


2019 *in review*

life **beyond** allergy

STALLERGENES  GREER™

We are pleased to enclose our report on another great year of significant forward progress and development at Stallergenes Greer.

Of course, as we send this report, the spread of COVID-19 started to affect individuals, communities, healthcare systems and economies across the globe. Everyone's own immediate outlook must of course adjust to reflect this extraordinary crisis, unprecedented in our modern society. Here, at Stallergenes Greer, it makes us even more acutely aware of our purpose: serving patients where the medical need is high.

In these challenging times, Stallergenes Greer's key priorities remain to provide patients with their personalised allergen immunotherapy solutions while, as always, protecting the health and safety of our people. I would like to take this opportunity to recognise the dedication and exemplary standards of our employees across the globe, thanks to whom patients with respiratory allergies can continue to take their treatment.

Today more than ever, Stallergenes Greer is fully mobilised to maintain an uninterrupted supply of allergen immunotherapy products from its manufacturing facilities in Europe and North America, so patients can continue to receive their treatments on time. We remain available for healthcare professionals and patients through the most up-to-date digital technology to ensure support and access. Stallergenes Greer is also lending a hand to help keep front-line responders and other vital personnel safe during the pandemic through donations of sanitisers, masks and gowning—a contribution to help those engaged in care at this time and a reminder of our close partnership with local communities

While the current pandemic has greatly impacted our daily lives and ways of working, Stallergenes Greer is demonstrating its ability to quickly adapt to the disruption created by the COVID-19 pandemic, and I am grateful to be supported by colleagues who are unwavering in their commitment to improve the lives of patients with respiratory allergies.

I remain grateful for your interest in our company and we wish you and your families well through this extraordinary time. In addition, I would like to express a particular thanks to those who are working relentlessly on the front lines to help overcome the impact of COVID-19.

Michele Antonelli



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patient deserves a unique solution.  
We, at Stallergenes Greer, fight for that.”*

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*“Stallergenes Greer  
is stronger today  
than it was before.”*

**Stefan Meister**

# *chairman's* message

**Stefan Meister** *Chairman of the Board of Directors*

2019 was a transformational year for Stallergenes Greer, with the company now positioned well for future growth.

In May 2019, Stallergenes Greer became fully owned by the Waypoint Capital group, the majority shareholder of the company since 2015. With Waypoint's support, Stallergenes Greer now has a singular focus on advancing its transformation and rebuilding its position as a trusted world leader in allergen immunotherapy.

The Board of Directors is fully engaged with the leadership team to continue to grow Stallergenes Greer and committed to overseeing the company's development strategy.

The results are already starting to show. The company has bolstered its leadership positions in many territories and regained market share. It has ramped up investments to continue to provide high quality allergen immunotherapy treatments to patients, and to grow and diversify its allergen portfolio.

Stallergenes Greer is stronger today than it was before. Its foundations are solid and the company is well positioned to create value for its stakeholders and deliver on its ambition of personalising allergy care to enable people with allergies to live their life to the fullest.

On behalf of the Board of Directors, I would like to take this opportunity to recognise the focus and determination of Stallergenes Greer's employees and their commitment to patients and the company.

Caring for patients is a passion that is shared at all levels of Stallergenes Greer. It is the relentless force that drives the company forward.

Sincerely,

Stefan Meister

# interview with our **CEO**

**Michele Antonelli** *Chief Executive Officer*

## **What were the significant highlights for Stallergenes Greer in 2019?**

In 2019, we capitalised on our investments and rigorous commitment to quality. Stallergenes Greer has regained the trust of its stakeholders and our products meet the highest quality standards in the pharmaceutical industry.

Stallergenes Greer's ability to deliver personalised products in standard time is also one of the accomplishments I am most proud of. We kept our word: Stallergenes Greer now ensures shipment of allergen extracts within 24 hours from its facility in Lenoir (US) and named patient products in less than six days from Antony (France), with a clear focus on customer service.

Finally, the year marked a true turnaround regarding our business operations. In 2019, Stallergenes Greer delivered solid financial performances, while recapturing market share and regaining leadership positions in several key markets such as France and the US.

## **You have been at the helm of the company for more than a year now, how has Stallergenes Greer changed over the years?**

I have witnessed major changes throughout the organisation, not only since the beginning of my tenure as CEO, but since joining the company in 2015.

The delisting of the company from the Paris stock exchange last May has brought significant change. Stallergenes Greer now has Waypoint Capital Group as its sole shareholder. Waypoint's legacy in pharma, biotech and innovation is a true strength. We can now focus all of our efforts on improving our operations and direct our energy at the company's transformation.

The results already speak for themselves. The company is now in a position to access external innovation in the allergy space and related therapeutic areas, to build strategic partnerships and to envisage growth.

Our organisation is more efficient and more agile. This is fundamental to create value and foster quick decision-making. This entrepreneurial mindset is a very powerful motivational factor for our teams and it drives us forward.

## **What are the company's strategy and ambition for the future?**

Our strategy is to create value both for patients and for society as a whole. By creating value, we will be able to access new technological platforms and industrial tools to offer physicians and people with allergies an even broader range of therapeutic solutions.

The first pillar is the implementation of an industrial plan to ensure state-of-the-art operating facilities, maintain a solid financial position and keep debt at a minimum. Thanks to our robust foundation, we can focus our efforts on transforming the company.

The second pillar is to have an extensive portfolio of treatment solutions tailored to each patient profile and to each market including injectable solutions, oral solutions –drops or tablets– venoms and diagnostics. Moving forward, we intend to further develop injectable forms and to add new allergen references to our portfolio which will make us both the company with the most complete portfolio and a valued partner for patients and doctors. I realise that this is a significant, complex and costly challenge for Stallergenes Greer. It will demand great efforts in particular in the clinical and regulatory domains.

## **What are the key challenges facing the company?**

We must ensure that every employee embraces our transformation and that we remain driven by the entrepreneurial spirit that characterises our company.

Another significant challenge remains access to our treatments. We continue to work with the authorities to raise awareness regarding the benefits of allergen immunotherapy solutions. We are committed to providing evidence that supports our value proposition and demonstrates the imperativeness for payers to recognise the societal benefits of allergen immunotherapy.

Allergies are the sentinels of our environment. Pollution, climate change, and changing lifestyles, all have a severe impact on the number of people affected by allergies. It is estimated that by 2050, one in two people worldwide will suffer from allergies with the risk of developing asthma if only symptomatic treatment is administered. These figures are alarming. Allergen immunotherapy remains the only solution that treats the root cause and can change the course of respiratory allergic diseases.

Every patient is different, and every patient deserves a unique solution. We, at Stallergenes Greer, fight for that.



*“Every patient is different, and every patient deserves a unique solution. We, at Stallergenes Greer, fight for that.”*

**Michele Antonelli**







living *with* allergies

# allergies *on the rise*

The prevalence and intensity of allergies have been increasing steadily and are associated with urbanisation, changes in lifestyle (modern hygiene standards, reduced microbial exposure), changing dietary habits and climate change. As these factors develop, allergies are expected to affect up to four billion people over the next three decades<sup>1</sup>.



## TRAFFIC

Traffic-related emissions are a significant source of air pollution and can worsen allergic rhinitis symptoms and asthma.

## HOUSE DUST MITES

House dust mites are one of the most common indoor allergens and can be found in rugs, upholstery, bedding, etc. The body reacts to the faeces and dead cells of the mites.



## GRASSES

Grasses are one of the most common causes of allergies. The pollen released by grass can be carried by the wind over many miles.

## WEEDS

Weed pollen season occurs from spring to early autumn. Weeds that trigger allergies include mugwort, nettle, lamb's quarters, ragweed, sage, Russian thistle, etc.

## FOOD

Food allergies can trigger symptoms such as digestive problems, hives and respiratory difficulties. In some people, food allergies can be life-threatening and cause anaphylaxis.



<sup>1</sup> World Health Organisation. Ambient Air Pollution: Health Impacts.

## MOULD/MILDEW

Fungi can be found both indoors in damp areas (bathroom, kitchen, etc.) and outdoors (fallen leaves, compost, grasses, etc.). The spores produced by the fungi are released by wind and dew.



## INDUSTRY

Air pollutants and particulates can exacerbate allergic rhinitis and asthma as well as modify the allergenic potential of certain pollens.



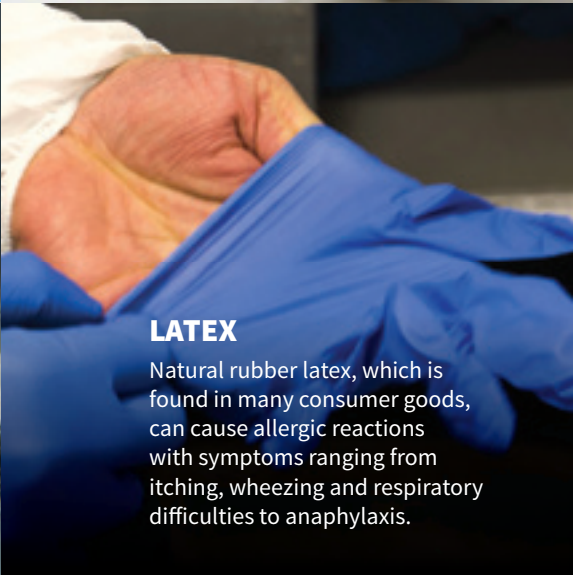
## PETS

Animals with fur can be a source of allergy. The body reacts to dead flakes of skin shed by animals.



## TREES

Tree pollen is the first seasonal allergy of the year, with some trees releasing pollen in January. Trees that trigger allergies include ash, beech, birch, cedar, elm, mulberry, olive, poplar, willow, etc.



## LATEX

Natural rubber latex, which is found in many consumer goods, can cause allergic reactions with symptoms ranging from itching, wheezing and respiratory difficulties to anaphylaxis.

## INSECT VENOM

Insect venom stings can cause severe reactions in people with allergies. While many people will have only minor reactions to stings, some may have a life-threatening allergic reaction and go into anaphylactic shock.



## our *market* environment

*Today, more than one billion people worldwide are affected by allergies. The number of people who suffer from allergies has risen continuously over the past 60 years, with higher incidence rates among children. By 2050, it is expected that 1 in 2 people worldwide will suffer from allergies<sup>1</sup>.*

### STALLERGENES GREER IS WELL POSITIONED TO MEET PATIENT NEEDS IN A COMPLEX ALLERGY MARKET

- A comprehensive portfolio of treatment options allows the patient and physician to choose the best method of administration
- A lean operating model delivers profitability while we continue to invest in advancements in innovation and operations
- Continuous improvement in operations ensures we can provide the right product to the right patient on time, every time

### Rapidly increasing prevalence

The increasing prevalence and intensity of allergies is a trend that has continued in the industrialised world for more than 60 years. Allergies currently affect over 13% of the world's population, and an estimated 20% to 30% of the developed world<sup>2</sup>.

### Allergies impact quality of life and can trigger asthma

The limitations resulting from the body's reaction to allergens are multifaceted but share one common theme: the patient's quality of life is no longer what it used to be. People who are sensitised to aeroallergens develop allergic rhinitis with symptoms such as a runny nose, itching, watery eyes, respiratory congestion and fatigue. A possibly less well-known, and often underestimated consequence, is that allergies put people at a greater risk of developing asthma.

People with allergic rhinitis are three times more likely to develop asthma than other people, and the risk for patients with house dust mite-induced allergic rhinitis is about six times higher than those whose allergic rhinitis is caused by grass pollen<sup>2</sup>.

### Too many patients are not treated

Allergic rhinitis affects approximately 10% to 30% of adults and 40% of children<sup>2</sup>. Only approximately 12% of people suffering from allergic rhinitis are treated with allergen immunotherapy (AIT) products due to low

**35%** of people are allergic to house dust mites

More than **1 billion** people worldwide affected by allergies

**1 in 2** people expected to be affected by allergies in 2050



## POLLUTION AND CLIMATE CHANGE

The number of people affected by respiratory allergies and asthma has been increasing steadily for decades, in both industrialised and nonindustrialised countries, due to changes in our environment. The quality of the air we breathe has become an important concern for public health authorities around the world.

Motor vehicle emissions and increased urbanisation are linked to the rising prevalence of pollen-induced respiratory allergies. Observational evidence indicates that recent regional changes in climate, particularly temperature increases, have already affected a diverse set of physical and biological systems in many parts of the world. Climate change is also affecting allergen patterns and air pollution can modify the allergenic potential of pollens especially in the presence of specific weather conditions.

Consequences on health can vary from a decline in lung function to allergic diseases, onset of new diseases, and exacerbation of chronic respiratory diseases<sup>3</sup>.

<sup>3</sup> D'Amato G, Liccardi G, D'Amato M. The role of outdoor air pollution and climatic changes on the rising trends in respiratory allergy



awareness among primary care prescribers, a complex treatment pathway and a market that is dominated by lower cost symptomatic treatments. AIT is the only treatment that addresses the underlying cause of allergy and may provide both rapid (within a few weeks) and long-lasting improvement of all symptoms, whereas symptomatic treatments (such as antihistamines and corticosteroids) temporarily relieve some allergy symptoms. With a modest proposal rate, the AIT market is still underdeveloped, representing approximately €1bn or 12% of the global allergic rhinitis market, and is expected to grow by 2% annually in the coming years<sup>4</sup>.

Market growth is expected to result from an increased awareness of respiratory allergies, easier access to allergists, the expanded range of administration modes as well as a growing middle class in developing countries that will gain access to medical treatment.

#### **Demand for personalised treatment options is growing**

As the prevalence of allergic diseases increases, so does its complexity. Each patient presents a unique immunologic profile. Patients present symptoms ranging from mild to severe and are often allergic to multiple allergens simultaneously. In addition, a patient's lifestyle and habits can impact their likelihood of adhering to treatment. As a result, physicians need treatment

methods that allow them to create a tailored approach that best addresses the individual patient's treatment needs, including type and severity of allergy, as well as the patient's preferred method of administration.

### **Innovation in science and technology is creating new medical opportunities**

Biologics, gene therapies and other new molecularly targeted compositions are starting to deliver on their promise to enable more precise diagnostics and more tailored treatments. The development of more patient-friendly treatments (shorter treatment lengths, ease of use) should improve AIT penetration in the allergic rhinitis patient population and their adherence. In addition, advances in the areas of genetics and informatics are driving a transformation in our understanding of the disease. Innovations in technology also present opportunities to address the growing volume of regulatory requirements more efficiently and more effectively.

### **Rise in allergies gaining attention from payers, providers and regulators**

As more patients seek treatment for their allergies, the AIT industry has gained greater attention from the healthcare community. Healthcare providers are seeking more clinical evidence related to the safety and efficacy of AIT; payers are more tightly controlling access and increasingly requiring data about the economic benefit to maintain coverage for treatment; and regulatory bodies are intensifying their scrutiny and enacting more stringent requirements of biologics manufacturers.

## **ALLERGY AND POLLUTION**

*“The effects of pollution on allergy, and consequently on the quality of life of patients, are very significant. For example, it is widely known that exhausted diesel particles can induce respiratory allergic diseases<sup>5</sup>.*

*The relation between allergic diseases and air pollution stresses the detrimental effects of air pollutants on allergic disease including the exacerbation of asthma, allergic rhinitis and eczema. Indoor pollutants also affect allergy: environmental tobacco smoke (ETS) is the greatest indoor air pollutant. Postnatal exposure to ETS is causally related to the development of childhood asthma.*

*The impact of air pollution on allergy is becoming a public health concern and a number of initiatives are being developed to better understand and assess this issue. The European project POLLAR-Impact of air POLLution on Asthma and Rhinitis, a European Institute of Innovation and Technology Health (EIT Health) project, aims to design strategies to propose the basis for a sentinel network at the European level for pollution and allergy to assess the implications of the interaction on our society.*

*The impact of air quality on human health is a real burden. It is time for policy makers to act and take up this challenge before it is too late.”*

**Professor Giorgio Walter Canonica,  
Head of Personalised Medicine Centre:  
Asthma and Allergology at Humanitas  
University & Research Hospital, Milan,  
Italy.**

<sup>4</sup> Market size (€1bn) and expected growth (2%): global data and internal estimates share of AIT market in the global allergic rhinitis market (12%): Visiongain report 2018. - <sup>5</sup> McCreanor et al. N.E.J.M. 2007

# *patient* journey

## **100 million** *days lost*<sup>3</sup>

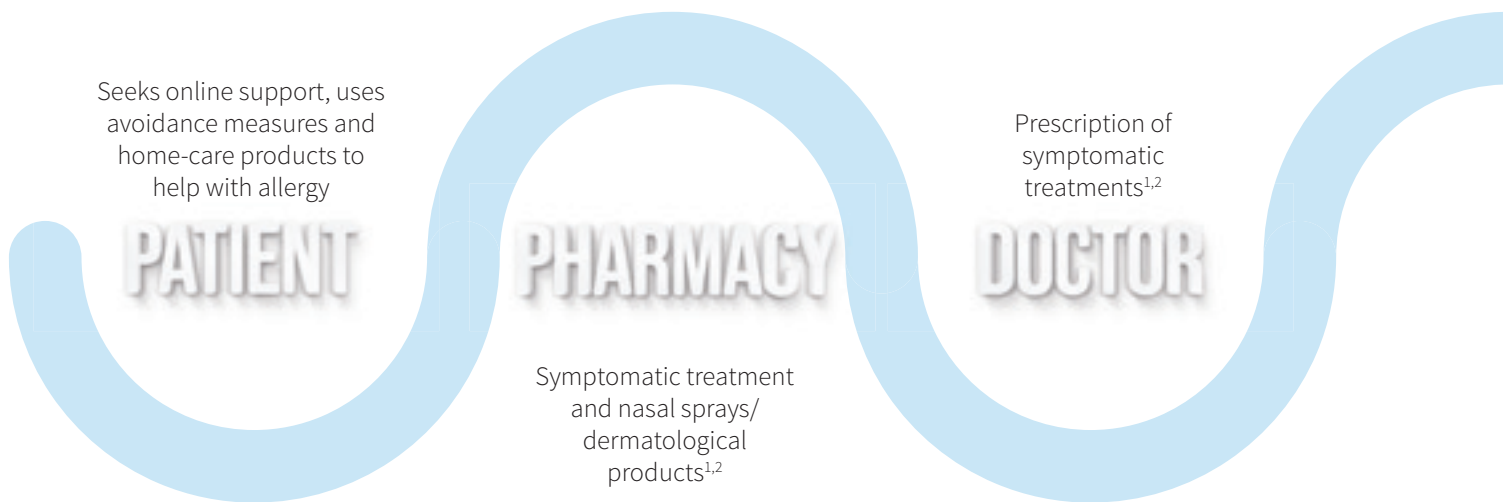
Asthma and allergic rhinitis are estimated to result in more than 100 million lost workdays and missed schooldays every year

## **8 years** *before diagnosis*<sup>4</sup>

Allergic rhinitis is often under-diagnosed. From onset of symptoms, a patient may have waited 8 years to see a specialist

## **15 days** *of symptoms* *per month*<sup>5</sup>

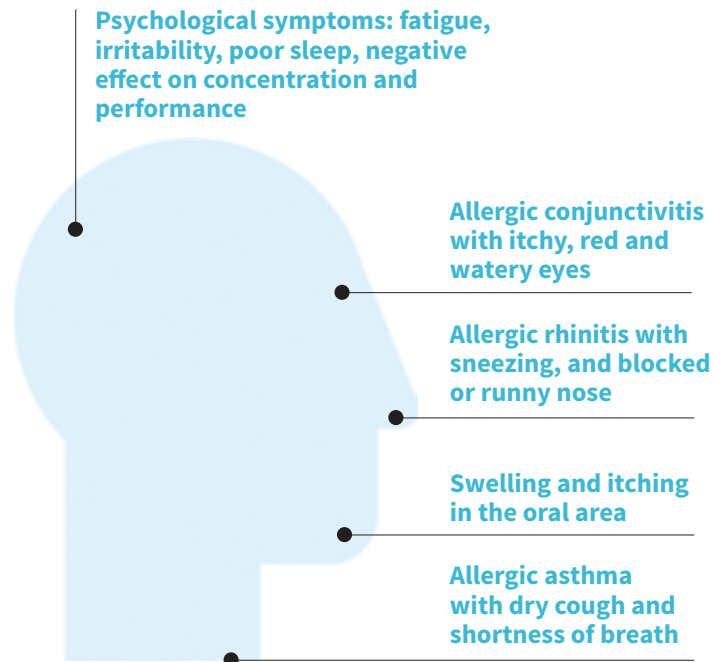
Patients can experience more than 15 days of symptoms per month



 Globally, **over 400 million people** suffer from allergic rhinitis<sup>5</sup>

 Yet AIT is used in **under 10%** of eligible patients<sup>6</sup>





Allergy specialist considers use of SLIT or SCIT<sup>1-3</sup>

**ALLERGY SPECIALIST**

## DIAGNOSIS

The diagnosis of respiratory allergies is based on clinical history, physical examination, allergy tests and specific questions. One of the diagnostic methods used by medical practitioners to identify the triggering allergens in patients is a skin prick test. Via a prick to the skin, the patient is exposed to the suspected allergen and is monitored. After approximately 20 minutes, the skin is observed for any signs of reaction to one or several of the allergens: redness, swelling, itching.

Stallergenes Greer offers a broad portfolio of testing extracts which allow to test for a wide range of allergies. The company also offers testing devices.



## ALLERGEN IMMUNOTHERAPY

Allergen Immunotherapy (AIT) is an allergy treatment designed to treat the underlying cause of the disease as well as have a long-lasting effect on all symptoms. After an accurate diagnosis of the type of allergy and responsible allergens, patients receive a targeted treatment, available in sublingual (tablet or drop) or subcutaneous (injections) form, based on market availability.

Because it treats the root cause, AIT results in immunologic tolerance; i.e. a decrease in the body's reaction to an allergen. Through the repeated administration of specific allergens to patients, the immune system builds resistance by changing the types and proportions of antibodies (immunoglobulins) and proteins (interleukins) it produces when it is exposed to the allergen, thus reducing symptoms when patients are exposed to the allergen in their environment – even after treatment ends. AIT usually requires 3 to 5 years of treatment.

<sup>1</sup> Didier A. et al. optimal dose, efficacy, and safety of once-daily sublingual immunotherapy with a 5-grass pollen tablet for seasonal allergic rhinitis. *Allergy Clin Immunol.* 2007, 120: 1338-1345.

<sup>2</sup> Moingeon P, et al. Immune mechanisms of allergen-specific sublingual immunotherapy. *Allergy* 2006;61:151-65 - <sup>3</sup>The European Academy of Allergy and Clinical Immunology Advocacy Manifesto

<sup>4</sup> Valero A. Et al. *Am J Rhinol Allergy* 2011 - <sup>5</sup> Canonica GW. *Etb al. Allergy* 2007;62 (suppl. 85) - <sup>6</sup> Jutel M, et al. *J Allergy Clin Immunol* 2015;136:556-68

“Our allergies can be treated.”



“ At times, I had trouble breathing and itchy eyes and skin. I kept thinking that it would pass, but the symptoms always came back. When I was in contact with certain foods, my eyes would sting and sometimes there was a sort of prickling in my throat. I realised that the symptoms peaked every time I ate an apple: I had a burning sensation in my mouth, my eyes would become itchy and I felt unwell. One of my sons also had difficulty sleeping at night. We put it off as a simple cold which caused him to cough a bit and kept him up some nights. One day, while listening to a programme about allergies, I put two and two together and wondered if the symptoms we were experiencing could be due to them. At the time, we had just adopted a second cat and I was beginning to have trouble breathing and my eyes would itch whenever I was close to him. After consulting an allergist, we found out that my sons are both allergic to pollen and house dust mites, and that I am allergic to birch and beech pollen as well as to cat dander. But most importantly, we were told that our allergies can be treated.”

## WHAT ARE CROSS-ALLERGIES?

Cross-allergies occur when individuals who are allergic to pollen experience discomfort when eating certain fruits or vegetables. This happens because their immune system does not differentiate between the allergy-provoking substances in pollen and the protein in certain foods.

# NAMED PATIENT PRODUCTS FOR PERSONALISED TREATMENTS

Stallergenes Greer believes that one solution does not fit all patients, therefore we provide patients with treatment options that are tailored to their individual needs. We aim to offer a comprehensive portfolio of allergen immunotherapy treatments globally and allow patients and their physicians to determine the administration method that best meets the disease and lifestyle needs of the patient.

The company's allergen extracts cover a vast array of allergens. They can be produced in standardised form and can also be tailored to the specific needs of patients in terms of composition, concentration and dosage.

These personalised solutions, known as named patient products (NPPS), are prepared according to the allergist's prescription and the patient profile using a stock solution obtained via the extraction of allergens (pollen, house dust mites, mould...). Each NPP has its own biological activity and is prepared for the unique needs of an individual patient.



**At Stallergenes Greer, we offer a range of allergy immunotherapy (AIT) solutions to meet individual patient needs and provide them with long-lasting relief from the burden of allergies.**

## Our solutions for Anne

*Stallergenes Greer's solutions are tailored to each geographic market.*

### Sublingual

Staloral® (oral drops) for the treatment of allergy involving rhinitis, conjunctivitis, rhinoconjunctivitis or asthma (mild to moderate) of a seasonal or perennial nature, in adults and children (from the age of 5).

### Subcutaneous

Alustal®/Phostal® for the treatment of allergic rhinitis, allergic rhinoconjunctivitis or mild to moderate asthma in adults and children.

### Extracts and supplies

Bulk extracts. Testing supplies, source materials and other supplies (sterile diluents, vials).

## Highlight

### Deepening our knowledge

Stallergenes Greer is engaged in a comprehensive programme to gather real world data from diverse countries across the globe to deepen the company's knowledge and understand how real life practices can impact patient outcomes.

Stallergenes Greer's BREATH (Bringing Real-World Evidence to Allergy Treatment for Health) real-world evidence programme studies the benefits of AIT based on the decrease of symptomatic treatment dispensation for allergic rhinitis and asthma for patients with respiratory allergies.

The retrospective analysis is based on eight years' worth of prescription data from 54,006 patients in Germany, and four years' worth of prescription data from 28,574 patients in France.

<sup>1</sup> Ulrich Wahn, Claus Bachert, Joachim Heinrich, Hartmut Richter and Stefan Zielen, AIT has long-term benefits for patients with allergic rhinitis and/or asthma induced by birch family pollen: refinement of real-world study methodology designed to increase robustness of findings, EAACI 2018 - <sup>2</sup> Claus Bachert, Ulrich Wahn, Joachim Heinrich, Hartmut Richter and Stefan Zielen, Allergy immunotherapy provides long-term relief of birch family pollen-associated allergic rhinitis up to 6 years following treatment cessation: a real-world dataset analysis, EAACI 2018 - <sup>3</sup> Stefan Zielen Ulrich Wahn, Claus Bachert, Hartmut Richter and Joachim Heinrich, AIT is associated with reduced risk of asthma medication initiation and evolution up to 6 years after stopping AIT in patients with birch family pollen-induced allergic rhinitis and/or asthma, EAACI 2018



*“I was becoming allergic to more and more things...”*

## POLLEN ALLERGIES

Pollen is one of the most common triggers of seasonal allergies which stretch from spring to autumn. Individuals allergic to pollen experience symptoms such as sneezing, coughing, nasal congestion, nasal discharge, red and itchy eyes, headaches as well as itching of the palate, nose and ears. Pollens can also cause allergic asthma.

The prevalence and intensity of pollen allergy have increased steadily over the past decades and will continue to be a concern as climate change brings more allergen sensitivity<sup>1</sup>.

<sup>1</sup> World Allergy Week 2016 Pollen Allergies – Adapting to a Changing Climate: Climate Change Worsens Allergies Globally

“ My allergies started when I was a teenager. As soon as spring began, I started suffering from hay fever. Sneezing, itchy eyes, fatigue... it was a burden I had to bear daily for several months each year! To treat my seasonal allergic rhinitis and relieve my symptoms, and as prescribed by my doctor, I took symptomatic treatment as soon as the pollen season began. I didn't stop going outdoors and kept on living normally without too many constraints, but I always took my tablets. The medication lessened the symptoms and anyhow I had been told that a person couldn't be treated for multiple allergies. Then suddenly, five years ago, I also started to have stinging sensations in my throat. That was a real catalyst! I realized that I was becoming allergic to more and more things and made an appointment with an allergist. The practitioner carried out tests that revealed that I was allergic to birch, grass and hazel. I began allergen immunotherapy treatment more than three years ago.”

**Stallergenes Greer is a pioneer in the extraction and manufacturing of pollen allergen extracts for use in allergen immunotherapy treatments. The company's wide range of extracts and formulations treat the root cause of allergies.**

**Our solutions for Nicolas**

*Stallergenes Greer's solutions are tailored to each geographic market.*

**Sublingual**

Staloral® (oral drop) for the treatment of allergy involving rhinitis, conjunctivitis, rhinoconjunctivitis or asthma (mild to moderate) of a seasonal or perennial nature, in adults and children (from the age of 5).

Oralair® (tablet) contains a five-grass (sweet vernal, orchard, perennial rye, timothy, Kentucky blue grass) mixture, which represents many of the natural exposure and sensitisation conditions of grass pollen allergic patients.

**Subcutaneous**

Alustal®/Phostal® for the treatment of allergic rhinitis, allergic rhinoconjunctivitis or mild to moderate asthma in adults and children.

**Extracts and supplies**

Bulk extracts. Testing supplies, source materials and other supplies (sterile diluents, vials).

**Highlight**

**Patient services for improved treatment and care**

Stallergenes Greer constantly endeavors to improve patient treatment and care. The company has designed a range of integrated and customised service solutions that ensure a continuum of care for patients and support physicians in their daily practice. In collaboration with patient associations and medical practitioners, we have developed support programs which aim to promote collaborative care, facilitate clinical practice and to improve the patient journey from education to diagnosis to treatment.

In 2019, the company launched a new initiative in France. Ordo Izzy® is a digital service that aims to improve patient compliance and simplify the prescription circuit. With Ordo Izzy®, allergists can upload the prescription to a secure platform, through which patients can learn more about their allergy and obtain information about how to follow their course of treatment. In the US, Stallergenes Greer further enhanced its commitment to patient services and education with the launch of a virtual botanical walk that enables users to see and learn more about common allergens—trees, grasses, and weeds—in their natural environment (forest, pasture, roadside).



**A ROBUST SUPPLY CHAIN**

**To ensure supply continuity, the company cultivates its own pollen. For example, each year in France, on 90 hectares of land, the company grows and harvests close to two tons of sweet vernal, orchard, perennial rye, timothy and Kentucky blue grass.**

**The pollen is harvested by combines specifically designed for pollen, and is treated and purified on site. The allergen extracts are then transferred to the company's Antony (France) manufacturing facility where they are transformed into tablets and sublingual or subcutaneous formulations.**

*“I experienced anaphylactic shock.”*



## **VENOM AND ANAPHYLAXIS**

**It is estimated that 10% of the population will develop an allergic reaction to venom released by a stinging insect<sup>1</sup>. While many people experience a local reaction (itching, redness), insect stings can be life-threatening for others. In allergic individuals, insect stings can lead to anaphylaxis, with symptoms ranging from respiratory difficulties to a loss of consciousness. Anaphylaxis is an emergency.**

“

*I clearly remember the day I found out I had become allergic to wasps. I was working alone in my barn in the country when I was stung. Having never experienced a reaction to wasp stings before, I simply applied some vinegar to the sting to relieve the pain. Shortly afterwards, I started feeling dizzy. I was nauseous and had pins and needles in my feet. I quickly called a neighbor to take me to the hospital. When my neighbour arrived, I was already unconscious. I spent the next 24 hours in intensive care – what I had experienced was anaphylactic shock.*

*It was an extremely traumatic experience, as much for me as for my family. I really thought that I wasn't going to make it.*

*On the doctor's advice, I underwent allergy testing that revealed I was allergic to wasp venom and I started allergy immunotherapy.*

*A year later, I was stung by a wasp again, and experienced anaphylactic shock for a second time. The symptoms were less severe after the second sting, but I still spent four hours in intensive care.*

*Then, eight months after that, I was stung yet again! This time though, I experienced no allergic reaction.”*

## Stallergenes Greer offers a complete set of solutions to treat venom allergies



### VENOM TREATMENTS ARE OF MAJOR THERAPEUTIC INTEREST

According to the EAACI guidelines on allergen immunotherapy for hymenoptera venom allergy, the only treatment that can potentially prevent further systemic sting reactions (defined as shock and loss of consciousness, or even cardiac or respiratory arrest after a sting) is venom immunotherapy. Quality of life is impaired in many patients who only carry an adrenaline auto-injector and do not receive venom immunotherapy. It is the only treatment to prevent further systemic sting reactions in children and adults.

The systematic review suggested that venom immunotherapy is effective in reducing subsequent systemic sting reactions in both children and adults and that this treatment modality can have a significant beneficial impact on disease-specific quality of life.

An extensive network of collectors helps ensure the supply of venoms from three different types of hymenoptera venoms. Our venoms are formulated to contain clinically relevant allergens, then freeze-dried to help ensure stability, and labelled in protein content, while our experts analyse the product identity, purity and protein content.

#### Our solutions for Yves

*Stallergenes Greer's solutions are tailored to each geographic market.*

Among the venoms offered by the company are honey bee venom (*apis mellifera*), vespula wasp venom (mix of different species), polistes wasp venom (mix of different species).

#### Subcutaneous

Alyostal® and Albey® for the treatment of allergy to wasp, honeybee and yellow jacket venom.

#### Extracts and supplies

Testing supplies, source materials and other supplies (sterile diluents, vials).

### Highlight

#### Ensuring the treatment continuum

Pending the full resumption of the production of the company's subcutaneous portfolio in the Europe and International region, Stallergenes Greer has been working closely with health authorities to find alternative solutions to ensure that patients with venom allergies continue their treatment.

Imported venoms were made available for use in hospitals and, in 2019, French health authorities authorised hospitals to distribute 120 µg vespula and apis treatments to patients. Thanks to this decision, which facilitates treatment management, patients can now continue their treatment with their practitioner.

<sup>1</sup> <https://www.uclahealth.org/allergy/venom-hypersensitivity>. - <sup>2</sup> EAACI guidelines, on allergen immunotherapy: Hymenoptera venom allergy G. J. Sturm E.-M. Varga G. Roberts H. Mosbech M. B. Bilò C. A. Akdis et al. first published 27 July 2017 - <sup>3</sup> Muller U, Helbling A, Berchtold E. Immunotherapy with honeybee venom and yellow jacket venom is different regarding efficacy and safety. J Allergy Clin Immunol. 1992;89:529-535. - <sup>4</sup> Rueff F, Vos B, Elberink JO, et al. Predictors of clinical effectiveness of Hymenoptera venom immunotherapy. Clin Exp Allergy. 2014;44:736-746.

“

*It all started when Lea was about two-and-a-half. She constantly had a cold, had trouble going to sleep and would wake up coughing at night. We took her to a paediatrician who prescribed a course of treatment for rhinopharyngitis. Even though Lea took cough medicine, the symptoms didn't go away. She was still not well. We couldn't understand why the treatment wasn't working. One night, she started struggling to breathe. We rushed her to the hospital, and in accident and emergency, we were told that Lea was having her first asthma attack. It was very scary and unsettling. We were referred to a pulmonologist who carried out prick tests and found that Lea was allergic to house dust mites.*

*“From asthma attacks to sneezing.”*



## **WHAT ARE HOUSE DUST MITES?**

**House dust mites, which are part of the spider family, measure between 0.2-0.4mm and are present in all households. They tend to be more numerous in bedding, upholstery, carpets, etc. House dust mites are one of the major causes of allergic rhinitis with symptoms such as congestion, sneezing, a dry cough or bronchitis which can lead to asthma. House dust mite allergies are perennial.**

*At under 5 years old, Lea was too young to start immunotherapy treatment. But it was such a relief when that diagnosis was made!*

*She was prescribed symptomatic treatment for allergies and bronchodilators for asthma. Despite the treatment, she had a few more asthma attacks which ended up in accident and emergency because the medication wasn't always effective. It was hard for Lea. She was very tired, slept badly, was short of breath... Those around her couldn't understand why she couldn't stop sneezing or why her nose was always running. She also missed quite a lot of school.*

*We started immunotherapy treatment two years ago. Her attacks are now much less frequent, although she continues to hide her sneezing because she's embarrassed when other people stare at her.”*



## House dust mite allergies: a major cause of allergic rhinitis and asthma

House dust mites (HDM) are a major cause of allergic rhinitis and asthma. Allergic rhinitis currently affects more than 500 million people worldwide. Patients with allergic rhinitis are three times more likely to develop asthma than other people, and the risk for patients with house dust mite-induced allergic rhinitis is about six times higher than those whose allergic rhinitis is caused by grass pollen<sup>1,2,3,4</sup>.

### Our solutions for Lea

*Stallergenes Greer's solutions are tailored to each geographic market.*

### Sublingual

Staloral® (oral drop) for the treatment of allergy involving rhinitis, conjunctivitis, rhinoconjunctivitis or asthma (mild to moderate) of a seasonal or perennial nature, in adults and children (from the age of 5).

Actair® (tablet) for the treatment of house dust mite allergies involving rhinitis with or without conjunctivitis (itchy and watery eyes) in adults and adolescents over 12 years (and under 12 in certain territories).

### Extracts and supplies

Bulk extracts. Testing supplies, source materials and other supplies (sterile diluents, vials).

### Highlight

#### The largest phase III clinical trial on house dust mite allergies

House dust mite-induced allergic rhinitis is a highly prevalent chronic illness which often has a negative impact on overall health, sleep, work and leisure activities. In 2019, Stallergenes Greer released new results regarding its global clinical trial on the company's tablet candidate to treat house dust mite-induced allergic rhinitis based on the level of reduction of allergic rhinitis symptoms and symptomatic medication use (vs. placebo). This phase III clinical trial was conducted in 13 countries; it was based on an approximately 12-month course of sublingual immunotherapy with a 300 index of reactivity tablet formulation of a house dust mite extract.

<sup>1</sup> Bousquet J, Khaltaev N, Cruz A, et al. Allergic Rhinitis and its Impact on Asthma (ARIA) 2008 update (in collaboration with the World Health Organization, GA(2)LEN and AllerGen). *Allergy*. 2008 Apr; 63 Suppl 86:8-160. - Brożek JL, Bousquet J, Agache I, et al. Allergic Rhinitis and its Impact on Asthma (ARIA) Guidelines – 2016 Revision, *Journal of Allergy and Clinical Immunology* (2017), doi: 10.1016/j.jaci.2017.03.050. - <sup>2</sup> Linneberg A., Henrik Nielsen N., Frolund L, et al. The link between allergic rhinitis and allergic asthma: a prospective population-based study. *The Copenhagen Allergy Study*. *Allergy*. 2002 Nov; 57(11):1048-1052. - <sup>3</sup> Calderon M. A., Linneberg A., Kleine-Tebbe J., De Blay F., Hernandez Fernandez de Rojas D., Virchow J. C., Demoly P. Respiratory allergy caused by house dust mites: What do we really know? *J Allergy Clin Immunol*. 2015 Jul;136(1):38-48.



## CULTURING HOUSE DUST MITES: QUALITY AND SECURITY FIRST

**In order to ensure the highest quality and purity of its house dust mite (HDM) extracts in France, Stallergenes Greer developed Stalmite APF™, a nutritional preparation for acarids that contains no animal or human material.**

**These animal protein free (APF) preparations aim to prevent any risk of transmission of conventional (e.g. virus) or unconventional (e.g. prions) pathogenic transmissible agents. With Stalmite™, the company's source materials obtained using these nutritional preparations, as well as the HDM extracts manufactured from these source materials, are free of pathogenic transmissible agents.**

**Additionally as part of its ongoing investments in the company's production facilities, in 2019 Stallergenes Greer opened a new building in Amilly (France) dedicated to the securing of HDM strains. Securing the strains, which guarantees controlled growth of each strain, is essential to ensure high and consistent quality of the raw material.**



Eko is a male Sumatran tiger born at Oklahoma City Zoo in 2017. When he was one, his caretakers and staff noticed that, now and then, Eko had scratches on his face. A veterinary dermatologist discovered that Eko was experiencing an allergic reaction. He was treated with symptomatic medication until the treatment became more and more frequent and Eko was seen rubbing his face. The veterinary staff at the zoo decided that it was time for allergy testing and contacted Dr. Alicia Webb Milum DVM DACVD, a board-certified veterinary dermatologist in Oklahoma City.

## ANIMALS HAVE ALLERGIES, TOO

Like humans, animals can experience allergies. Itching of the skin, also called pruritus, is the most common symptom of an allergic reaction in animals. The itching can cause self-inflicted wounds and skin infection as well as loss of fur. Some animals also experience respiratory difficulties.

### Alicia & Eko

*“Just like people, animals can have allergic reactions.”*

*“Just like people, animals can have allergic reactions when their immune system starts to recognise allergens as dangerous. These reactions can cause a variety of symptoms ranging from skin irritation, to respiratory and digestive disorders and can make animals miserable due to the discomfort and distress.*

*I work a lot with cats, dogs and horses but this was my first time examining a tiger. When I was called to the zoo, Eko had been experiencing allergic reactions for several months. His pruritus was quite severe and he had caused himself multiple excoriations to the face and shoulders because of the itching.*

*Just like allergy diagnosis in humans—except that Eko was under general anaesthesia—we performed intradermal allergy testing to determine which allergens he was reacting to. The results were positive for local allergens such as red cedar and environmental mould.*

*Eko started desensitisation in April 2019 to provide better control and provide comfort for his condition. The allergens are administered to him subcutaneously at the zoo and he has been trained to come up to the fence to receive his injection.”*

## Trusted by veterinary dermatologists across the US since 1983, Stallergenes Greer was the first allergen immunotherapy company to provide high-quality veterinary specific products and personalised services.

### Our solutions for Eko

#### A comprehensive range of allergen extracts and supplies

We are committed to ensuring that veterinary dermatologists have access to a broad range of allergen extracts and supplies to support the needs of their clients. Stallergenes Greer produces extracts of different strengths and formulations specifically for veterinary specialists.

#### Named patient products for pets

**GREER® Extracts™** extracts are USDA approved for both subcutaneous and sublingual administration. Stallergenes Greer offers a wide selection of extracts and formulations.

**GREER® Sterile Diluents™** offer a range of various sizes, formulations, and fill volumes available.

**GREER® Sterile Empty Vials™** comprise a range of industry-relevant sizes for extract mixing and storage.

### Allergies in pets

Pets can suffer from the same ailments as humans, including allergies. Cats, dogs and horses can have allergic reactions to a variety of environmental substances or allergens. If a pet has allergies, it means it has a hypersensitivity to a substance that would otherwise be harmless.

Most allergies in pets fall into three categories:

- **atopic dermatitis** (skin irritation): whether seasonal or year-round, atopic dermatitis can be caused by pollen, mould, dander, dust, flea bites, or other irritants in the environment<sup>1</sup>;
- **respiratory allergies**: animals can develop a sensitivity to particles in the air. Both cats and horses are particularly susceptible to this type of allergy<sup>2</sup>;
- **food allergies**: meat, dairy and eggs are common causes of food allergies in pets. Food allergy is sometimes the source of allergy symptoms in pets younger than one year of age<sup>3</sup>.



### A CLOSE WORKING RELATIONSHIP BETWEEN PET OWNERS AND VETERINARIANS

**Allergies in pets not only impact the lives of the animals themselves but also the lives of their owners who are concerned about their pet, can experience fatigue due to loss of sleep and a feeling of guilt because they don't know how to help. It takes a close working relationship between pet owners and their veterinarian to determine what a pet is allergic to. Owners must first identify the symptoms in their pet (skin irritation, respiratory conditions, paw licking and chewing, rashes, etc.) before evaluation by a veterinarian who will examine the pet, learn about the identified symptoms, and study the pet's medical history. It can take multiple visits to properly diagnose a pet.**

<sup>1</sup> Baker Institute for Animal Health. What is an allergy? [http://www.vet.cornell.edu/Baker/News/documents/allergies\\_poster-v2.3.6-print.pdf](http://www.vet.cornell.edu/Baker/News/documents/allergies_poster-v2.3.6-print.pdf) - <sup>2</sup> Horses and Horse Information. Horse allergies: Symptoms, common causes & treatments of an equine allergy. <http://www.horses-and-horse-information.com/articles/0395allergy.shtml> - <sup>3</sup> Verlinden A, Hesta M, Millet S, Janssens GP. Food allergy in dogs and cats: a review. *Crit Rev Food Sci Nutr.* 2006;46(3):259-273



*year* in review



# Remaining focused on a balanced strategy in **the Americas**

*2019 continued a trend of growth for Stallergenes Greer Americas. The US was able to maintain its market leadership position in the legacy bulk allergen business while Canada strengthened its position across the entire AIT landscape.*

The Americas business continued to face intense competition and a continually evolving allergy treatment landscape. Patients have a variety of options to help meet their allergy needs, both from other AIT providers as well as low-cost, over-the-counter symptomatic treatments. Stallergenes Greer Americas remained committed to its core values of superior customer service, a comprehensive portfolio of standardised and non-standardised allergen extracts and a legacy of commitment to the specialist community.

Throughout 2019, Stallergenes Greer Americas remained focused on key strategic pillars: strengthening our core operational capabilities, investing in our people and culture, and positioning the business for long-term growth.

## **Strengthening our core operational capabilities**

Having the right product available for every patient in need is critical to ensuring we can meet our customer demand. However, we faced supply challenges and so made it a priority to have the right equipment, technology and systems in place to manage that demand. In 2019, we executed on the second of a three-year strategy to update, scale up and improve the flexibility of operations at our primary manufacturing

facility in Lenoir, North Carolina. Advancements included introducing modern equipment to increase efficiencies and software systems to increase visibility into our processes, as well as expanding our facility to increase production output.

## **Investing in our people and culture**

In 2019, Stallergenes Greer Americas focused on ensuring we had the right people in the right positions to meet our business needs and prepare for the future. That included investing in project management and executive training programmes, and creating dedicated project teams to increase our focus on information sharing. These activities improved our ability to communicate across departments and to collaborate and learn.

In addition, we reinforced our culture of commitment to quality and patients. We achieved this through an educational series that helped employees understand each other's roles, an internal social media platform with programming dedicated to increasing our connection with patients, and conversations with physicians who shared their experiences and the importance of high-quality AIT treatment options.



## EXPANDING AIT ACCESS IN CANADA

In October 2017, Stallergenes Greer made a strategic investment in the Canadian market with the acquisition of a distributor partner, Medic Savoure. Previously, Oralair® was the only product sold directly to physicians in the Canadian market by Stallergenes Greer. The Medic Savoure acquisition allowed us to also offer SCIT named patient products and bulk allergens to the allergy specialist community. A comprehensive portfolio, Stallergenes Greer's high-quality standards and a commitment to a strategic vision have resulted in success for the company in Canada. In 2019, the team gained customers and market share, and was able to leverage the full Americas network to capitalise on market opportunities.

Stallergenes Greer continues to invest in growing the Canadian market and will look to introduce STAGR320, the house dust mite-induced allergic rhinitis tablet, in 2020 as well as continue to gain share in all segments of the portfolio.

## Positioning the business for long-term growth

The investments in our existing business were complemented by initiatives designed to ensure the long-term success of the Americas business. To achieve this, we focused on market adjacencies where we could offer a unique value by leveraging our core capabilities as well as relationships across our various customer segments. We advanced target initiatives by gathering market intelligence to understand the customer need, evaluating the value that Stallergenes Greer can offer to the target audience and analysing how each opportunity offers incremental growth without compromising our disciplined approach to financial management.

Stallergenes Greer Americas remained focused in 2019 on its strategic priorities and was able to deliver on its goals while facing aggressive competition and a changing marketplace.

# 24 hours

the shipment time  
from the Lenoir (NC) facility.

# Continued growth and leading positions in the **French** AIT market

*Stallergenes Greer's French operations experienced a dynamic year with continued growth of the business, a strong increase in the patient base and investments in manufacturing facilities, as part of the Group's ongoing investments in technical operations.*

## A dynamic year

2019 marked the completion of the recovery of Stallergenes Greer's French operations with growth across all product segments in an increasingly competitive environment.

Stallergenes Greer continued to grow its patient base throughout the year and achieved market leadership in the total allergen immunotherapy (AIT) market in terms of value, new patients within the allergy specialists space and new patients in the grass allergy segment.

Staloral®, our leading AIT brand, is now the leading AIT product in France (in terms of revenues and new patients) while Oralair® steadily gained market share throughout the year.

In line with the company's strategy of providing a wide range of references to enable allergists to prescribe the most personalised therapeutic options to their patients, Stallergenes Greer continued to expand its product portfolio:

- 9 new Staloral® references launched in 2019
- 7 skin prick tests (special import license) approved by the French National Agency for Medicines and Health (ANSM)
- 6 venom references (special import license) approved by the ANSM



## Serving patients: our priority

Stallergenes Greer is committed to offering patients and the medical community innovative tools to constantly

improve patient treatment and care. The company works in the field with specialist doctors and allergists to develop programmes that make daily life for people with allergies easier.

In 2019, the company launched Ordo Izzy®, a new digital service that aims to improve patient compliance and simplify the prescription process. With Ordo Izzy®, the prescription process becomes more intuitive and easier to understand for AIT patients.





### Focusing on innovation

As part of our commitment to advancing AIT, Stallergenes Greer France held a two-day workshop (AVENIR) focusing on innovation. The event was attended by more than 40 allergists. The company presented its Antony facilities, which included an in-depth tour of its manufacturing site, to the participants. The second day was dedicated to a creative thinking workshop which brought together allergists, patients and pharmaceutical and engineering students to reflect on solutions for the challenges facing allergology.

**99%**  
the percentage  
of treatments  
delivered on time  
to doctors.



### PRACTIS: EVALUATING THE BENEFITS OF NAMED PATIENT PRODUCTS

In December 2019, the company finalised the recruitment of 1,608 patients for its Practis study. This real world pharmacoepidemiology study aims to assess the benefits of SLIT for patients with allergic rhinitis and better define the clinical relevance of named patient products based on patient related outcomes.

# Expanding our business and strengthening our portfolio in the **Europe** and **International region**

*In 2019, Stallergenes Greer recorded solid growth across the Europe and International region. This performance was achieved in an increasingly competitive environment and reflects the company's strength in the sublingual allergy immunotherapy market.*

## **Expanding our business**

Stallergenes Greer posted top line growth across all subregions in the European and International markets demonstrating our ambition of putting patients at the heart of what we do.

Performance in the region was primarily driven by the company's core brands Staloral®, Oralair® and Actair® in the countries in which they are marketed. These three brands showed robust growth, and in Germany—the largest AIT market in the world—both Staloral® and Oralair® gained market share in their respective markets.

These sustained performances were fuelled by Stallergenes Greer's BREATH real-world evidence programme, which is designed to understand the real-world benefits of AIT outside of a clinical trial setting. These studies were retrospective longitudinal analyses of French and German prescription databases and further substantiated the long-term benefits of AIT to significantly reduce the need for allergic rhinitis and asthma medication in patients suffering from grass pollen- and birch tree pollen-induced allergies.

In 2019, Stallergenes Greer maintained leadership positions in the sublingual immunotherapy (SLIT) market in Australia, Belgium, the Czech Republic, Poland, Russia, the Middle East, North Africa and

Eastern Europe.

In Italy, Stallergenes Greer strengthened its presence thanks to the eligibility for registration of a wide range of the company's products and references.

The region gained momentum throughout the year with the resumption of its business in Greece and Kuwait and the launch of its commercial activities in Hong Kong.

## **Scientific engagement**

At Stallergenes Greer, we aim to ensure that patients have access to the treatment method that best meets their disease and lifestyle needs. Our comprehensive portfolio of AIT treatment options helps patients and doctors determine which methods are best adapted to each patient's individual needs.

Stallergenes Greer continued to engage with the scientific community via various medical education activities across the region: the company held a symposium at the EAACI congress, organised several forums dedicated to AIT in Russia, the Czech Republic,

**24%**  
SLIT portfolio growth  
versus 2018.



## WHY WAIT?

The public health burden of chronic allergic disease is increasing<sup>1,2</sup> and it is estimated that by 2025, half of the entire European population will suffer from an allergy<sup>3</sup>.

AIT has been shown to provide long-term protection and benefits for people with allergies such as house dust mites and pollen<sup>4,5</sup>. At Stallergenes Greer, we have developed AIT solutions to meet individual patient needs and provide long-lasting relief from the burden of allergies, allowing patients to take back control and live their lives to the fullest.

Slovakia and Australia, and launched an AIT school in Poland.

## Commercial excellence

Stallergenes Greer is committed to reinforcing its continuous improvement culture. The Europe and International region focused on achieving commercial excellence via the upgrading of local scientific knowledge and sales competencies. The company also rolled out a series of training programmes for sales managers and implemented a customer management framework as well as e-detailing.

In the United Arab Emirates, Australia and New Zealand, the company upgraded its business models and started working with new distributors to further enhance customer service. Shionogi, Stallergenes Greer's partner in Japan, also started to implement a new commercial model to further support the development of AIT treatments.

As part of Stallergenes Greer's commitment to ensuring customer satisfaction, the company carried out two major customer satisfaction surveys across the Europe and International region in 2019. These surveys focused on improvement in terms of product delivery and overall supply chain and aimed to further enhance the company's customer-centric approach.

## Developing our people

Because our people are the driving force of our ongoing success, the Europe and International region pursued its commitment to people development. A series of programmes aimed at reinforcing people management and developing talents across the region were rolled out throughout the year. A talent review was also carried out to support the company's people development programmes and training.

<sup>1</sup> Mi. Asher et al. Lancet 2006;368 733-43. <sup>2</sup> JL Brozk et al. Allergy Clin Immunol 2017;140 950-8. <sup>3</sup> The European Academy of Allergy and Clinical Immunology Advocacy Manifesto. <sup>4</sup> R. Pawankar et al. 5Eds: White Book on Allergy 2013 Update. <sup>5</sup> J Bousquet et al. Allergy 2008;63 (suppl 86):8-160





**who** we are

# Five manufacturing sites

## FRANCE

Amilly, Antony

## US

Lenoir (NC)

San Diego (CA)

## CANADA

Dutton (ON)

### San Diego, California, US

Production of bulk allergens and custom-order products

### Dutton, Ontario, Canada

Preparation of named-patient subcutaneous immunotherapy

### Lenoir, North Carolina, US

Production and processing of source materials, bulk allergens and supplies for human and veterinary use

1,139

employees in 19 countries

19

countries with a direct presence

40

countries with a distribution network



### **Antony, France**

Production of SLIT, SCIT and tablets covering all of the company's allergen extracts and venoms

### **Amilly, France**

Production of raw materials (pollen) and securing of house dust mite strains

6 days  
average product lead time compared to industry average of 2 to 3 weeks

Stallergenes Greer is a fully integrated global biopharmaceutical company specialising in the diagnosis and treatment of allergies through the development and commercialisation of allergen immunotherapy (AIT) products and services.

Stallergenes Greer has an extensive global footprint, and the largest allergen and finished AIT product manufacturing capacity globally. The company's extensive product portfolio, available in multiple formulations (subcutaneous, sublingual drops and tablets), offers patients innovative solutions to enable people with allergies to live normal lives.

*Stallergenes Greer is a private company owned by interests associated with the Bertarelli family, which are advised by the Waypoint Capital Group.*

*Waypoint is a business enterprise for the managers and advisers of the funds and investments associated with the Bertarelli family. The group is active in two areas: life sciences and asset management. Chaired by Ernesto Bertarelli, Waypoint is headquartered in Geneva, with offices in London, Jersey, Boston and Luxembourg.*

## executive committee

*Stallergenes Greer's Executive Committee, which is chaired by the Chief Executive Officer, is comprised of senior leaders from across the company which represent a breadth and depth of knowledge and experience to lead our business.*

### **Michele Antonelli**

*Chief Executive Officer*

Michele Antonelli has been CEO of Stallergenes Greer since January 2019. He joined the company in 2015 as Head of Europe and International.

Previously, Michele Antonelli held roles of various responsibility and scope at UCB, most recently serving as EVP and Head of Immunology Europe, overseeing the region's commercial, medical, and market access activities. Prior to UCB, Michele Antonelli spent 16 years at Merck Serono, ultimately serving as SVP and Global Head of Biotech Manufacturing and Process Development.

Michele Antonelli is Swiss and Italian.

### **Valérie Benhamou**

*General Counsel*

Valérie Benhamou joined Stallergenes Greer in 2017 as Associate General Counsel Europe and International. Valérie Benhamou joined the company from Abbott, where she was Senior Legal Counsel for France, Benelux and Africa. Prior to Abbott, she served as Senior counsel for Bristol-Myers Squibb where she provided legal support to all divisions in France and to EMEA commercial operations, and practiced at law firms where she focused on healthcare matters. She has been a member of the Paris Bar since 1999.

Valérie Benhamou is French.

### **Emily Duff**

*Global Head Strategic Programme Management*

Emily Duff joined Stallergenes Greer in 2015 as Director, Office of the CEO. Prior to joining Stallergenes Greer, Emily Duff was a member of the Finance team at Third Rock Ventures where she focused on investor relations, operations and financial planning and analysis. Previously, Emily Duff was a healthcare consultant in PwC's Advisory practice, where she led teams on strategic planning and transformation projects. Emily Duff is American.

### **Amer Jaber**

*Executive Vice President Operations, Europe*

Amer Jaber joined Stallergenes Greer in 2018. Prior to joining Stallergenes Greer, Amer Jaber was Head of Biotechnology Operations at R-Pharm responsible for developing the long-term strategy and execution of technical operations for CMC Development and Manufacturing. Amer Jaber was previously Head of Global Biotech Development and Manufacturing for Technical Operations and Managing Director of UCB Switzerland. Before joining UCB, he held roles of increasing responsibility at Mondobiotec, Serono International and Rivopharm.

Amer Jaber is Lebanese and Swiss.

### **Nicola Lamacchia**

*Chief Financial Officer*

Nicola Lamacchia joined Stallergenes Greer in March 2017 as Head of Finance for Europe and International. Prior to joining Stallergenes Greer, he was Head of Finance for International at Shire, leading the creation of a new financial framework and supporting the company's growth and expansion.

Prior to Shire, Nicola Lamacchia held several country, regional and division-level financial roles at Merck Serono.

Nicola Lamacchia is Swiss and Italian.

### **Tibor Nemes**

*Executive Vice President, Head of Americas*

Tibor Nemes joined Stallergenes Greer in 2016 and served as Global Head of Technical Operations before taking over as Head of the Americas in May 2018.

Tibor Nemes previously spent eight years at Novartis where he held roles of increasing responsibility, most recently as the Global Operations Head, Tech Ops Manufacturing, Strategy and BDM&A. Prior to Novartis, Tibor Nemes held Engineering and Operations leadership roles at Novavax, Inc., Bristol-Myers Squibb Company, Elan Pharmaceuticals and Hypex, Inc.

Tibor Nemes is American.

### **Dominique Pezziardi**

*General Manager, France*

Dominique Pezziardi joined Stallergenes Greer in 2012 as Head of Strategy and Business Operations. Prior to joining Stallergenes Greer, Dominique Pezziardi gained his expertise in several therapeutic fields including fertility, growth hormones, diabetes, rare diseases, cardiology and medical devices in the pharmaceutical sector at Ciba, Sanofi and Merck Serono. He successfully managed global product launches, life cycle development plans, mature franchise relaunches, alliances with strategic partners, and more recently, corporate strategy development.

Dominique Pezziardi is French.

### **Petr Tor**

*Head of Commercial, Europe and International*

Petr Tor joined Stallergenes Greer in 2010 as General Manager of the Czech and Slovak subsidiary and since 2014 he has held commercial responsibilities for various regions of increasing scope and complexity in Europe, the Middle East and Africa.

Petr Tor gained his expertise in several therapeutic fields including asthma, cardiology, diabetes, glaucoma, antibiotics and HIV at Merck & Co., where he spent 16 years.

Petr Tor is Czech.





## our science

*Stallergenes Greer is committed to promoting progress in allergy treatments and developing therapeutic solutions that meet the growing needs of allergy patients worldwide.*



### BREATH

Stallergenes Greer's BREATH real-world evidence programme was launched in 2017. It is designed to understand the real-world benefits of AIT outside a clinical setting. Positive results were released in 2019 regarding SLIT tablets in respiratory disease and real-world evidence has shown that patients with allergic rhinitis achieve control of their respiratory disease with fewer allergic rhinitis prescriptions and less need for symptomatic medication<sup>1,2</sup>.

<sup>1</sup> P. Devillier et al. *Allergy* 2018; doi: 10.1111/all.13705 - <sup>2</sup> S. Zielen et al. *Allergy* 2019; 73:165-77

### Our therapeutic approach

Allergen immunotherapy (AIT) is the only therapeutic class capable of modifying disease progression and potentially preventing the onset of the disease. AIT consists in administering allergens by sublingual or subcutaneous route, thus allowing the reorientation of the immune responses of patients towards allergen-specific tolerance induction.

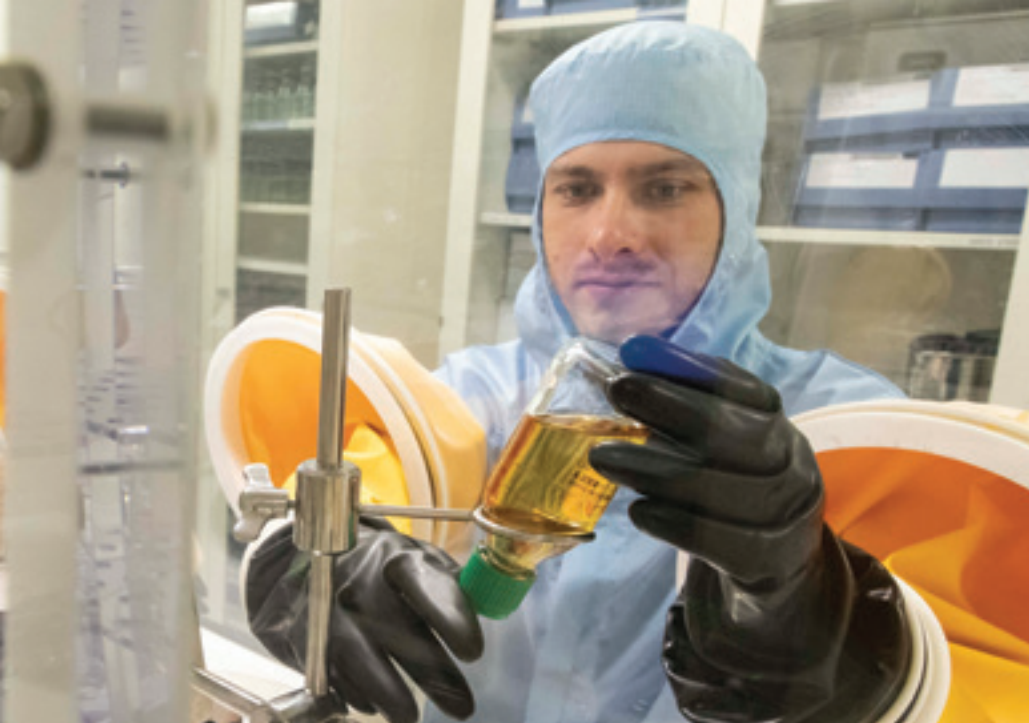
### A high level of scientific expertise

Each allergen source contains several molecules which are recognised by the immune system as allergens and will trigger an allergic reaction. Allergens are large, complex molecules composed of a multitude of atoms. Working with large molecules requires a high level of scientific expertise and state-of-the-art technologies to characterise and quantify allergens. Specific processes are required due to both the complexity of the molecules and their biological nature.

### A focused approach to innovation

At Stallergenes Greer, we have been working with allergens for more than 100 years. We aim to develop treatments that address the unmet needs of a growing number of allergy patients around the world. We focus our efforts on allergen characterisation as well as on optimal approaches to deliver allergens to the immune system.

Our long-standing work on the mechanisms of action of AIT has enabled us to identify candidate biomarkers which correlate with clinical outcomes observed in double-blind placebo-controlled AIT trials. These candidates could be used either as predictive or follow-up biomarkers in line with our commitment to explore further allergy diagnosis and treatment personalisation.



### A consistent development path

From diagnosis to treatment, Stallergenes Greer's portfolio is designed to ensure the consistency of our products, in terms of:

- reactivity index
- source of raw materials
- high quality standards

Stallergenes Greer's marketed products are tested through clinical trials to evaluate the short- and long-term efficacy and tolerability of treatments. In the US, our allergens are FDA approved.

### Clinical development

Stallergenes Greer is committed to improving health and quality of life for patients. Clinical trials are designed to provide evidence that a treatment is both safe and effective and produce high-quality data for decision-making.

**Staloral®:** 30 double-blind, placebo-controlled studies; 3,200 patients enrolled in total. The studies aimed to evaluate the tolerability and efficacy of Staloral® for the treatment of allergic rhinitis and asthma in the short- and long-term, as well as after stopping the treatment, in children and adults.

**Oralair®:** full clinical development; more than 2,500 patients enrolled. The studies evaluated the tolerability and efficacy of Oralair® after one month, in the short- and long-term and after the treatment has ended.

**Actair®:** full clinical development; more than 3,500 patients enrolled. The studies evaluated the tolerability and efficacy of Actair® after four months, in the short-term as well as one year after the treatment has ended.

Further evidence of Stallergenes Greer AIT treatments beyond clinical trials is demonstrated through real-world studies. This approach is increasingly being used by Stallergenes Greer. Since it is based on large populations of patients, it provides useful data to optimise AIT prescription and clinical performance.

## THE LARGEST PHASE III STUDY FOR HOUSE DUST MITE-INDUCED ALLERGIC RHINITIS

House dust mite (HDM)-induced allergic rhinitis is a highly prevalent chronic illness which often has a negative impact on overall health, sleep, work and leisure activities.

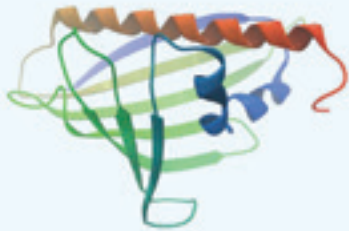
Stallergenes Greer's trial regarding the efficacy and safety of its sublingual allergy immunotherapy tablet STAGR320 is the largest phase III study to evaluate the treatment of HDM-induced allergic rhinitis in adult and adolescent patients, recruiting more than 1,600 patients from 231 participating investigative sites in 13 countries.

The double-blind placebo-controlled study reached primary and secondary endpoints, including quality of life, and confirmed the favourable safety profile of STAGR320. These results illustrate Stallergenes Greer's determination to develop a large portfolio of treatment options, including sublingual tablet treatments.

Coordinating investigators were Pascal Demoly, Professor at the Department of Pulmonology and Addiction Heart & Lung Centre at the University Hospital of Montpellier, France, President of the College of Allergology Teachers and President of the French Allergy Federation, and Thomas Casale, MD, Professor of Medicine and Paediatrics at the University of South Florida.

# manufacturing

*Stallergenes Greer is committed to bringing allergen immunotherapy (AIT) to the highest quality standards and to delivering state-of-the-art AIT products to patients. As biologic drugs, the manufacture of allergen products is inherently challenging and complex<sup>1</sup>.*



## WHAT ARE BIOLOGIC DRUGS?

Biologic drugs contain one or more active substances that are produced in a living system such as micro-organisms and plant or animal cells<sup>2</sup>. Biologics consist of large and complex molecules; their characterisation is challenging and involves highly advanced technologies.

### Manufacturing biologics: quality, safety and controls

Like other biologics, Stallergenes Greer's allergens are derived from living systems.

Controlling the quality of allergen products is of prime importance to guarantee consistent optimal clinical benefits<sup>3</sup>. To ensure batch-to-batch consistency, quality and purity of its products, Stallergenes Greer has established stringent controls regarding the source and nature of the starting materials, and applies a large number of process controls to ensure that target quality attributes are delivered.

Each batch of product is the combination of the product, documentation and controls.

### AIT starts with a patient-centric approach

At Stallergenes Greer, our product design is based on a clear understanding of patient needs:

- patient exposure to a specific allergen
- patient sensitisation
- allergen clinical relevance.

Stallergenes Greer covers the value chain from allergen extraction to the production of unique treatments adapted to the individual needs of each patient, in sublingual and subcutaneous forms.

Our manufacturing facilities in France produce individual treatments that are delivered directly to patients. In the US, our bulk allergen extracts are delivered to medical practitioners who prepare the individual treatment for their patients.

### Consistent biological potency through process standardisation

Stallergenes Greer ensures the consistent biological potency of its tablets, sublingual and subcutaneous products through standardised and validated quantitative analytical methods.

<sup>1</sup> Declerk PJ. Biologicals and biosimilars: a review of the science and its implications. *GaBI J* 2012;1:13-6.

<sup>2</sup> Biological product definitions [www.fda.gov](http://www.fda.gov)

<sup>3</sup> Zimmer J, et al. Standardization and regulation of allergen products in the European Union. *Curr Allergy Asthma Proc* 2016;16(3):21.



### Driving operational excellence

We seek excellence in every part of our organisation. We aim for a lean operating model without compromising on quality. We draw on improved and sustainable production processes and procedures to consistently deliver the highest quality products to patients.

Our approach to manufacturing the highest quality products relies on continuous learning and improvements to ensure we are continually modernising our quality controls and improving our processes through investments in our facilities. Over the past few years, we have made continuous improvements to our manufacturing capabilities both in France and the US, in order to put in place a manufacturing and quality system that meets the highest product quality standards.

These improvements were supported by programmes designed to strengthen and reinforce our culture of quality and continuous improvement.

In 2019, Stallergenes Greer continued to improve and refine its processes and was able to reduce the average time to dispatch orders to under 6 days from its Antony (France) facility and to 24 hours from its Lenoir (North Carolina, US) facility. We also focused on further optimising our inventory management to ensure we can consistently deliver our products throughout the entire year.

### ALLERGEN EXTRACTS: DERIVED FROM NATURAL SOURCES

Allergen sources contain allergenic proteins from pollens, house dust mites, venom, food, animal dander, etc. Stallergenes Greer produces a large portion of its source materials, which are cultivated at the company's production sites in Amilly (France) and Lenoir, North Carolina (US).



## fostering a **responsible** culture

*At Stallergenes Greer, we strive to develop a culture of inclusion, engagement, opportunity and recognition. Our people are committed to meeting our business goals. We believe that diversity and inclusion are the foundations on which to develop our performance as a responsible corporate citizen, focused on patient needs.*



**In France, Stallergenes Greer's index on gender equality at work is 81/100. We focus strongly on developing our culture, which aims to provide all our employees with a supportive work environment that values diverse opinions and experiences, and enables individual, group and organisational success.**



### Fostering engagement and dialogue

In 2019, as part of the company's ongoing efforts to encourage dialogue and strengthen engagement, Stallergenes Greer rolled out its first Global Employee Engagement Survey. This survey provided us with feedback from our colleagues throughout our organisation.

The overall response rate for the Global Employee Engagement Survey exceeded 70%. This result illustrates the enthusiasm shown by Stallergenes Greer employees to provide feedback and participate in the development of the company. Moving forward, Stallergenes Greer will build on the results of the survey and the elements highlighted by employees to continue developing the company and its people.

### Develop beyond training

We believe that providing development opportunities beyond role-specific training is important in order to retain our talent and develop the next group of leaders. In 2019, we continued to implement training programmes including coaching, management and finance, and project management, as well as assessments.

### Giving back to our communities

We continued our commitment to supporting the communities in which our employees live and work during 2019. The Day of Service at our Lenoir, North Carolina facility this year brought together 240 volunteers who visited 27 different locations (animal shelters, local schools, food banks, etc.) and volunteered close to 1,200 hours. Other US initiatives included an Employee Wellness Day with health screenings, as well as a blood drive.

Our US colleagues also celebrated Allergy Awareness Month in May with a series of educational opportunities, and introduced the President's Award which



recognises employees whose contributions go above-and-beyond what is expected of them.

### **An inclusive environment**

For Stallergenes Greer, an inclusive working environment is a foundation of who we are. To support this company imperative, the Antony site in France has implemented a series of programmes to support people with disabilities. Links have been developed with sheltered workshops notably for the supply of printing and catering services. The company also partners with HandiEm, a French nonprofit organisation created by pharmaceutical companies which is dedicated to the inclusion of disability in the workplace, for various internal events.

### **A sustainable organisation**

We operate a sustainable organisation that protects our employees, the environment and our communities. We strive to reduce our environmental impact by monitoring our greenhouse gas emissions and being careful of the way we use resources. Our employees are committed to giving back to the communities in which we live and work.

## **HEALTH & SAFETY**

**Stallergenes Greer's Occupational Health & Safety Charter guarantees a safe and healthy working environment for all its employees. High-quality working conditions are key to the success of our activities.**

### **Safety Culture**

Ensuring the rollout of and compliance with best safety practices, and involving everyone in accident prevention on a daily basis.

### **Prevention of Occupational Risks**

Defining the most appropriate means of prevention and protection through a targeted analysis of occupational risks in all our operations.

### **Health & Safety Training Programme**

Introducing a Health & Safety training programme in order to continually improve the skills of our employees and ensure the protection of everyone's health and safety.







*our* portfolio

Not all our products and extracts are available in all geographic territories

**1/ SUBLINGUAL PRODUCTS**

**STALORAL®**

The allergens and concentrations available vary by market.

Allergens :

**MITES**

- D.pteronysinus
- D. Farinae
- D.pt / D.far 50/50
- Blomia / D.pt / D.far 45/45/10

**GRASSES**

- 5 Grasses
- Cocksfoot
- Timothy
- Bermuda Grass

**TREES**

- Birch
- 3 Trees Mix (Alder / Birch / Hazel)
- Cupressaceae
- Ash
- Alder
- Hazel
- Olive

**DANDER**

- Cat epithelia

**WEEDS**

- Ragweed
- Wall pellitory
- Mugwort

**MOULDS**

- Alternaria
- Pollen mix
- Birch / ash
- 5 Grasses / olive
- 5 Grasses / birch
- 5 Grasses / rye
- 5 Grasses / juniperus
- 5 Grasses / ash
- 5 Grasses / berm. Grass
- 5 Grasses / 3 trees
- 5 Grasses / ragweed
- Birch / timothy
- Olive / ash
- Cupressaceae / olive
- Birch / olive

**ORALAIR®**

A five-grass Sweet Vernal (*Anthoxanthum odoratum* L), Orchard (*Dactylis glomerata* L), Perennial Rye (*Lolium perenne* L), Timothy (*Phleum pratense* L), and Kentucky Blue Grass (*Poa pratensis* L) mixture.

**ACTAIR®**

A house dust mite (*Dermatophagoides pteronyssinus* and *Dermatophagoides farinae*) mixture.

**2/ SUBCUTANEOUS PRODUCTS\***

**ALUSTAL®**

**PHOSTAL®**

**ALYOSTAL VENOM**

**ALBEY VENOM®**

**3/ VETERINARY PRODUCTS**

**VET EXTRACTS**

Allergens:

**TREES & SHRUBS**

- Acacia
- Alder, Hazel
- Alder, Red
- Alder, White
- Ash, Arizona
- Ash, Oregon
- Ash, Red/Green
- Ash, White
- Aspen
- Bayberry/Was Myrtle
- Beech, American
- Birch, Black/Sweet
- Birch, River
- Birch, Spring
- Birch, White
- Box Elder
- Cedar, Mountain
- Cedar, Red
- Cedar, Salt/Tamarisk
- Cottonwood, Black
- Cottonwood, Eastern
- Cottonwood, Fremont
- Cottonwood, Western
- Cypress, Arizona
- Cypress, Bald
- Elm, American
- Elm, Cedar/Fall Blooming
- Elm, Siberian
- Eucalyptus
- Hackberry
- Hazelnut, American
- Hickory, Shagbark
- Hickory, Shellbark
- Hickory, White
- Juniper, Oneseed
- Juniper, Pinchot
- Juniper, Rocky Mountain
- Juniper, Utah
- Juniper, Western
- Locust Blossom, Black
- Mango Blossom
- Maple, Red
- Maple, Silver/Soft
- Maple, Sugar/Hard
- Melaleuca
- Mesquite
- Mulberry, Paper
- Mulberry, Red
- Mulberry, White
- Oak, Arizona/Gambel
- Oak, Black
- Oak, Bur
- Oak, California Black
- Oak, California Live
- Oak, California White
- Oak, Post
- Oak, Red
- Oak, Virginia Live
- Oak, Water
- Oak, Western White
- Oak, White
- Olive
- Olive, Russian
- Orange Pollen
- Palm, Queen
- Pecan
- Pepper Tree
- Pine, Australian (Beefwood)
- Pine, Loblolly
- Pine, Longleaf
- Pine, Ponderosa

- Pine, Virginia/Scrub
- Pine, Eastern White
- Pine, Western White
- Pine, Yellow
- Poplar, Lombardy
- Poplar, White
- Privet, Common
- Sweet Gum
- Sycamore, American/Eastern
- Sycamore, Western
- Walnut, Black
- Walnut, California Black
- Walnut, English
- Willow, Arroyo
- Willow, Black
- 2 Maple Mix
- 3 Maple Mix
- 11 Tree Mix
- Ash Mix
- Birch Mix
- Eastern 6 Tree Mix
- Eastern 7 Tree Mix
- Eastern 8 Tree Mix
- Eastern 10 Tree Mix
- Eastern Oak Mix
- Elm Mix
- Hickory Mix
- Hickory-Pecan Mix
- Maple-Box Elder Mix
- Pine Mix
- Western 10 Tree Mix
- Western Oak Mix
- Western Walnut Mix
- Daisy Ox-Eye
- Dandelion
- Sunflower
- Alfalfa
- Mustard
- Red Clover
- Sugar Beet

**WEEDS**

- Allscale
- Baccharis
- Burrobrush
- Careless Weed, Amaranth/ Green
- Cocklebur
- Dock, Yellow/Curly
- Dog Fennel
- Firebush/Kochia
- Goldenrod
- Hemp, Water
- Iodine Bush
- Lambs Quarter
- Lenscale/Quailbrush
- Marsh Elder, Burweed/Giant
- Poverty
- Marsh Elder, True/Rough
- Mugwort, Common
- Mugwort, Darkleaved/ Sagebrush, Prairie
- Nettle
- Palmer's Amaranth
- Pigweed, Rough/Redroot
- Plantain, English
- Rabbit Bush
- Ragweed, Desert
- Ragweed, False
- Ragweed, Giant
- Ragweed, Short
- Ragweed, Slender
- Ragweed, Southern
- Ragweed, Western
- Russian Thistle
- Sagebrush, Common
- Saltbush, Annual
- Sorrel, Sheep/Red
- Wingscale
- 3 Weed Mix
- Dock-Sorrel Mix
- Pigweed Mix
- Plantain-Sorrel Mix
- Ragweed Mix
- Sage Mix
- Scale/Atriplex Mix
- Western Ragweed Mix

**GRASSES**

- Bahia Grass
- Bermuda

- Brome Grass, Smooth
- Canarygrass
- Corn, Cultivated
- Couch/Quack Grass
- Johnson Grass
- Kentucky Blue/June
- Meadow Fescue
- Oats, Common/Cultivated
- Orchard
- Redtop

**RYE, CULTIVATED**

- Ryegrass, Giant Wild
- Ryegrass, Italian
- Ryegrass, Perennial
- Sweet Vernal
- Timothy
- Velvetgrass
- Wheat Cultivated
- Wheatgrass, Western
- 7 Grass Mix
- 9 Southern Grass Mix
- Bermuda-Johnson Grass Mix
- K-O-R-T Grass Mix

**FUNGI & SMUTS**

- Acremonium strictum
- Alternaria alternata
- Aspergillus amstelodami
- Aspergillus flavus
- Aspergillus fumigatus
- Aspergillus nidulans
- Aspergillus niger
- Aureobasidium pullulans
- Bipolaris sorokiniana
- Botrytis cinerea
- Candida albicans
- Chaetomium globosum
- Cladosporium herbarum
- Cladosporium sphaerospermum
- Drechslera spicifera
- Epicossium nigrum
- Epidermophyton floccosum
- Fusarium moniliforme
- Fusarium solani
- Geotrichum candidum
- Gliocladium viride
- Helminthosporium solani
- Malassezia pachydermatis
- Mucor circinelloides f. circinelloides
- Mucor circinelloides f. lusitanicus
- Mucor plumbeus
- Neurospora intermedia
- Paecilomyces variotii
- Penicillium chrysogenum (notatum)
- Penicillium digitatum
- Phoma betae
- Rhizopus oryzae
- Rhizopus stolonifer
- Rhodotorula mucilaginosa var. mucilaginosa
- Saccharomyces cerevisiae
- Stemphylium solani
- Trichoderma harzianum
- Trichophyton mentagrophytes
- Trichophyton rubrum
- Trichothecium roseum
- Aspergillus Mix
- Dematiaceae Mix
- Fusarium Mix
- Mold Mix #1
- Mold Mix #2
- Mold Mix #3
- Monilia Mix
- Mucor mix
- Penicillium Mix
- Phycomycetes Mix
- Rhizopus Mix
- Corn Smut
- Grain Smut mix
- Grass Smut Mix

**EPITHELIA**

- Cat Epithelia
- Cattle Epithelia
- Dog Epithelia

- Gerbil Epithelia
- Goat Epithelia
- Guinea Pig Epithelia
- Hamster Epithelia
- Hog Epithelia
- Horse Epithelia
- Human Dander
- Mouse Epithelia
- Rabbit Epithelia
- Rat Epithelia
- Sheep Epithelia

**FEATHERS & MISCELLANEOUS INHALANTS**

- Canary Feathers
- Chicken Feathers
- Duck Feathers
- Parakeet Feathers
- Feather Mix
- Cotton Linters
- Cottonseed
- Flaxseed
- Kapok Seed
- Orris Root
- Pyrethrum
- Silk
- Tobacco Leaf

**INSECTS**

- Ant, Black/Carpenter
- Ant, Fire – Solenopsis richteri
- Ant, Fire – Solenopsis invicta
- Cockroach, American
- Cockroach, German
- Culicoids
- Deer Fly
- Flea
- Horse Fly
- House Fly
- Mosquito
- Moth
- 2 Cockroach Mix
- 4 Insect Mix

**DUST & DUST MITES**

- Dust, House
- Grain Mill Dust Mix
- Acarus siro
- Blomia tropicalis
- Dermatophagoides farinae
- Dermatophagoides pteronyssinus
- Lepidoglyphus destructor
- Tyrophagus putrescentiae
- Equal Parts Mixture

**VET OTHER SUPPLIES**

**STERILE DILUENTS**

**NONSTERILE EMPTY VIALS**

**STERILE EMPTY VIALS**

**PLASTIC COLORED CAPS**

**VIAL RACKS**

**AMBER VIALS AND METERED PUMPS**

**SYRINGES AND SYRINGE TRAYS**

**ANCILLARY PRODUCTS**

**4/ STANDARDISED HUMAN EXTRACTS**

**STANDARDISED CAT HAIR**

**STANDARDISED DERMATOPHAGOIDES FARINA MITE**

**STANDARDISED DERMATOPHAGOIDES PTERONYSSINUS MITE**

**STANDARDISED MITE MIX**

**STANDARDISED GRASS & POLLENS**

- Bermuda Grass
- Kentucky Blue/June
- Meadow Fescue
- Orchard
- Redtop
- Ryegrass, Perennial
- Sweet Vernal
- Timothy
- 7 Grass Mix
- K-O-R-T Grass Mix
- K-O-R-T and Sweet Vernal Mix
- K-O-T Grass Mix
- Timothy/Orchard Grass Mix
- T-O-S Grass Mix
- Ragweed, Short
- National Weed Mix
- Ragweed Mix

**POLLENS - TREES & SHRUBS**

- Acacia
- Alder, Hazel
- Alder, Red
- Alder, White
- Ash, Arizona (Velvet)
- Ash, Green
- Ash, Oregon
- Ash, White
- Aspen
- Beech, American
- Birch, Black/Sweet
- Birch, River
- Birch, Spring
- Birch, White
- Box Elder
- Cedar, Mountain
- Cedar, Red
- Cedar, Salt (Tamarisk)
- Cottonwood, Arizona (Fremont)
- Cottonwood, Black
- Cottonwood, Eastern
- Cottonwood, Western
- Cypress, Arizona
- Cypress, Bald
- Elm, Cedar
- Elm, Siberian
- Eucalyptus, Bluegum
- Hackberry
- Hazelnut, American
- Hickory, Shagbark
- Hickory, Shellbark
- Hickory, White
- Juniper, Oneseed
- Juniper, Pinchot
- Juniper, Rocky Mountain
- Juniper, Utah
- Juniper, Western
- Locust Blossom, Black
- Mango Blossom
- Maple, Red
- Maple, Silver/Soft
- Maple, Sugar/Hard
- Melaleuca
- Mesquite, Velvet
- Mulberry, Paper
- Mulberry, Red
- Mulberry, White
- Oak, Arizona (Gambel)
- Oak, Black
- Oak, Bur
- Oak, California Black

Oak, California Live  
 Oak, California White  
 Oak, Post  
 Oak, Red  
 Oak, Virginia Live  
 Oak, Water  
 Oak, Western White  
 Oak, White  
 Olive  
 Olive, Russian  
 Orange Pollen  
 Palm, Queen  
 Pecan  
 Pine, Australian (Beefwood)  
 Pine, Loblolly  
 Pine, Longleaf  
 Pine, Ponderosa  
 Pine, Virginia Scrub  
 Pine, Eastern White  
 Pine, Western White  
 Pine, Yellow  
 Poplar, Lombardy's  
 Poplar, White  
 Privet  
 Sweetgum  
 Sycamore, American  
 Sycamore, California (Western)  
 Walnut, Black  
 Walnut, California Black  
 Walnut, English  
 Wax Myrtle  
 Willow, Arroyo  
 Willow, Black  
 2 Maple Mix  
 3 Maple Mix  
 11 Tree Mix  
 Birch Mix  
 Central/Eastern 4 Tree Mix  
 Eastern 6 Tree Mix  
 Eastern 7 Tree Mix  
 Eastern 8 Tree Mix  
 Eastern 9 Tree Mix  
 Eastern 10 Tree Mix  
 Eastern Oak Mix  
 Elm Mix  
 Hickory Mix  
 Hickory-Pecan Mix  
 Juniper Mix  
 Maple-Box Elder Mix  
 Peppertree Mix  
 Pine Mix  
 Western 3 Tree Mix  
 Western 10 Tree Mix  
 Western Oak Mix  
 Western Walnut Mix

**POLLENS – FLOWERS & PLANTS**

Daisy  
 Dandelion  
 Sunflower  
 Alfalfa  
 Rape (Mustard)  
 Red Clover  
 Sugar Beet

**POLLENS – WEEDS**

Allscale  
 Amaranth, Green  
 Burningbush (Kochia)  
 Burrobrush  
 Cocklebur  
 Dock, Yellow (Curly)  
 Dogfennel  
 Goldenrod  
 Iodinebush  
 Lamb's Quarters  
 Lenscale (Quailbrush)  
 Marshelder, Burweed (Giant Poverty)  
 Marshelder, True (Rough)  
 Mugwort, Common  
 Nettle  
 Palmer's Amaranth  
 Pigweed, Rough Redroot  
 Pigweed, Spiny  
 Plantain, English  
 Rabbit Bush  
 Ragweed, Desert  
 Ragweed, False

Ragweed, Giant (Tall)  
 Ragweed, Lanceleaf  
 Ragweed, Slender  
 Ragweed, Western  
 Russian Thistle  
 Sagebrush, Common  
 Sage, Prairie  
 Saltbush, Annual  
 Sorrel, Sheep (Red)  
 Waterhemp, Tall  
 Wingscale  
 3 Weed Mix  
 Baccharis Mix  
 Central/Western Weed Mix  
 Common Weed Mix  
 Dock-Sorrel Mix  
 Pigweed Mix  
 Plantain-Sorrel Mix  
 Sage Mix  
 Scale/Atriplex Mix  
 Western Ragweed Mix

**POLLENS - GRASSES**

Brome, Smooth  
 Canary Grass, Reed  
 Corn, Cultivated  
 Johnson Grass  
 Oats, Cultivated  
 Quack (Couch) Grass  
 Rye, Cultivated  
 Ryegrass, Giant Wild  
 Ryegrass, Italian  
 Velvetgrass  
 Wheat, Cultivated  
 Wheatgrass, Western

**MOULDS**

Alternaria alternata  
 Aspergillus amstelodami  
 Aspergillus flavus  
 Aspergillus fumigatus  
 Aspergillus nidulans  
 Aspergillus niger  
 Aureobasidium pullulans  
 Bipolaris sorokiniana  
 Botrytis cinerea  
 Candida albicans\*  
 Chaetomium globosum  
 Cladosporium herbarum  
 Cladosporium sphaerospermum  
 Curvularia spicifera  
 Epicoccum nigrum  
 Epidermophyton floccosum  
 Fusarium solani  
 Geotrichum candidum  
 Gibberella fujikuroi  
 Gliocladium viride  
 Helminthosporium solani  
 Hypomyces perniciosus  
 Microsporum canis  
 Mucor circinelloides f. circinelloides  
 Mucor circinelloides f. lusitanicus  
 Mucor plumbeus  
 Neurospora intermedia  
 Paecilomyces variotii  
 Penicillium chrysogenum var. chrysogenum  
 Penicillium digitatum  
 Phoma betae  
 Rhizopus arrhizus  
 Rhizopus stolonifer  
 Rhodotorula mucilaginosa  
 Saccharomyces cerevisiae  
 Sarcocladium strictum  
 Stemphylium solani  
 Trichoderma harzianum  
 Trichophyton mentagrophytes  
 Trichophyton rubrum  
 Trichothecium roseum  
 AHH Mix  
 Alternaria/Hormodendrum Mix  
 Aspergillus Mix  
 Dematiaceae Mix  
 Fusarium Mix  
 Mold Mix #1  
 Mold Mix #2  
 Mold Mix #3  
 Monilia Mix  
 Mucor Mix

New Stock Fungi Mix  
 Penicillium Mix  
 Phycomycetes Mix  
 Rhizopus Mix  
 Bermuda Grass Smut  
 Corn Smut  
 Loose Smut of Barley  
 Loose Smut of Wheat  
 Oat Smut  
 Grain Smut Mix  
 Grass Smut Mix

**EPITHELIA**

Cattle Epithelia  
 Dog Epithelia  
 Gerbil Epithelia  
 Goat Epithelia  
 Guinea Pig Epithelia  
 Hamster Epithelia  
 Hog Epithelia  
 Horse Epithelia  
 Mouse Epithelia  
 Rabbit Epithelia  
 Rat Epithelia  
 Canary Feathers  
 Chicken Feathers  
 Duck Feathers  
 Parakeet Feathers  
 Feather Mix  
 Cotton Linters  
 Cottonseed  
 Flax  
 Gum Arabic  
 Gum Karaya  
 Gum Tragacanth  
 Kapok  
 Leaf Tobacco, Cultivated  
 Orris Root  
 Pyrethrum  
 Silk Worm Cocoon  
 Ant, Black Carpenter  
 Fire Ant – Solenopsis richteri  
 Fire Ant – Solenopsis invicta  
 Cockroach, American\*  
 Cockroach, German\*  
 Deer Fly  
 Flea (Aqueous Only)  
 House Fly  
 Mosquito  
 2 Cockroach Mix

**FOODS**

Apple  
 Apricot  
 Banana  
 Barley, Whole Grain  
 Bean, Lima  
 Bean, Navy  
 Bean, String Green  
 Blueberry, Velvetleaf  
 Broccoli  
 Buckwheat  
 Cabbage  
 Cantaloupe  
 Carrot  
 Cauliflower  
 Celery  
 Cherry, Sweet  
 Cacao Bean  
 Cinnamon  
 Coffee  
 Corn  
 Cranberry  
 Cucumber  
 Garlic  
 Ginger  
 Grape, White Seedless  
 Grapefruit  
 Hops  
 Lemon  
 Lettuce  
 Malt  
 Mushroom  
 Mustard Seed  
 Nutmeg  
 Oat  
 Olive, Green  
 Onion  
 Orange

Pea, Green or English  
 Peach  
 Pear  
 Pepper, Black  
 Pepper, Green  
 Pineapple  
 Potato, Sweet  
 Potato, White  
 Raspberry, Red  
 Rice  
 Rye  
 Sesame Seed  
 Soybean  
 Spinach  
 Squash, Yellow Summer  
 Strawberry  
 Tomato  
 Vanilla  
 Watermelon  
 Wheat, Whole  
 Beef  
 Lamb  
 Pork  
 Chicken Meat  
 Egg White, Chicken  
 Egg Whole, Chicken  
 Egg Yolk, Chicken  
 Turkey Meat  
 Milk, Cow  
 Bass, Black  
 Catfish, Channel  
 Clam, Northern Quahog  
 Cod, Atlantic  
 Crab, Blue  
 Flounder, Southern  
 Lobster, American  
 Mackerel, King/Atlantic  
 Oyster, Atlantic/Eastern  
 Perch, Ocean  
 Salmon, Atlantic  
 Scallops, Sea  
 Shrimp, Brown  
 Trout, Rainbow  
 Tuna, Yellowfin  
 Fish, Mix  
 Shellfish Mix  
 Almond  
 Brazil Nut  
 Cashew Nut  
 Coconut  
 Hazelnut (Filbert)  
 Peanut  
 Pecan  
 Walnut, Black  
 Walnut, English

**5/ PRICK TESTS**

**40-WELL SKIN OMNI™  
 EVALUATION PACKAGE**

**40-WELL GREER® PICK®  
 EVALUATION PACKAGE**

**60-WELL SKIN OMNI™  
 EVALUATION PACKAGE**

**60-WELL GREER® PICK®  
 EVALUATION PACKAGE**

**ALYOSTAL PRICK® \***

**GREER® PICK®**

**GREER® PICK® TRAY™**

**GREER® PICK® TRAY™**

**LID PRICK LANCET®**

**STALLERPOINT®**

**GREER® PICK® WELL™**

**SKINTESTOR OMNI™**

**SKINTESTOR OMNI™**

**SYSTEM**

**SKINTESTOR OMNI™ TRAYS**

**THE GREER® PICK® SYSTEM**

**6/ OTHER SUPPLIES**

**DOM' HOUS®**

**GREER® STERILE DILUENTS™**

**GREER® STERILE EMPTY  
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**SHARPS COLLECTORS**

**SKIN REACTION GUIDES**

**STERILE EMPTY VIALS**

**STOCK AND CUSTOM-PRINTED  
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**STYROFOAM CONTAINERS**

**SYRINGES AND SYRINGE TRAYS**

**VIAL RACKS**

\* Progressive resumption of production

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