

Provenance Bio, an Alternative Protein Company, Creates Biomimetic, Animal-Free Gelatin Using Its Novel Microbial Protein Expression Platform

- Provenance Bio has produced animal-free gelatin from recombinant full-length, bovine type I collagen, produced in their proprietary protein expression platform.
- The company has developed a proprietary protein expression platform to make biomimetic proteins that can beat animal agriculture prices.
- Provenance Bio is exploring partnerships with multiple global companies that are industry leaders in pharmaceuticals, biomaterials, and foods.

SAN FRANCISCO, June 23, 2021 - Provenance Bio, a San Francisco-based alternative proteins company, announced today that it has made animal-free gelatin using their proprietary protein expression platform.

The gelatin made by Provenance is designed to be identical to traditionally-sourced animal gelatin, while using no animal inputs.

Traditionally, gelatin is made from collagens extracted from cow or pig hides and bones. Gelatin is used in a wide array of consumer goods such as in capsules for vitamins and therapeutics, as an ingredient in foods for imparting texture, and as a key component used in tissue engineering.

Provenance Bio is focused on producing animal-free gelatin to address issues in the market such as inconsistencies in quality and to make products devoid of contaminants. Provenance Bio also makes its gelatin from collagen, which is produced in their microbial platform. For its recombinant gelatin products, Provenance currently uses full-length, type I collagen, the most abundant form of collagen in mammals but produced in a clean laboratory setting. Provenance gelatins promise to have the same functional attributes as those derived from animal collagens but with a radically reduced environmental footprint.

“Gelatin represents a large and growing market. We were inspired to make an animal-free gelatin to provide a sustainable and humane solution for this material, while solving major concerns with animal derived gelatins that suffer from animal-borne illness, batch-to-batch variability, and price fluctuations. Provenance collagens, which are entirely animal-free, also support the growing demand for vegan alternatives to gelatin products with superior performance,” says Provenance Bio CEO, Michalyn Andrews.

In addition to full length bovine collagens, Provenance is utilizing a library of collagen variants for tailored applications.

“We are excited about all the possible industrial applications of Provenance gelatins, as well as other proteins. The platform will produce animal-free gelatin at attractive price points. When

we began our work at Provenance, there was no way to make the proteins we needed at scale," she says. "We took it upon ourselves to redesign a new chassis for protein production that would revolutionize our ability to deliver functional proteins at price parity with those sourced from animals. While we still have a road ahead of us, to date, we've been able to increase our own collagen strain efficiencies by 100x. "

Recombinant collagen, as a sustainable solution for animal products has been out of reach to date due to the historic challenge of producing these functional proteins. Access to biomimetic collagens with zero animal inputs, at price parity with current animal products, will enable its wider adoption across all relevant sectors.

Andrews continues, "Gelatin is just the first of many animal products we're disrupting at Provenance. Full-length proteins are important for the markets we're working to disrupt. We want our gelatin to be a seamless plug-and-play product for corporations ready to make their supply chains more sustainable. Today our collagen products have 1/50th the carbon footprint of bovine collagen products. By year end, we expect to cut that number by 90 percent, making our products over 500 times more carbon efficient than collagens and related products sourced from cattle."

By partnering with large corporations for product rollout, Provenance intends to move quickly as an impact-focused organization, furthering the mission of transitioning large global supply chains for sustainable solutions.





About Provenance Bio

Provenance Bio is an alternative proteins company developing cutting edge synthetic biology tools to compete head-to-head with animal proteins, leveraging its patent-pending platform to make full-length collagen for B-to-B applications in pharma, biomaterials and food. The Provenance protein expression platform represents the future of biomanufacturing, efficiently making the protein building blocks needed to usher in a new era of sustainable products.

Provenance Bio was formed in 2020, co-founded by Michalyn Andrews, Dr. Zev Gartner, Dr. John Dueber, and Christian Ewton.

For further information: visit <http://provenance.bio> or email info@provenance.bio.

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