

**INNOVATIVE TREATMENT • PULMONARY FIBROSIS • ACADEMIC RESEARCH****SATT Nord-led Academic Partnership Collaborates with Boehringer Ingelheim to Develop a Novel Treatment for People Living with Pulmonary Fibrosis**

SATT Nord (Technology transfer office) and its partners from Centre National de la Recherche Scientifique (CNRS), University of Lille, Pasteur Institute of Lille, University of Paris-Cité, France and University of Pavia, Italy are entering in collaboration and licensing agreements with Boehringer Ingelheim with the goal to advance an innovative treatment called K1K1 into clinical development for the treatment of people living with pulmonary fibrosis.

Fibrosis account for more than one third of mortality worldwide<sup>1</sup>. Especially, Idiopathic Pulmonary Fibrosis (IPF) is a fast-progressing fibrotic disease of the lung with an average survival time of only 3 years. Symptoms include breathlessness during activity, a dry and persistent cough, chest discomfort, fatigue, and weakness. Although considered “rare,” IPF affects approximately 3 million people worldwide<sup>2</sup>. The disease primarily affects patients over the age of 50 and affects more men than women<sup>3</sup>. While current treatments have been successful in slowing down the decline in lung function, a huge unmet patient need remains to restore lung function to bring back quality of patient’s life.

K1K1 triggers anti-fibrotic and regenerative mechanisms by activating the hepatocyte growth factor receptor (c-MET or HGFR) signaling. This engineered molecule consists of two copies of the kringle 1 (K1) domain of the hepatocyte growth factor / Scatter Factor (HGF/SF), the natural agonist of c-MET.

SATT Nord has supported the European consortium early to translate the concept of K1 domain dimerization into a potential therapeutic innovation: the group of Pr. Ermanno Gherardi from University of Pavia led the structural biology and protein engineering efforts for K1K1 and the group of Dr. Oleg Melnyk from CNRS Lille generated initial data showing the therapeutic potential of K1 multimerization and characterized the activity of K1K1 in vitro and in vivo.

“We are happy to collaborate with Boehringer Ingelheim, a leader in pulmonary fibrosis therapy and research, and excited to work with one of the world's top 20 pharmaceutical companies,” said Fabrice LEFEBVRE, SATT Nord executive chairman. “Being able to potentially bring this novel treatment to patients with the help of a strong partner is very gratifying for the research teams from Pavia, Lille and Paris, who have achieved this innovation in a long-term pan-European cooperation.”

Based on the promising data Boehringer Ingelheim has entered into an exclusive license with SATT Nord to progress K1K1 in preclinical and clinical development, with the ultimate goal to bring a novel treatment to patients.

The collaboration and license agreements with Boehringer Ingelheim, coordinated by Dr. Jérôme VICOONE from CNRS representing the academic partnership, takes the project to the next stage leveraging Boehringer Ingelheim's world-class expertise in R&D for therapies addressing high patient needs in pulmonology. As part of the collaboration agreement, SATT Nord and its partners will be able to continue investigating the potential of K1K1 in other chronic diseases. Boehringer Ingelheim will be responsible for research and all further development activities on K1K1 and its potential commercialization on a worldwide basis.

#### **Références :**

**Ref 1** - [Fibrotic diseases account for more than one third of mortality worldwide.](#)

[Am J Physiol Cell Physiol](#). 2013 Feb 1; 304(3): C216–C225. Published online 2012 Dec 19. doi: [10.1152/ajpcell.00328.2012](#)

**Ref 2** - "Idiopathic pulmonary fibrosis (IPF) is a progressive devastating lung disease with substantial morbidity. It is associated with cough, dyspnea and impaired quality of life. If left untreated, IPF has a median survival of 3 years. IPF affects ~3 million people worldwide, with increasing incidence in older patients. This is the statement found at DOI: [10.1016/j.lpm.2023.104166](#)

**Ref 3** - The age and gender statements I would reference to [What Is Idiopathic Pulmonary Fibrosis? IPF Part 1 \(thoracic.org\)](#)

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#### **CNRS**

The French National Center for Scientific Research (*CNRS*) is a public-funded institution that covers all scientific disciplines, from the humanities and social sciences to biological sciences, nuclear and particle physics, information sciences, engineering and systems, physics, mathematical sciences, chemistry, Earth sciences and astronomy, and ecology and the environment. With 32,000 researchers, engineers and technicians, the CNRS is at the forefront of international research and is the world's first producer of scientific research papers. It has been home to no fewer than 21 Nobel Prize laureates and 12 Fields Medal winners. The organization plays a key role worldwide through 36 International Joint Units and partnership agreements with more than 76 countries. It is also involved in the development and operation of large-scale research facilities, including telescopes, particle accelerators, supercomputers and very large databases.

#### **SATT Nord**

SATT Nord is a Technology Transfer Office whose mission is to work in close collaboration with the academic research laboratories. It is a tool for economic development through innovation. SATT Nord covers the whole value chain of technology transfer: increasing the awareness of researchers to innovation, sourcing high potential inventions in academic research labs, cofunding private-public collaborations, financing proof of concept and prototyping projects to support their further development and intellectual protection, as well as marketing "ready to industrialize" technologies through licensing out agreements, or creating start-up businesses.

#### Key figures:

1.090 Innovative projects detected, 186 Patents filed, 44 €M invested, 55 Licence agreements, 23 DeepTech startups created,

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