

# FibroGenesis Reports COVID-19 Breakthrough Using Fibroblast Cell Therapy

## ***PneumoBlast™ Reduces Pathology and Lung Fluid Accumulation in Model of COVID-19***

HOUSTON, May 21, 2020 /PRNewswire/ -- FibroGenesis announced today significant efficacy of its PneumoBlast™ product in an animal model of lung inflammation which resembles COVID-19. Mice immune systems were stimulated to enter hyper-activation mode, which causes symptoms similar to COVID-19. Once COVID-19 simulation was achieved, administration of PneumoBlast™ resulted in significant reduction in lung fluid accumulation. Additionally, reduction was observed from infiltration of inflammatory cells, as well as suppression of chemical mediators such as interleukin-6 (IL-6), which are associated with poor survival in COVID-19 patients.

In one set of experiments, control-untreated-mice possessed a lung wet weight to body weight ratio (LWW/BW) of 3.7 mg/g. Mice treated with lipopolysaccharide; an agent that induces COVID-19-like lung inflammation caused an increase of the LWW/BW ratio of 12.5 mg/g. Administration of bone marrow mesenchymal stem cells (BMSCs) to lipopolysaccharide-treated-mice only reduced the LWW/BW ratio to 9.9 mg/g. In strong contrast, PneumoBlast™ administration significantly reduced the LWW/BW ratio to 5.2 mg/g in lipopolysaccharide-treated-mice ( $p < .001$ ). PneumoBlast™ showed a 37% improvement in outcome compared to BMSCs, which was statistically significant ( $p < .005$ ). More importantly, after the introduction of PneumoBlast™ fibroblast cell therapy, average LWW/BW ratios returned to baseline control numbers of healthy lungs, which resulted in no statistical difference between recovered lungs and normal/healthy lungs using PneumoBlast™.

When the lung inflammation marker interleukin-6 was assessed, control mice possessed 532.3 pg/ml of the cytokine, whereas lipopolysaccharide administration caused an increase to 4400.1 pg/ml. Treatment with BMSCs resulted in a slight 26% decrease of IL-6 in the lipopolysaccharide-treated-mice to 3317.7 pg/ml, whereas PneumoBlast™ significantly reduced IL-6 by 80% to 896.2 pg/ml, which was highly significant ( $p < .001$ ). The use of PneumoBlast™ resulted in a 54% improvement over BMSCs ( $p < .001$ ). The introduction of PneumoBlast™ cell therapy resulted in a reduction of inflammation back to normal/healthy lung levels in just 24 hours.

“This preliminary data is compelling and urgently needs to be translated into clinical trials,” said Tom Ichim, Ph.D., Chief Scientific Officer of FibroGenesis. “Our studies showed PneumoBlast™ therapy significantly outperformed BMSCs in all parameters tested. We have previously obtained FDA IND Clearance #18151, for using similar cells to treat degenerative disc disease. Given the promising efficacy data, combined with existing human safety data, I strongly believe PneumoBlast™ may offer new hope to patients suffering from COVID-19 associated lung disease.”

“We are excited about this positive outcome and the ability to dramatically reduce fluid accumulation in the lungs,” said Pete O’Heeron, President and CEO of FibroGenesis. “Once again, compared to stem cells, fibroblasts appear to be a more robust and potent cell source. These data also suggest PneumoBlast™

may possess activity not only related to suppressing inflammation and fluid accumulation, but also to regenerating damage the COVID-19 virus causes to lungs. This is the best result we could have hoped for.”

### **About FibroGenesis**

Based in Houston, Texas, FibroGenesis, is a regenerative medicine company developing an innovative solution for chronic disease treatment using human dermal fibroblasts. Currently, FibroGenesis holds 200+ U.S. and international issued patents/patents pending across a variety of clinical pathways, including Disc Degeneration, Multiple Sclerosis, Parkinson's, Chronic Traumatic Encephalopathy, Cancer, Diabetes, Liver Failure and Heart Failure. Funded entirely by angel investors, FibroGenesis represents the next generation of medical advancement in cell therapy.

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