



Press release

Genethon and Samabriva strengthen their partnership to develop of a cost-effective plant-based AAV manufacturing process for greater patient access to gene therapies.

Amiens, France – 17th of September 2024 - Genethon, a pioneer and leader in gene therapy research and development for rare genetic diseases and Samabriva, a plant-based biotechnology company are pleased to announce their continued collaboration through on a project that will complete the development of a new way of producing AAVs using Samabriva's proprietary technology.

The project will be funded by France's Health Innovation 2030 plan of more than 1,4 million Euros. The initiative is part of a global 800 million Euro investment to make France an international leader in biotherapies and bioproduction. The initiative aims to support the development of new biotherapies and industrial processes for their manufacture.

Current manufacturing methods for AAV vectors in gene therapy are not sufficient to supply, at an affordable cost, the quantities needed to treat diseases that require high doses or have high prevalence. The aim of this collaborative programme is to increase yields and significantly reduce bioproduction costs, and ultimately help decreasing the cost of these treatments. This is key to ensuring patient access and AAV gene therapy market development.

In this context, the Genethon and Samabriva partnership aims to develop a competitive process for producing AAVs using a plant-based viral vector expression system. This project is based on results obtained over the past six years, which resulted in a series of patents filed in 2020. The collaboration combines Genethon's expertise in gene therapy and Samabriva's expertise in plant-based bioproduction. By combining their mutual know-how, the partners will develop a highly cost-controlled expression system, with AAV production efficiencies amenable to industry standards. The goal of the collaboration is, ultimately, to demonstrate the ability of this innovative production system to produce AAVs in industrial-scale bioreactors.

Serge Braun, Scientific director of AFM-Telethon and Director of the neuromuscular strategy at Genethon – *“Genethon is a pioneer not only in the development of advanced therapy medicinal products for patients suffering from rare diseases, but also in the manufacturing development of these products. In this field, disruptive technologies are instrumental in solving the question of productivity and cost*

of goods in AAV gene therapies. Our collaboration with Samabriva may fulfil such an unmet need for breakthrough solutions. Thanks to BPI France (the Public Investment Bank of France), the collaboration between Genethon and Samabriva will help us translate our common technology to an industrializable process with the aim of providing clinical grade AAV vectors to a much lower cost, a driver for patient access.

Patrick Santambien, Director of Technological Development at Genethon – *“For more than ten years, Genethon has been pushing back the gene therapy bioproduction limitations by focusing efforts on innovative technologies and approaches. It has been six years since the start of the partnership with Samabriva. Today, with an established proof of concept and thanks to BPI France, Genethon and Samabriva are more committed than ever to the acceleration phase towards the industrialization of this disruptive AAV vector production process.*

Marina Guillet, CEO of Samabriva - *“We are delighted to partner with Genethon on this groundbreaking project to develop an innovative manufacturing process using our proprietary plant-based technology. Together we aim to significantly increase production efficiency and reduce the manufacturing costs of AAV therapies. This will help ensure broader patient access to these life-saving gene therapies by making them more affordable. We would like to thank BPI France which will enable us to accelerate the pre-industrialisation of our innovative bioproduction process currently under development.”*

About Genethon

As a pioneer in the discovery and development of gene therapies for rare diseases, Genethon is a non-profit laboratory that was established by AFM-Telethon. A first gene therapy, for spinal muscular atrophy, to which Genethon contributed was approved worldwide. With more than 200 scientists and professional staff, Genethon is pursuing its aim to develop innovative therapies which change the lives of patients suffering from rare genetic diseases. Thirteen products stemming from Genethon’s R&D or from collaborations are at clinical trial stages for diseases of the liver, blood, immune system, muscles, and eyes. Seven other products could enter clinical trials over the next five years.

To know more www.genethon.com

About Samabriva

Samabriva is a plant-based biotechnology company which has successfully developed a proprietary bioproduction platform that is already being used by the pharmaceuticals and cosmetics industry. For companies that need affordable production of high-value molecules our innovative, flexible system is a game-changing solution.

Samabriva’s platform combines the advantages of plant-based systems (low cost, safe, serum- and animal-free) with traditional bioproduction in large-scale bioreactors. This delivers continuous, reliable and environmentally sustainable manufacture of a wide range of high value molecules all year round, in any location.

Recombinant proteins are typically produced in bacteria (*Escherichia coli*) or more commonly in mammalian (typically Chinese Hamster Ovary (CHO)) cell cultures. These bioproduction systems are complex and costly. Mammalian cell cultures often use animal-derived media that require extensive purification of the final product to avoid any risk of virus or prion transmission. Thus, the manufacture of recombinant proteins currently lacks cost effective and contaminant free production processes. Samabriva's platform enables the production of recombinant proteins at scale in a more controlled and environmentally sustainable way.

Find out more at www.samabriva.com

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