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FibroBiologics Presents Preclinical Data at the 2024 Keystone Symposia for Systemic Autoimmune and Autoinflammatory Diseases

HOUSTON, Feb. 13, 2024 /PRNewswire/ -- FibroBiologics (Nasdaq: FBLG) ("FibroBiologics"), a clinical-stage biotechnology company focused on the development of therapeutics and potential cures for chronic diseases using fibroblasts and fibroblast-derived materials encompassing 150+ patents issued and pending, presented preclinical data that employs human dermal fibroblast (HDF) spheroids to treat an induced mouse model of psoriasis at the 2024 Keystone Symposia for Systemic Autoimmune and Autoinflammatory Diseases during a poster presentation. See the poster "Exploring a Novel Cell-based Therapy Using Human Dermal Fibroblasts in a Mouse Model of Psoriasis" [here](#) or on the [publications](#) section of the FibroBiologics website.



"As part of our IND-enabling experiments for our early discovery phase psoriasis project, our in vivo animal studies have provided evidence that HDF spheroids have both external effects on measures of psoriasis severity in addition to a direct positive impact on reducing autoimmune inflammation," said Dr. Hamid Khoja, Chief Scientific Officer at FibroBiologics. "Cognizant of the high degree of psychological and physiological impact of psoriasis on patients, these findings indicate a potentially promising new direction for developing cell therapy-based alternative psoriasis treatments using fibroblast spheroids."

Psoriasis is an autoimmune inflammatory disorder often characterized by the development of plaques and scales on the skin, which in many individuals may lead to psoriatic arthritis. Psoriasis affects more than eight million adults in the United States alone, and FibroBiologics is investigating the therapeutic potential of HDFs for treating this disorder and providing relief to patients.

In our study using an imiquimod (IMQ)-induced psoriasis model in C57BL/6J mice, we found that a single intravenous administration of HDF spheroids significantly reduced the severity of psoriatic skin lesions, with a 35% decrease in average Psoriasis Area and Severity Index (PASI) score ($p < 0.0001$). Systemic effects were also evident, as HDF spheroid administration ameliorated IMQ-induced changes in spleen size and lymphocyte and

monocyte counts.

The ability of HDF spheroids to affect markers of psoriatic inflammation was further explored by co-culturing with human blood-derived monocytes. HDFs inhibited tumor necrosis factor (TNF)- α and interleukin (IL)-17 production in addition to suppressing cytokine-induced dendritic cell maturation by down-regulating CD40, CD80, CD86, and IL-12 and up-regulating inhibitory molecules, including IL-10, IL-1 receptor antagonist (IL-1Ra), and programmed cell death-1 (PD-L1).

For more information, please visit [FibroBiologics' website](#) or email FibroBiologics at: info@fibrobiologics.com.

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About FibroBiologics:

Based in Houston, FibroBiologics is a cell therapy, regenerative medicine company developing a pipeline of treatments and 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.

Investor Relations:

Nic Johnson or Harrison Seidner, Ph.D.

Russo Partners

212-845-4242

fibrobiologicsIR@russopr.com

Media Contact:

Liz Phillips


Russo Partners

(347) 956-7697

Elizabeth.phillips@russopartnersllc.com

General Inquiries:

info@fibrobiologics.com

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