Idiopathic pulmonary fibrosis (IPF) is a rare, not curable, chronic lung disease. The INAT project aims to develop a novel nanomedicine, to be delivered locally and non-invasively via aerosols into the lungs to improve its therapeutic index (high efficacy, low side effects). This nanomedicine combines an innovative nanoparticle patented by Partner 5, which is biodegradable and highly effective and an oligonucleotide produced by Partner 4, to target a profibrosis mediator discovered by Partner 1. The nanomedicine will be formulated for inhalation in humans and its toxicity and efficacy tested preclinically by Partners 1-3.

The INAT consortium synergistically combines the efforts of 3 academic labs with complementary expertise in aerosolized medicine and 2 industry partners, whose platform technologies will be merged. This will allow us to develop a novel nanomedicine for inhalation in humans and to achieve its robust preclinical evaluation for the treatment of IPF.