



OUR SERVICES

SUPPLYING 100% PLANT-BASED BESPOKE
PROTEINS TO THE PERSONAL CARE
INDUSTRY



LEAF EXPRESSION SYSTEMS

At Leaf we live and breathe plants. Our scientific team are all specialist plant scientists with a depth of expertise in the production of proteins in plants. By using our extensive knowledge of plants' cellular functions, we are combining nature and biotechnology to provide active ingredients faster and more sustainably to the personal care industry.

WHY LEAF?

SupraVec® is our proprietary plant-based transient expression technology that allows us to produce bespoke active ingredients in the leaves of plants. The SupraVec® system has several advantages:



Free from CRUELTY

No animals are used in the process, and for existing GRAS status plants is cruelty free.



More SUSTAINABLE

Rare plants are not taken from their natural environment.



Non-GMO

We use transient expression technology. This means that we are not creating, or using GMO plants to manufacture our own products.



Free from CONTAMINANTS

Produced in controlled conditions, our products are free from contaminants such as pesticides, chemicals and animal infectious agents.



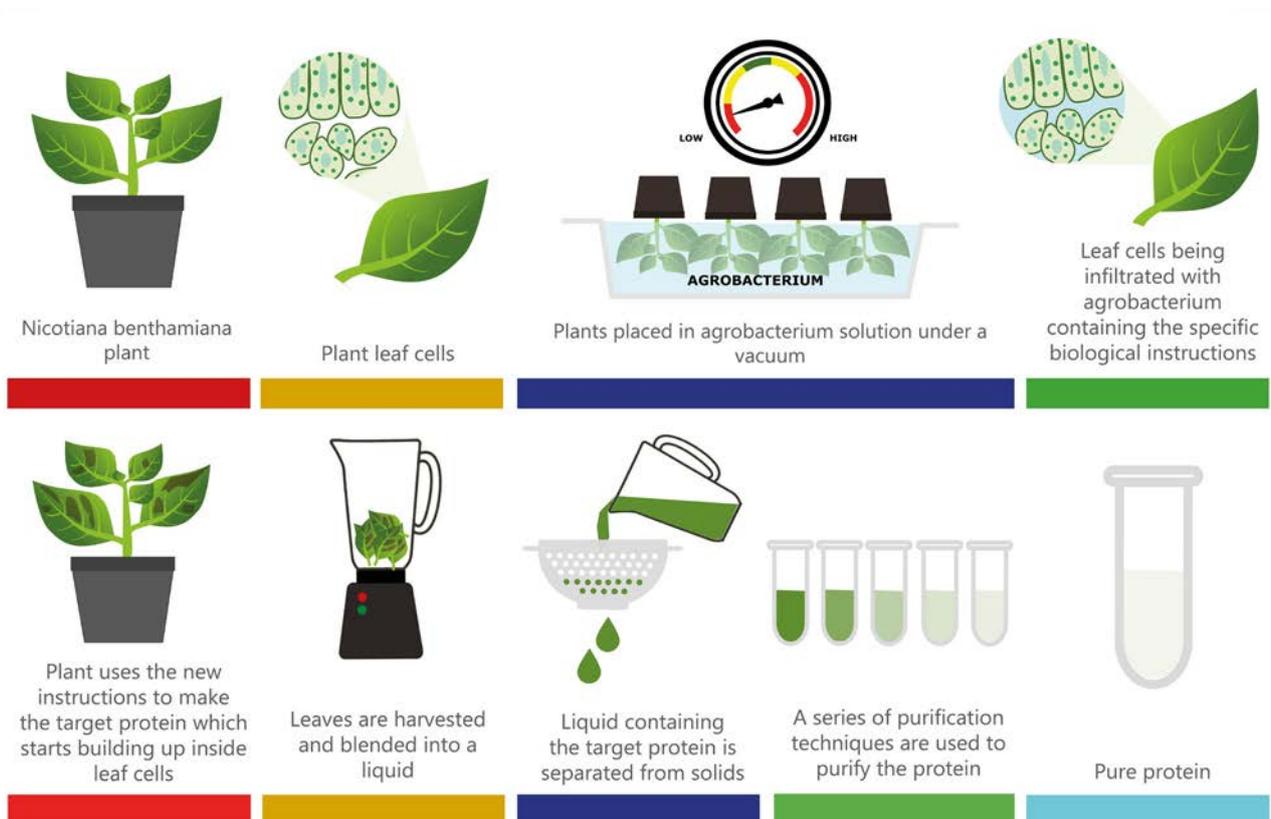
And we're FAST

The process is established and developed in a matter of weeks.

THE PROCESS

HARNESSING NATURE'S BIOREACTOR

Our SupraVec® technology allows for the rapid simultaneous production of multiple gene products in a controlled and coordinated manner within the tissues of plants. Using gene synthesis and modular vectors, new products are rapidly produced and easily scaled.



OUR SERVICES

Our cohesive portfolio of services lends itself to both small-scale feasibility studies and large-scale manufacturing. Our technology, facilities, expertise and contacts enable us to undertake multiple simultaneous projects.

TRANSIENT EXPRESSION

This non-GMO expression process is fast and efficient. Once the plants are infiltrated, purified protein is delivered within two weeks.

STABLE EXPRESSION IN PLANTS

We can create stable whole plant lines on behalf of our clients for long-term, large-scale production in other geographical locations.

STABLE EXPRESSION IN CELL LINES

We can generate bespoke plant cell lines using bioreactor-based processes with high levels of expression in a stable production platform. It is easily scalable and cost-effective when compared to other eukaryotic bioreactor processes.

RESEARCH AND DEVELOPMENT

Our experienced scientific team have a combined 100+ years of developing processes for the manufacture of biologic products for the health, personal care, life sciences and agritech industries.

DEDICATED PROJECT TEAM

You will be assigned to a dedicated senior member of our project team. They will be on hand throughout the length of the assignment to help guide and advise to ensure that your specific needs are met.

OUT LICENCING

Commercial licences for our SupraVec® technology will allow you to run your own inhouse manufacturing if required. A full tech transfer can also be provided to ensure a seamless transition for production within your own facility.

PRODUCTS

PLANT-BASED GROWTH FACTORS AND CYTOKINES

'Growth factors and cytokines are included in several cosmetic products intended for skin rejuvenation because of the ability to promote collagen synthesis.'

We have produced a number of growth factors and cytokines that are available on exclusive or non-exclusive licences and or a supply agreement basis.

INTERLEUKIN 1 α



Collagen/Skin Homeostasis

INTERLEUKIN 1 β



Collagen/Skin Homeostasis

INTERFERON A



Wrinkles/Fine lines

VEGF165



Skin Rejuvenation

IGF



Collagen Boosting

PDGF



Elasticity

FGF1/2



Skin/Hair Rejuvenation

GM-CSF



Increase Collagen

*Skin rejuvenation using cosmetic products containing growth factors, cytokines, and matrikines: a review of the literature - Dovepress

CELL LINES FOR RARE PLANT EXTRACTS

Cell culture lines for the production of naturally occurring bioactives from rare are difficult to obtain plant species.

We are developing proprietary plant cell lines for the production of plant-based products from rare or difficult to obtain plant species. These enable the manufacture of products in environmentally friendly and sustainable ways.

- More sustainable for plants that are at risk of extinction from excess harvesting
- Cell banks will be developed reducing the need for harvesting wild plants
- Uniformity of production: product consistency that cannot be achieved with

CONTACT US

For more information on our range of products and services.
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