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FibroBiologics Files Patent Application for Technology Designed to Produce GLP-1 and Other Therapeutic Peptides Inside the Body

New approach proposes an alternative to repeated injections

HOUSTON, Oct. 7, 2026 /PRNewswire/ -- FibroBiologics, Inc. (Nasdaq: FBLG) ("FibroBiologics"), a clinical-stage biotechnology company with 270+ patents issued and pending with a focus on the development of therapeutics and potential cures for chronic diseases using fibroblasts and fibroblast-derived materials, announced today that it has filed a U.S. patent application covering a new cell-based technology designed to continuously produce peptides such as GLP-1, GIP and GLP-2 inside the body.



Today, popular GLP-1 medicines used for weight loss and diabetes generally require patients to take regular weekly injections or daily pills. FibroBiologics is developing a different approach.

The patent application describes engineering living cells to act like **tiny peptide factories inside the body**. These cells would be grouped together into small three-dimensional structures called spheroids or organoids. Once administered to a patient, they are designed to continuously produce and release a therapeutic peptide.

What could this mean for patients?

Instead of receiving a GLP-1 drug through repeated injections or pills, patients would be administered the engineered cells one time and then have those cells continuously produce the desired peptide inside the body. By providing consistent levels of a potentially therapeutic peptide, the technology could reduce the need for repeated injections.

The patent application specifically covers GLP-1, GIP and GLP-2 class peptides, among many other potential medicines.

More Than GLP-1

The patent application is not limited to weight-loss or diabetes indications, it also describes possible applications in gastrointestinal diseases, autoimmune and inflammatory diseases, wound healing, tissue regeneration, hormone deficiencies, cancer and age-related conditions. The technology could potentially be used to produce many different therapeutic proteins and peptides. The technology could also allow different potentially therapeutic peptides to be produced at the same time and in different amounts depending on the disease or patient.

A Different Way of Delivering Medicine

Pete O'Heeron, Founder and CEO of FibroBiologics, said: "Instead of repeatedly injecting a therapeutic peptide that was manufactured outside the body, our approach is designed to use engineered cells to continuously make and deliver the peptide inside the body. We believe this could potentially offer a fundamentally different way of delivering GLP-1 and other therapeutic peptides."

Key Takeaways from the Patent Application

- **A living source of GLP-1, GIP, and GLP-2 class peptides.** The application covers organoids and spheroids made from engineered fibroblasts and/or other cells that secrete currently identified therapeutic peptides and other potentially therapeutic peptides and their analogs, continuously from within the body. A single administration is designed to supply steady, physiologic levels of the desired peptide, offering a potential alternative to the weekly injections.
- **Therapeutic peptide administered with a tunable ratio.** The application covers aggregates that secrete a unimolecular dual or triple agonist, antagonists, and aggregates in which the secretions are separate peptides by the same cells or by distinct cell populations, so the balance between the two hormones can be set for the indication or the patient. Worldwide demand for GLP-1 and dual incretin medicines has been constrained by dose spikes, injection burden, patient compliance, and manufacturing bottlenecks. Continuously secreted peptides from spheroids or organoids are intended to address each of these limitations.
- **A platform, not a single product.** The claims extend to any therapeutic peptide or polypeptide, and to engineering fibroblasts, stem cells, immune cells, and other mammalian cell types. The described indications span diabetes and metabolic disorders, intestinal and gastrointestinal conditions, autoimmune and inflammatory disease, wound healing and tissue regeneration, hormone deficiencies, cancer, age-related disorders, and longevity.
- **Control and safety engineered in.** The application describes immune-evasive modifications that support allogeneic, off-the-shelf use, inducible safety switches that allow the cells to be eliminated on demand, integration of the therapeutic gene at genomic safe-harbor sites, and encapsulation in biocompatible scaffolds or retrievable devices, giving physicians multiple ways to govern dose and duration.

"Peptides produced by living cells are made in their native conformation, correctly processed, and released continuously rather than in bursts," said Hamid Khoja, Ph.D., Chief Scientific Officer of FibroBiologics. "A living peptide-secreting factory built from distinct engineered cell populations, each secreting one or more of these therapeutic peptides at a tunable level, is a far closer physiological match than the currently available peptides administered weekly via a syringe, or daily through an orally administered pill."

For more information, please visit FibroBiologics' [website](#), email FibroBiologics at info@fibrobiologics.com or follow FibroBiologics on [LinkedIn](#), [YouTube](#), [Facebook](#) or [X](#).

About FibroBiologics

Based in Houston, FibroBiologics is a clinical-stage biotechnology company developing a pipeline of treatments and seeking potential cures for chronic diseases using fibroblast cells and fibroblast-derived materials. FibroBiologics holds 270+ US and internationally issued patents/patents pending across various clinical pathways, including wound healing, multiple sclerosis, disc degeneration, psoriasis, orthopedics, human longevity, and cancer. FibroBiologics represents the next generation of medical advancement in cell therapy and tissue regeneration. For more information, visit www.FibroBiologics.com.

Cautionary Statement Regarding Forward-Looking Statements

This communication contains "forward-looking statements" as defined in the Private Securities Litigation Reform Act of 1995. Forward-looking statements include information concerning the scope and strength of the Company's intellectual property portfolio, the potential indications for and clinical benefits of engineered peptide-secreting three-dimensional cell aggregates, the potential of such aggregates to address limitations of existing peptide therapeutics, including GLP-1, GIP, and GLP-2 receptor agonists and dual incretin agonists such as tirzepatide, the potential methods of delivering GLP-1 and other therapeutic peptides, FibroBiologics' research and development programs, and the potential clinical benefits of spheroids, organoids, fibroblasts and fibroblast-derived materials. These forward-looking statements are based on FibroBiologics' management's current expectations, estimates, projections and beliefs, as well as a number of assumptions concerning future events. These forward-looking statements are not guarantees of future performance, conditions or results, and involve a number of known and unknown risks, uncertainties, assumptions and other important factors, many of which are outside FibroBiologics' management's control, that could cause actual results to differ materially from the results discussed in the forward-looking statements, including those set forth under the caption "Risk Factors" and elsewhere in FibroBiologics' annual, quarterly and current reports (i.e., Form 10-K, Form 10-Q and Form 8-K) as filed or furnished with the SEC and any subsequent public filings. Copies are available on the SEC's website, www.sec.gov. These risks, uncertainties, assumptions and other important factors include, but are not limited to: (a) risks related to FibroBiologics' liquidity and its ability to maintain capital resources sufficient to conduct its business; (b) expectations regarding the initiation, progress and expected results of FibroBiologics' R&D efforts and preclinical studies; (c) the unpredictable relationship between R&D and preclinical results and clinical study results; and (d) the ability of FibroBiologics to successfully prosecute its patent applications. Forward-looking statements speak only as of the date they are made. Readers are cautioned not to put undue reliance on forward-looking statements, and FibroBiologics assumes no obligation and, except as required by law, does not intend to update, or revise these forward-looking statements, whether as a result of new information, future events, or otherwise. FibroBiologics gives no assurance that it will achieve its expectations.

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