

Lys Therapeutics secures an additional €2.15 million in funding as a winner of the i-Nov innovation competition organized by the French government to accelerate the clinical development of its drug candidate LYS241



This funding will advance LYS241, Lys Therapeutics' innovative treatment targeting neurovascular and neurodegenerative diseases, into clinical phases.

Lyon & Caen, France, September 24, 2024 – Lys Therapeutics, a pioneering French biotechnology company revolutionizing the treatment of patients suffering from neurodegenerative or neurovascular diseases, today announces that it has secured €2.15 million in funding from France 2030 as a laureate of the 12th edition of the French Government i-Nov innovation competition, led by the General Secretariat for Investment (SGPI) and operated by Bpifrance. Lys Therapeutics has received the largest amount of funding among the winners of this edition of the competition.

After being a winner and Grand Prize recipient of the i-Lab innovation competition in 2021, and obtaining the Deeptech Development grant from Bpifrance in 2022, Lys Therapeutics now benefits from this new non-dilutive funding, demonstrating the support and interest from health authorities and public bodies in its therapeutic innovation, the LYS241 biotherapy for treating patients with neurological diseases. This groundbreaking innovation aims to restore the physiological functioning of the blood-brain barrier, reducing neuroinflammatory and neurodegenerative processes associated with neurovascular and neurodegenerative pathologies.

This €2.15 million innovation grant will accelerate the pharmaceutical development of Lys Therapeutics' drug candidate and advance it into initial clinical trials.

"Through the funding granted to Lys Therapeutics, the General Secretariat for Investment (SGPI), in charge of France 2030, reaffirms its unwavering support for French innovation, particularly in the strategic health sector," said Bruno Bonnell, General Secretary for Investment. "This investment illustrates our commitment to developing advanced therapeutic solutions and reflects our long-term vision for the France 2030 plan, which aims to position France as a global leader in biotherapies and biotechnology. This is the work being done by the Health Innovation Agency within the SGPI, along with the entire ecosystem."

"The commitment of the Health Innovation Agency (AIS) to initiatives such as that of Lys Therapeutics reflects our belief that scientific advances in healthcare are essential to addressing today's medical challenges. Supporting promising projects like Lys Therapeutics' is central to our mission to accelerate

the development of new treatments for neurological diseases and improve patients' quality of life," said Lise Alter, Director of the AIS.

"We are very proud to be a winner of the i-Nov innovation competition and warmly thank the French government and Bpifrance for this new support and for their renewed trust in Lys Therapeutics," said Dr. Manuel Blanc, CEO and co-founder of the company, who added, "This major funding strengthens the company's overall resources and accelerates our developments, particularly the preparation and launch of the first clinical trials of LYS241. Our goal is to provide a therapeutic solution as soon as possible to patients suffering from neurological diseases where neuroinflammation plays a decisive role and where medical needs remain high, such as Parkinson's disease, multiple sclerosis, and stroke."

About France 2030

The France 2030 investment plan:

- **Embodies a dual ambition:** to transform key sectors of our economy (energy, automotive, aeronautics, and space) through technological innovation and to position France not just as a player but as a leader in tomorrow's world. From fundamental research to the emergence of an idea, and from the production of a new product or service, France 2030 supports the entire innovation lifecycle through to industrialization.

- **Is unprecedented in its scale:** €54 billion will be invested to ensure that our companies, universities, and research organizations successfully navigate their transitions in these strategic sectors. The goal is to enable them to meet the ecological and competitiveness challenges of the future and to create the champions of tomorrow in our fields of excellence. France 2030 is defined by two overarching objectives: to dedicate 50% of its expenditures to the decarbonization of the economy and 50% to emerging players driving innovation, without any spending harmful to the environment (in line with the "Do No Significant Harm" principle).

- **Is implemented collectively:** designed and deployed in consultation with economic, academic, local, and European actors to determine its strategic orientations and flagship actions. Project leaders are invited to submit their proposals through open, rigorous, and selective procedures to benefit from State support.

- **Is led by the General Secretariat for Investment** on behalf of the Prime Minister and implemented by the French Agency for Ecological Transition (ADEME), the National Research Agency (ANR), Bpifrance, and the Caisse des Dépôts et Consignations (CDC).

About Bpifrance

Bpifrance finances businesses at every stage of their development – through loans, guarantees, and equity. Bpifrance supports their innovation and international projects. It also handles their export activity through a wide range of products. Advice, university networking, and acceleration programs for startups, SMEs, and mid-sized companies are also part of the offering for entrepreneurs.

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About LYS241

LYS241 est un anticorps monoclonal IgG1 entièrement humanisé conçu pour contrer les mécanismes impliqués dans la physiopathologie de nombreuses maladies neurologiques associées à la dysfonction de la barrière hémato-encéphalique (BHE). L'ouverture de la BHE permet le passage accru de molécules toxiques et cellules inflammatoires dans le système nerveux central, entraînant neuroinflammation, excitotoxicité et mort neuronale.

Dans le cadre des **accidents vasculaires cérébraux** (AVC) ischémiques, LYS241 atténue également les effets secondaires « off-target » des thrombolytiques de référence (alteplase et tenecteplase) sur les cellules endothéliales des vaisseaux tout en améliorant la recanalisation sanguine. Ces effets secondaires, allant de la perturbation à la rupture de la BHE, provoquent des hémorragies et une inflammation sévère qui impactent fortement la récupération fonctionnelle des patients.

La capacité de LYS241 à restaurer l'intégrité de la BHE et à protéger le cerveau suscite également un grand intérêt pour les **maladies neurodégénératives** telles que la **sclérose en plaques**, d'autres **maladies démyélinisantes sévères** et la **maladie de Parkinson**. Pour ces indications, Lys Therapeutics prévoit un plan de développement clinique important.

About Lys Therapeutics

First-in-class biotherapies against neurological diseases.

Lys Therapeutics is a pioneering biotechnology company revolutionizing the treatment of patients with neurodegenerative or neurovascular diseases by targeting blood-brain barrier (BBB) dysfunctions.

In the pathophysiology of various neurological diseases such as **stroke, multiple sclerosis, and Parkinson's disease**, the hyperactivation of endothelial NMDA receptors (NMDAR) by tissue plasminogen activator (tPA) which is overexpressed in these patients leads to the degradation of tight junctions and BBB dysfunction. This allows inflammatory cells and toxic molecules to migrate into the brain, triggering excitotoxicity and neuroinflammation, major contributors to neurodegeneration.

Lys Therapeutics' lead drug candidate, **LYS241**, is a **first-in-class monoclonal antibody** with a unique mechanism of action that effectively counteracts these pathological mechanisms. Specifically, LYS241 acts in blood vessels to prevent the binding of tPA to NMDAR without interfering with the physiological function of NMDAR. By inhibiting this interaction, NMDAR can function normally, and the activation of harmful downstream cellular pathways is halted. Tight junctions are restored, endothelial cells return to their healthy state, and BBB function is restored, protecting the brain from further neuro-inflammatory and neurodegenerative cascades.

Lys Therapeutics' approach of targeting neuroinflammation to combat neurodegeneration represents a promising avenue in the search for effective treatments for these debilitating disorders.

More information on lystherapeutics.com

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