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FibroBiologics Announces Updates for Novel Artificial Thymus Organoid Technology

HOUSTON, Oct. 29, 2024 (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 promising new findings from its artificial thymus organoid program. Recent results from the artificial thymus organoid program showed that fibroblasts and thymus-derived cell organoids can persist and function for over 50 days post-transplantation, with vascularization and the generation of a diverse array of mature T cells in animal models.

The artificial thymus organoid has shown an ability to support distinct vascularization, critical for sustained functionality in vivo, while producing fully mature T cells expressing T cell receptors (TCR). Fully mature T cells differentiate into various types of cells, including CD4, CD8, T-regulatory, and gamma delta T cells, and contribute to a well-rounded immune response. The artificial thymus organoid also produces T cells with diverse TCR-beta chains that enable the recognition of a broad spectrum of antigens.

"This data further supports our unique approach to using fibroblast-based organoids as potential therapeutics. Our findings to date underscore the potential of our artificial thymus organoid to restore and enhance immune function," said Hamid Khoja, Ph.D., Chief Scientific Officer. "The diverse TCR-beta repertoire, in combination with extended organoid functionality and vascularization, may provide an effective immune support platform for patients facing immune dysregulation, such as those with age-related immune decline or who have undergone chemotherapy. We are excited by this prospect and will continue our work to advance this technology toward clinical application."

"We believe these findings set the stage for revolutionary advancements in immunotherapy," said Pete O'Heeron, Founder and Chief Executive Officer. "By potentially offering a fibroblast-based organoid approach capable of generating a wide array of mature and functional T cells, we aim to provide patients with a safer, more effective option than currently utilized immune modulation and restoration therapies."

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 and capabilities of fibroblasts and artificial thymus organoids to

persist and function post-transplantation, with vascularization and the generation of a diverse array of mature T cells, and to produce T cells with diverse TCR-beta chains, the potential of artificial thymus organoids to restore and enhance immune function and to provide for revolutionary advancements in immunotherapy, and a safer, more effective option than currently utilized immune modulation and restoration therapies. 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. When used in this communication, the words "estimates," "projected," "expects," "anticipates," "forecasts," "plans," "intends," "believes," "seeks," "may," "will," "should," "future," "propose" and variations of these words or similar expressions (or the negative versions of such words or expressions) are intended to identify forward-looking statements. 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; (b) the unpredictable relationship between R&D and preclinical results and clinical study results; (c) risks related to FibroBiologics' liquidity and its ability to maintain capital resources sufficient to conduct its business, 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 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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