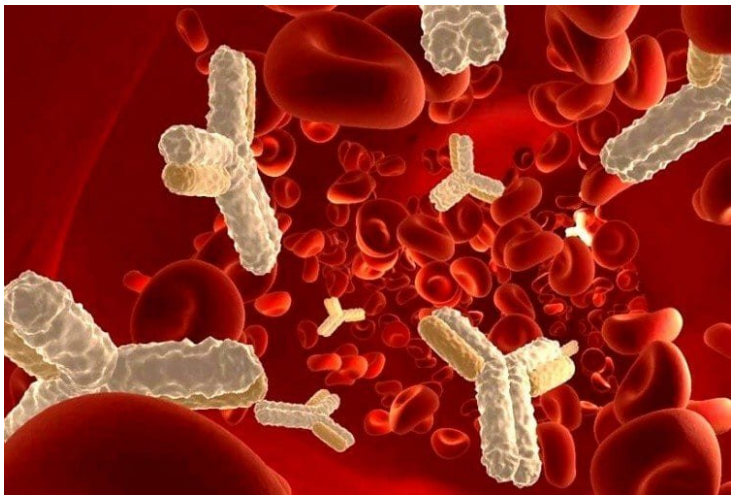
BioSpectrum
the business of Bio & Health Sciences
ASIA EDITION

SciRhom Initiates First-In-Class Program to treat major Autoimmune Diseases

05 November 2019 | News

Bench to bedside Antibody development research provides a new business opportunity: Newly discovered antibodies against iRhom2 block several pro-inflammatory pathways simultaneously, promising significant improvement over current autoimmune therapies.



SciRhom GmbH, a therapeutic antibody company, announced on 5 Nov 2019 its development of first-in-class antibodies against iRhom2, a key modulator of several major pro-inflammatory signalling pathways, including TNF-alpha signalling. Based on a decade of cutting-edge bench research and the completion of a challenging, yet ultimately successful antibody campaign, SciRhom is now in the unique position to pursue the development of monoclonal antibodies against iRhom2 for the treatment of major autoimmune diseases.

iRhom2 is a protein that controls the tumour necrosis factor-alpha-convertase (TACE; also known as ADAM17), a set of molecular scissors that activates several crucial signalling pathways, including TNF-alpha (tumour necrosis factor-alpha) and another disease-related signalling. Blocking TACE, however, raises major concerns about side effects, as TACE-deficient patients show severe skin and intestinal defects. In contrast, antibodies against iRhom2 would have a unique advantage over TACE-targeted therapies of simultaneously blocking several TACE-dependent disease-associated pro-inflammatory pathways without causing lesions in the skin and intestinal barrier. Moreover, antibodies against iRhom2 are expected to be superior over anti-TNF-alpha biologics due to their ability to interfere with other important pro-inflammatory pathways. This concept has been validated using iRhom2 knockout mice, which are normal and healthy but are protected from Rheumatoid Arthritis (RA) and glomerulonephritis caused by Systemic Lupus Erythematosus.

These proof-of-concept studies were primarily conducted by Professor Dr Carl Blobel, co-founder of SciRhom and pioneer of the TACE/ADAM17 field, and his colleague, Professor Dr Jane Salmon. Prof. Blobel is Program Director of the Arthritis and Tissue Degeneration Program at Hospital for Special Surgery (HSS) in New York, USA, one of the world's top-ranking academic medical centres in Rheumatology and musculoskeletal health.

From these promising results, SciRhom has identified iRhom2-specific antibodies that block TNF-alpha release by TACE and is currently advancing the preclinical development of its first-in-class anti-iRhom2 antibodies towards IND-enabling studies. SciRhom was founded and is led by a highly experienced management team with an excellent track record in antibody drug development that consists of Dr Jens Ruhe, co-founder of U3 Pharma and former Director R&D at U3

Pharma / Daiichi Sankyo and Dr. Matthias Schneider, previously Preclinical Head of the Patritumab lead program at U3 Pharma / Daiichi Sankyo. In addition to Professor Dr Carl Blobel, the co-founders of SciRhom are Professor Dr Axel Ullrich, biotech pioneer, former Director at the Max Planck Institute of Biochemistry and recent recipient of the prestigious Lasker Award, Dr Andreas Jenne, serial biotech entrepreneur, and HSS. To date, SciRhom has secured about EUR 7 million in seed funding from the High-Tech Gruenderfonds (HTGF), HSS and private investors.

“We are delighted with the excellent and close collaboration with Professor Blobel and HSS, the outstanding work of our team and the strong support of all of our shareholders. Our joint efforts led to the successful generation of first-in-class antibodies against the novel and highly promising target iRhom2, which are protected by the filing of two strong patent applications,” said Dr Jens Ruhe. “Based on the novel mechanism of action, this approach promises to be significantly more effective and much safer therapy for autoimmune disease patients. Backed by the clinical excellence of HSS in Rheumatology we are now thrilled to take our anti-iRhom2 antibodies into the clinic as expediently as possible.”

“With the launch of SciRhom we are fulfilling a vision our teams have pursued for more than a decade. We are excited by the opportunity to advance our bench to bedside research into clinical development to provide novel targeted treatment options for patients with debilitating and life-threatening autoimmune diseases,” commented Prof. Dr Carl Blobel. “iRhom2 provides a unique and completely new approach for the inhibition of several disease-causing pathways simultaneously, including TNF-alpha signalling. We have identified antibodies with a unique profile, showing potent inhibition of iRhom2/TACE without affecting TACE-dependent pathways that are essential for normal physiology. We hope that these efforts will ultimately give clinicians superior treatment options to improve the quality of life of patients.”