**Participating Member** 

States

Austria, Belgium, Estonia, France, Germany, Greece, Italy, Portugal, Spain,

Slovakia and Slovenia

**PE** Permanent Establishment

Prospectus Directive Directive 2003/71/EC and any amendments thereto, including the Directive

2010/73/EU amending the Prospectus Directive, to the extent implemented in the Relevant Member State) and any relevant implementing measure in

each Relevant Member State

**QoL** quality of life

**Regulatory Regulations** regulatory laws and regulations with which the Company has to comply

Remuneration and Nomi-

nation Committee

the remuneration and nomination committee of the Company

Shares the shares of the Company

Shareholders the shareholders of the Company

**Shareholders' Meeting** the general shareholders' meeting of the Company

SME small company within the meaning of article 15 of the BCC

Stock Based Plans the 2014 Plan, the 2015 Plan and the 2016 Plan

**Takeover Law** the Belgian law of 1 April 2007 relating to public tender offers (Loi relative

aux offres publiques d'acquisition/Wet op de openbare overnamebiedingen)

Takeover Royal Decree the Belgian Royal Decree of 27 April 2007 on public takeover bids (Arrêté

royal sur les offres publiques d'acquisition/Koninklijk besluit op de open-

bare overnamebiedingen)

Transparency Law the Belgian Law of 2 May 2007 on the disclosure of significant sharehold-

ings in issuers whose securities are admitted to trading on a regulated market and containing various provisions (Loi relative à la publicité des participations importantes dans des émetteurs dont les actions sont admises à la negotiation sur un marché règlementé et portant dispositions diverses/Wet op de openbaarmaking van belangrijke deelnemingen in emittenten waarvan aandelen zijn toegelaten tot de verhandeling op een gereglementeerde markt

en houdende diverse bepalingen)

Walloon Grant the refundable advance received by the Company from the Walloon Region

and further described under Section 7.14 "Grants and Subsidies"



**WAO** World Allergy Organization

WHO World Health Organisation

2014 Plan the 2014 stock option plan of the Company

2015 Plan the 2015 stock option plan of the Company

2016 Plan the 2016 stock option plan of the Company

#### 15.2 GLOSSARY

AIT Allergy Immunotherapy

API Active Pharmaceutical Ingredient

ASIT Allergen Specific Immunotherapy

ASIT+TM Improved Antigen Specific Immuno Therapy

BLA Biologics Licence Application

IND Investigational New Drug Application

CMO Contract Manufacturing Organisation

CPT Conjunctival Provocation Test

CSMS Combined Symptom and Medication Score

CRO Contract Research Organisation

CTA Clinical Trial Authorisation

DP Drug product

DS Drug susbtance

DSMB Data and Safety Monitoring Board

FSA the framework service agreement dated 28 April 2015 entered into between the

Company and a CMO

GCP Good Clinical Practices

GMP Good Manufacturing Practices

gp-ASIT+TM the ASIT+TM product candidate developed by the Company for the treatment of

grass pollen allergy by subcutaneous injections

hdm-ASIT+TM the ASIT+TM product candidate developed by the Company for the treatment of

house dust mite allergy by subcutaneous injections

Rag-ASIT<sup>+TM</sup> the ASIT<sup>+TM</sup> product candidate developed by the Company for the treatment of

ragweed allergy by subcutaneous injections

HRQL Health-Related Quality of Life



#### 15 DEFINITION AND GLOSSARY

IgE Immunoglobulin E

MAA Marketing Authorisation Application

MPL Monophosphoryl lipid A

NPPs Named Patient Products

PCT Patent Corporation Treaty

PBM Pharmacy Benefit Manager

PEI Paul Ehrlich Institute (the German National Regulatory authority)

RMS Rescue Medication Score

RTSS Rhinoconjunctivitis Total Symptom Score

SAR systemic allergic reaction

SCIT Subcutaneous Immunotherapy

SIT Specific Immunotherapy

SLIT Sublingual Immunotherapy

SmPC summary of products characteristics

TEAEs Treatment Emergent Adverse Events