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# Sensegen Aims To Put Natural Back In Fragrance With Next-Gen, Sustainable Biotech Solutions

by [Eileen Francis](#)

California-based fragrance and flavor developer Sensegen is preparing a formal launch of biotech-based aromas and other fragrance ingredients this summer, touting them as building blocks for category-leading “new naturals” that balance sustainability with quality and value.

Sensegen, recently hatched as the taste, smell and beauty division of Rancho Santa Margarita, CA-based Blue California Co., will showcase its version of musk, Plantarôme (M), among other biotech innovations, at the World Perfumery Congress in Miami at the end of June.

“At Sensegen, our creative palette is built by biology, fully anchored in biotechnology, and mimics nature and its enzymatic activities. Materials are cleverly re-created to be used more efficiently, using much less water and land and having a near-zero carbon footprint,” writes Kathy Oglesby, chief value creation officer, in a 15 February article on Sensegen’s website.

Sensegen and Blue California are targeting white space needs for natural fragrance and other natural, good-for-the-earth ingredients in beauty, personal-care, food and home-care products.

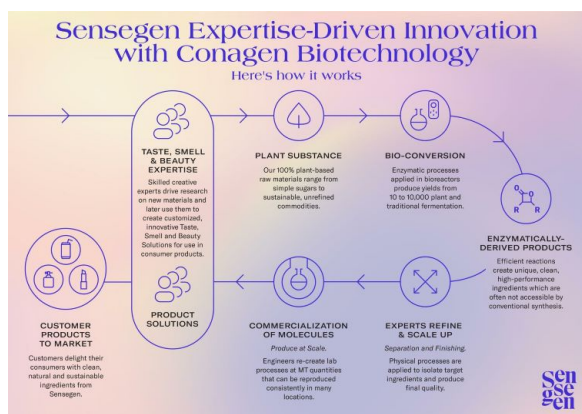
They hold up Plantarôme M, a 100% plant-based musk that they say vies with today’s synthetic options, as emblematic of the company’s disruptive innovation aims. Sensegen also will be formally introducing this summer a biotech-based sandalwood scent, Plantarôme S, as well as Plantarôme N Naturalizer.

All three can be formulated into 100% natural and sustainable fragrances developed by Sensegen for scent customers. “Revolutionize your fragrance from synthetic to natural, design a new fragrance, or re-imagine your existing product,” the company’s website reads.

Oglesby told HBW Insight that just over a dozen additional fragrance captives are in the Plantarôme pipeline and will be completed over the next 18 months.

“What we are bringing forward into the market is this concept of new naturals,” said Oglesby, previously head of Blue California’s flavors and fragrances business. She also has served in senior leadership roles for Emeryville, CA-based synthetic biotechnology company Amyris, Inc. and Swiss fragrance and flavors firm Firmenich SA.

“We’re going to be able to bring such a diverse palette of natural materials that are very cost effective, that we’ll be able to take natural fragrances to a whole other level,” she added in a 24 February interview.



THE SENSEGEN PROCESS Source: Sensegen

Most fragrance ingredients on the market now are not natural due to ethical and sustainable considerations, and those that are positioned as natural are limited mostly to essential oils and aromatherapy-type products, combining “simple ingredients in different proportions,” Oglesby said.

According to the exec, “Even the fine fragrance materials that are 100% natural, there are only few of them,” often from “super exotic materials that aren’t sustainable at all.”

Additionally, most are very expensive, she said.

“That’s not what we are for. We are a very sort of democratic group,” said Oglesby. “We think that all people deserve to have high quality and highly pleasant flavors and fragrance.”

## Overturing Synthetic Tradition

Sensegen certainly seems to be hitting all the right notes in the current consumer climate. The group claims that in addition to reducing environmental footprint by more than 90% compared with conventional models with its natural, clean ingredients and biomanufacturing processes – when taking into account carbon, water and land factors – its vertically integrated operations can help companies avoid supply-chain disruptions.

Allergy concerns could be lessened as well with use of its ingredient offerings, the company suggests.

Oglesby notes at Sensegen.com that upheaval caused by the COVID-19 pandemic and fears about climate change are prompting brands and businesses to reset their approaches to innovative

product development. In fragrance, there is increasing demand for solutions that are natural, clean – ie, cruelty-free, non-petroleum-based, and without pesticides, herbicides, heavy metals and plastic residues – as well as environmentally friendly.

She notes in her 15 February piece, "Synthetic fragrances were first mainstreamed by Chanel at the turn of the 20th century, the heyday of petroleum-based synthetic chemistry. Since that time, synthetic has been so synonymous with fragrances that accepted synthetic fragrance labeling had become simply 'fragrance,' as though there was no difference between natural and synthetic fragrances. Doing so suggests that only synthetic fragrances exist."

Sensegen touts its offerings and services as transparent, cost-effective and highly scalable. Partner brands are capable of producing "in pure forms and simple mixtures the valuable molecules that are either too difficult or too rare or too wasteful to extract from nature," and turning out "increasingly larger amounts of natural ingredients without depleting fields, taking species to the limit of extinction or simply leaving them at the mercy of the elements," Sensegen says.

Blue California cultivated Sensegen through an 18-month incubation period in partnership with Bedford, MA-based Conagen, a firm that specializes in developing ingredients through fermentation and bioconversion. (Also see "[Clean And Sustainable Beauty & Personal Care News: Sensegen, SOLESPHERE, Dial Soap Refills](#)" - HBW Insight, 17 Feb, 2022.)

Conagen's technology essentially replicates metabolic pathways discovered in nature using engineered microbes to convert simple sugars into target molecules.

For example, "We're making a fingerprint of a sandalwood oil using plant technology," Oglesby said in reference to Plantarôme S. "One kilogram of sugar makes as much sandalwood oil as a whole forest of sandalwood trees," she said.

Oglesby noted biotech-sourced ingredients used to be much more expensive, but costs have declined as the science has become more accessible.

Sensegen also is working on biotech-based "clean beauty" ingredients for the personal-care space, including anti-aging ingredients that are non-irritating to skin. The firm also plans to introduce a line of Flavorings within the next few months, comprising ingredients developed through collaboration with perfumers and flavor experts, Oglesby said.

On the regulatory front, there is increasing pressure on companies to disclose fragrance and flavor ingredients linked to human health safety and allergenic concerns. California has begun requiring cosmetic product companies to report use of listed fragrance constituents to the state's public health department under the Cosmetic Fragrance and Flavor Ingredients Right To Know

Act enacted in 2020. (Also see "[California's Fragrance 'Right To Know' Act Kicks In With Important Questions Unresolved](#)" - HBW Insight, 20 Jan, 2022.)