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FibroBiologics Files Patent For Novel Approach to Modulate Mitochondrial Activity Using Fibroblast-based Therapeutics

This innovative method has the potential to unlock new treatment options for chronic conditions driven by mitochondrial dysregulation.

HOUSTON, March 04, 2025 (GLOBE NEWSWIRE) -- FibroBiologics, Inc. (Nasdaq: FBLG) ("FibroBiologics"), a clinical-stage biotechnology company with 160+ 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 the filing of a patent application with the United States Patent and Trademark Office covering methods employing fibroblasts to improve mitochondrial performance in cells.

Mitochondria are critical organelles responsible for cellular energy production via oxidative phosphorylation. Mitochondrial dysregulation is implicated in aging, and a wide range of diseases including autoimmune, neurodegenerative, metabolic, and muscular diseases. Fibroblasts, primary cells for the secretion and maintenance of connective tissue, secrete bioactive molecules such as growth factors, cytokines, and extracellular vesicles that influence cellular microenvironments.

Modulating mitochondrial function using local or systemic fibroblast administration, represents a novel method to address mitochondrial dysregulation—an area of increasing focus in medical research. This novel approach has the potential to unlock new treatment options for conditions driven by mitochondrial dysfunction that contribute to the pathology of many chronic diseases.

"Using fibroblasts to improve the microenvironment of the cells by modulating mitochondrial activity has the potential of fundamentally altering how we treat chronic diseases, and positively impact human longevity," said Pete O'Heeron, Founder & Chief Executive Officer of FibroBiologics.

"There has been growing interest in the research community around leveraging mitochondria-focused therapies to address chronic diseases," said Hamid Khoja, Chief Scientific Officer of FibroBiologics. "Our approach takes advantage of fibroblasts' natural ability to modulate mitochondrial function, potentially unlocking new therapeutic strategies for the treatment of multiple chronic diseases."

For more information, please visit [FibroBiologics' website](https://www.fibrobiologics.com) or email FibroBiologics at: info@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 potential of fibroblasts to modulate mitochondrial function, to unlock new treatment options driven by mitochondrial dysfunction, to alter how chronic disease is treated, and to unlock new therapeutic strategies for the treatment of multiple chronic diseases. 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 our 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.

About FibroBiologics

Based in Houston, FibroBiologics is a clinical-stage biotechnology company developing a pipeline of treatments and potential cures for chronic diseases using fibroblast cells and fibroblast-derived materials. FibroBiologics holds 160+ US and internationally issued patents/patents pending across various clinical pathways, including disc degeneration, orthopedics, multiple sclerosis, psoriasis, wound healing, reversing organ involution, and cancer. FibroBiologics represents the next generation of medical advancement in cell therapy. For more information, visit www.FibroBiologics.com.

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