April 4, 2024

FibroBiologics Presents Data from Dermal Fibroblast Spheroid-based Treatment of Chronic Wounds in a Diabetes Mouse Model at Advanced Wound Care Summit USA

HOUSTON, April 04, 2024 (GLOBE NEWSWIRE) -- FibroBiologics, Inc., (Nasdaq: FBLG) ("FibroBiologics"), a clinical-stage biotechnology company with 150+ patents issued and pending for the development of therapeutics and potential cures for chronic diseases using fibroblasts and fibroblast-derived materials, announced today data from its latest study in a diabetes mouse model on the potential therapeutic efficacy of dermal fibroblast spheroids in treating chronic wounds. These findings will be presented via an oral and poster presentation at the Advanced Wound Care Summit USA in Boston, MA, April 16-17.

Diabetic foot ulcers (DFUs) are prevalent in individuals with diabetes, with approximately 33 million people impacted globally. DFUs pose significant challenges for patients and the healthcare system due to impaired healing mechanisms associated with hyperglycemia, cellular senescence, and other comorbidities associated with diabetes. FibroBiologics' research aims to address this issue by investigating the potential of using human dermal fibroblast (HDF) spheroids in promoting and accelerating the wound healing process in diabetic patients.

The study, led by a team of researchers including FibroBiologics' Chief Scientific Officer, Hamid Khoja, Ph.D., utilized a diabetic mouse model to evaluate the therapeutic effects of HDF spheroids on mice with wounds resembling DFUs.

Key findings from the study include:

- Acceleration of wound healing with a 60% decrease in relative wound area within 4 days post-treatment with a single administration of HDF spheroids compared to standard of care treatment control.
- Upregulation of pro-inflammatory cytokines such as interferon-gamma (IFN-γ), interleukins IL-1), and tumor necrosis factor-alpha (TNF-α), along with anti-inflammatory cytokines IL-6 and IL-10, indicating modulation of the wound microenvironment conducive to healing.
- Increased levels of vascular endothelial growth factors (VEGF) and endothelial growth factor receptors (EGFR), suggesting enhanced revascularization and re-epithelialization in HDF-treated wounds.
- Immunohistochemical analysis revealing the presence of markers indicative of fibroblast and endothelial proliferation, active cell proliferation, angiogenesis, and

macrophage proliferation in HDF-treated wounds.

"These results support the potential of HDF spheroids to expedite the healing process of chronic wounds associated with diabetes," said Dr. Khoja. "Our findings underscore the importance of further exploration and development of fibroblast spheroid-based therapies for clinical applications, particularly in patients with diabetic foot ulcers."

Details of the presentations are as follows:

Oral Presentation:

Presentation Title: Fibroblast Spheroid-mediated Accelerated Chronic Wound Healing in a Diabetic Mouse Model
Presenter: Hamid Khoja, Ph.D., Chief Scientific Officer, FibroBiologics
Session Title: Research and Development - Biologics
Session Date and Time: April 16, 2024, at 12:30 p.m. Eastern Standard Time

Poster Presentation:

Presentation Title: Dermal Fibroblast Spheroid-based Treatment of Chronic Wounds in a Diabetes Mouse Model
Presenter: Subhiksha Raghuram, MS, MD, Associate Scientist, FibroBiologics
Poster Session: Available Virtually

For more information, please visit FibroBiologics'website 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 therapeutic efficacy of dermal fibroblast spheroids, possible modulation of the wound microenvironment conducive to healing, enhanced revascularization and re-epithelialization in HDF-treated wounds, the possibility of fibroblast and endothelial proliferation, active cell proliferation, angiogenesis, and macrophage proliferation in HDF-treated wounds, and our expectations regarding plans for our current and future product candidates and programs. 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) expectations regarding the initiation, progress and expected results of our R&D efforts and preclinical studies; and (b) the unpredictable relationship between R&D and preclinical results and clinical study results. 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 cell therapy and regenerative medicine company developing a pipeline of treatments and seeking potential cures for chronic diseases using fibroblast cells and fibroblast-derived materials. FibroBiologics holds 150+ US and internationally issued patents/patents pending across various clinical pathways, including disc degeneration, orthopedics, multiple sclerosis, 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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