

AbolerIS: testing an antibody to kill effector T cells tied to autoimmunity

University of Nantes spinout heading toward clinic with €27.3M from international syndicate

By Paul Bonanos, Director of Biopharma Intelligence
September 19, 2023 1:36 AM GMT+2

ARTICLE | Emerging Company Profile

BioCentury & Getty Images

Building on its 2020 seed funding, European academic spinout AbolerIS has drawn a new series A round to start clinical work on its lead immunology program, designed to eliminate precursors of effector T cells that proliferate in autoimmune diseases.

Belgium-based [AbolerIS Pharma S.A.S.](#) hopes to begin its first clinical study of an antibody selectively targeting CD45RC, an isoform of CD45. Upstream of inflammatory cytokines, the antibody induces apoptosis of precursors to autoreactive T cells. The company believes its approach can spare regulatory T cells, the formation of which is suppressed by the effector cells, and improve the balance of the two in patients with a group of immune disorders.

CEO Ann Meulemans told BioCentury that by selectively targeting the CD45 subtype, the antibody also does not act on T cells that are responsible for normal immune responses against viral infections.

“We are rebalancing the immune system, and resetting it,” she said.

Founded by three scientists with ties to the University of Nantes, the four-year-old start-up drew a small seed round in November 2020. Now, the company has raised €27.3 million (\$29.1 million) in its series A led by Caixa Capital Risc, with Sound Bioventures and Newton Biocapital as co-leaders.

AbolerIS has conducted a series of animal studies, and believes it has a potential pipeline-in-a-product in the CD45RC program. By 2H24, Meulemans said the company hopes to begin a trial in healthy volunteers, followed by a clinical plan that will initially focus on rheumatoid arthritis patients refractory to standard-of-care, anti-TNF therapies.

Meulemans said those patients are easy to identify and access, given that a large percentage of patients on anti-TNFs become refractory.

Beyond the lead indication, Meulemans noted that the scientific co-founders had a lot of experience studying graft-versus-host disease. She also named a rare disease, autoimmune polyendocrinopathy candidiasis ectodermal dystrophy (APECED), as a possible indication for its program.

“We will be data-driven, as we always are in R&D,” she said.

The set of indications could give AbolerIS flexibility as it navigates beyond the series A round, which Meulemans said should deliver proof-of-concept data in the lead indication. The biotech could raise a series B round, or could enter a pharma partnership in at least one indication.

APECED, an autosomal recessive disease characterized by organ-specific destruction of endocrine tissues, could give AbolerIS an opportunity to bring the antibody to market on its own. Meulemans said clinical studies in the indication could be small and relatively short, and FDA could offer a chance to apply for accelerated approval.

Meulemans joined AbolerIS in 2020, a year after it was formed. She said early investor Newton Biocapital reached out to her about the project via 2 Bridge N.V., a consultancy Meulemans co-founded and where she serves as co-CEO.

Despite a lack of face-to-face interaction during the COVID-19 pandemic, 2 Bridge assisted the co-founders in fleshing out the company, acting as an outside development team as the projects advanced and the young biotech sought to duplicate experiments that had been conducted previously in the academic setting.

The lead and existing investors were joined in the series A by a host of institutional investors in the Walloon region of Belgium, Meulemans said. "Newton has an enormous network in the Walloon ecosystem."

A longtime employee of Johnson & Johnson (NYSE:JNJ), Meulemans has more recently worked with start-ups including Movetis N.V., which Shire plc acquired in 2010, and Octimet Oncology N.V.

AbolerIS's co-founders include Ignacio Anegon, who is director of research at France's Institut National de la Santé et de la Recherche Médicale (INSERM), and Carole Guillonnet, director of the French National Center for Scientific Research (CNRS). Both are affiliated with the Center of Research in Transplantation and Translational Immunology at Nantes University Hospital. A third co-founder,

François-Xavier Hubert, also held a position at the hospital; he is a past president and former director at AbolerIS.

COMPANY PROFILE

AbolerIS Pharma S.A.S.

Gosselies, Belgium

Technology: Antibody targeting an isoform of CD45

Origin of technology: Nantes University Hospital

Disease focus: Immunology

Clinical status: Preclinical

Founded: 2019 by Ignacio Anegon, Carole Guillonneau and François-Xavier Hubert

Academic collaborators: University of Nantes

Corporate partners: None

Number of employees: 3

Funds raised: €29.5 million (\$31.5 million)

Investors: Caixa Capital Risc, Sound Bioventures, Newton Biocapital, SFPI-FPIM, Wallonie Entreprendre, Sambrinvest, Investsud Tech, and Relyens Innovation Santé/Turenne Capital

CEO: Ann Meulemans

Patents: Undisclosed