Further results from studies using orthotopic mouse models of lung disease, revealed that local pulmonary delivery of nanoparticles via inhalation reduced side-effects to other organs and enhanced cellular internalization of the drugs and nucleic acids. Given the fatal prognosis of IPF in a majority of the patients, this novel inhalation administration of drugs and nucleic acids can potentially lead to favorable and progression-free outcomes in the treatment and management of this disease.

**Market Applications:** Nanocarrier-Based Targeted Delivery System, Idiopathic Pulmonary Fibrosis Treatment, Inhalation treatment

**Advantages:** High efficiency in delivering drugs and nucleic acids specifically to lungs via inhalation. Enhanced cellular internalization of siRNA delivered by nanoparticles. Accumulation of a drug and nucleic acid predominately in the lungs, leaving healthy organs intact. Enhanced therapeutic efficiency when compared with conventional treatment.

**Intellectual Property & Development Status:** Patent pending.