



NICOLE GIRAUD

PRESIDENT

By I Feel Good event

Nicole, Tell us about yourself and your background

Having grown up close to nature, always interested in cosmetic products and very concerned by their content, I made scientific studies allowing me to associate these two centers of interest. With a doctorate in plant biotechnology, I made a career in the private industry with responsibilities in R&D, quality, marketing and technology transfer in fields related to living organisms (health, food, environment, cosmetics).

Very concerned about the quality of the products, in 2012 I created the company DNA Gensee, in order to benefit the industry which manufactures herbal products of innovative DNA technologies. Everything I have achieved along the way has been aimed at bringing progress to, improving ways of designing, manufacturing and using, but also protecting our natural resources. In connection with DNA Gensee's know-how, I am a legal expert to the Court of Appeal of Chambéry in plant identification biology.

DNA Gensee, what is it?

DNA Gensee is an expert company in plant genetics that supports all those who use plants or algae to make the most authentic and healthy products possible. We are referents for the use of botany and molecular biology (plant DNA) to help manufacturers identify and trace their natural raw materials.

Based near Chambéry in Savoie, DNA Gensee is made up of a small, highly specialised scientific team with doctors in Plant biotechnology and Cell biology / physiology, plant and engineers in Molecular Biology and Bioinformatics who also have skills in botany.

The laboratory is equipped with clean rooms which guarantee optimal security and quality of our analysis and we are at the forefront of DNA sequencing technology.

For almost 8 years, our company has been rewarded many times for its technology and expertise (Henry Maso Prize (IFSCC), Inspiring Fifty, CEW achiever innovation, Cosmetic victories, Initiative ô Feminin).

DNA Gensee's mission is to provide security for the skincare products (in the broad sense) that we all consume.

What is your target market? What types of products do you work on?

Our markets are those that manufacture products from plants, namely cosmetics and perfumery, phytotherapy, nutraceuticals and also food.

These are markets very concerned by fraud issues and which must imperatively secure their sourcing. Controlling the identity of raw materials has always been important; today it is vital to do so!

Pioneers and leaders in the cosmetic field, we benefit from the trust of our customers to guarantee the authenticity, quality and traceability of the raw materials and ingredients they use. There is a strong growth in the authentication market. Several factors combine to make this phenomenon, including the increasing use of natural ingredients and the search for more sustainability. This creates new needs for visibility and transparency across all supply and processing chains.

Within brands or with ingredient manufacturers, the R&D, quality, CSR, marketing or purchasing departments are aware of the need for authenticity checks as well as certain distributors and traders.

The regulatory environment also plays an important role. The requirements of the Nagoya Protocol on access to genetic resources and the fair and equitable sharing of the benefits arising from their use thus require a precise identification of the plants concerned.

We perform DNA analysis on all raw materials of natural origin, mainly plants or algae but also beehive products, spirulina, ... We are not limited to raw materials (biomass); we can also analyse products (processed plants) such as oils, plant extracts, butters, etc. In the case of honey, we can even identify all the plants foraged by bees. If the manufacturing processes have not completely destroyed the DNA of the starting plants, we are also working on finished "processed" products such as shampoos, creams, hydrosols, etc.

What can the genetic analysis carried out by your company guarantee?

Genetic analysis makes it possible to validate the origin of raw materials and ingredients, to check whether there are contaminations and / or adulterations.

The issue of authentication of raw materials and ingredients used in cosmetics is becoming crucial. The increasing use of natural cosmetic ingredients requires new traceability tools.

Our technology is based on the determination of the genetic signature of plant species and makes it possible to identify the species present in raw materials, ingredients and finished products from the plant DNA they contain.

In this context, DNA Gensee offers DNA-based analysis to guarantee the quality and security of supplies. This allows participants in the cosmetic industry to have factual information on the veracity of what they have bought and to ensure that what is supplied corresponds to their specifications; this is even more important for raw materials with high added value.

In the end, we guarantee the botanical authenticity of the sourced plants, the purity of the materials received (MP, ingredient or finished product) and therefore the absence of plant contamination / adulteration or plants producing alkaloids, etc., the traceability of the plant to the product, the geographic origin of the biomass, the genetic similarity to the client's reference plant.

In addition, we bring elements of knowledge to confirm the naturalness but also to optimise the transformation processes so that they are respectful of plants.

Do you describe DNA Gensee as an innovative company? Why ?

We have the status of Young Innovative Company, Research Tax Credit accreditation since the start of DNA Gensee's activity, the support of the Bpi for our research programs, the use of very innovative technology (barcoding and metabarcoding) from the University of Grenoble, the filing of patents and soleau envelopes, there is so much evidence to affirm that DNA Gensee is innovative!

The advent of metabarcoding has made identification analytics leap forward; indeed this technology allows an identification, without having samples of all the species present in a sample. DNA Gensee has innovated since its creation by applying, on the one hand, genetics to products and no longer only to biomass and, on the other hand, working blindly, which represents a real asset in the fight against fraud.

Every day, we create new tools and genetic markers to be able to respond to requests for species identification from our customers.

We are also innovative in bringing new analytical technology to a market where chemical analysis is a big thing. We can identify issues early on before any production.

We are also working on the innovations of our customers: search for specific markers for a species of interest, search for toxic plants in a mixture, search for methods to get to the level of subspecies, creation of a benchmark to distinguish geographic origins , etc. These projects can give patents and scientific accreditations.

Tell us about the expertise and know-how that DNA Gensee offers

Our expertise is scientific: plant genetics, bioinformatics, botany. We focus our work on the work of the DNA of plants, algae, fungi and bacteria.

Our know-how is based on the global consideration of analytical control, being aware of scientific knowledge as well as the lack of databases, also we create repositories every day for the needs of our customers. It is this awareness that makes us know how to work reliably.

Our know-how is designed to share knowledge and offer full legibility to manufacturers to secure sourcing and protect resources.

Why is traceability important today?

Today, traceability is essential for our health. What we are currently experiencing with the COVID 19 crisis shows how necessary it is to put transparency into our production and consumption. The cosmetic industry has moved closer to DNA Gensee to get a responsible and sustainable approach and therefore work for the protection of individuals and resources related to the objectives of the UN.

When a raw material is not what it should be, such as a plant species replaced by another, the health risks are high. There have already been cases of this with food supplements. Consumers are very demanding of transparency: where do the products they buy come from, how are they made and from which natural raw material?

Some raw materials are highly defrauded or victims of biopiracy such as vanilla for example. "A major stake for the future: vanilla authentication thanks to DNA", published in *Perfumer & Flavorist*, Vol.44. October, 2019.

Traceability is important to validate the supply chains and ensure the quality of what is sold. Only systematic control can reduce the high rate of fraud on natural raw materials. Traceability will create trust circles between players in the field for better consumer safety; who need to be reassured.

Does your biotechnology laboratory have any certification?

We are ISO 9001 certified for all of our processes including design (R&D) and production. As our technology and methods are innovative, standards do not yet exist. It is up to us to help draft a specific certification and to encourage its implementation.

What do companies gain by using DNA Gensee?

Our support responds to risk analysis issues that our customers have on the traceability of their products. They gain peace of mind, the guarantee of doing well, or even better, enhanced credibility and a positive image combining transparency and ethics.

An analysis as far upstream as possible also costs much less than months of R&D on a plant that is not the right one or buying bad batches for months or a health crisis!

DNA analysis is not limited to securing sourcing and the quality of supplies. In many cases, it is also a matter of promoting the products put on the market.

DNA Gensee's activity is based on evidence and the guarantees provided allow it to move upmarket and to increase consumer confidence with a scientific guarantee.

Tell us about DNA Gensee's quality policy commitment

Our commitment is total and our quality approach is based on continuous improvement on a daily basis.

If we want to promote the quality of cosmetic products, then we must be irreproachable on the quality of the analysis that we carry out and therefore on their reliability. We have very demanding quality criteria, the most demanding in the sector, at all stages of our test protocols.

How are you managing the situation with COVID-19?

This health crisis shows how fragile we can be if we do not anticipate dangers. Risk analysis must now be on everyone's mind.

We have protected our team with all the necessary precautions and for the moment, no external third party enters our premises. We now favour remote working one to two days a week to limit risks, fatigue and expense. In addition, we promote video conferencing with our customers and partners. All this makes it possible to better protect our planet.

We communicate on the dangers of non-control and non-control of supplies in natural raw materials. With a lack of care, manufacturers and all the participants in the fields concerned can cause problems with sanitation for all of us. It is up to us to help them not to take these risks and to help to preserve all of our health.

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TRAÇABILITÉ PAR L'ADN ET CONTRÔLE D'AUTHENTICITÉ



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