The STING pathway as a master key in autoimmune disease

ISD Immunotech Announces Scientific Publication Supporting Therapeutic Potential of its Lead Candidate ISD017 in Severe Lupus Patients

Prof. Søren Riis Paludan, Lead Investigator, Aarhus University

COPENHAGEN, DENMARK, April 6, 2021 /EINPresswire.com/ -- ISD Immunotech, a preclinical stage biotechnology company developing a first-in-class peptide STING antagonist to treat severe systemic lupus erythematosus announced today the publication of a paper in the peer-reviewed scientific journal EBioMedicine entitled “A STING antagonist modulating the interaction with STIM1 blocks ER-to-Golgi trafficking and inhibits lupus pathology”.

The paper describes ISD017, a selective peptide inhibitor of stimulator of interferon genes (STING), that prevents all downstream activities of STING and disease in several mouse models of lupus. The drug candidate also prevents pathological inflammatory immune response in lupus patient blood samples. Thus, the results support the clinical benefit of ISD017 and its potential as a treatment for severe lupus.

Prof. Søren Riis Paludan, Professor in virology and immunology from the Department of Biomedicine Aarhus University, Denmark and Chairman of the Scientific Advisory Board (SAB) of ISD Immunotech was the study’s Principal Investigator. The paper is co-authored by a team including Assoc. Prof. Rayk Behrendt, Dresden Technical University, and Assoc. Prof. Prapaporn Pisikun of Faculty of Medicine Ramathibodi, Thailand and member of ISD Immunotech’s SAB. The paper can be accessed here: https://www.sciencedirect.com/science/article/pii/S2352396421001079

ISD Immunotech has been working in close partnership with Profs. Paludan, Behrendt, and Pisikun to understand the mechanism of action of ISD017 and the efficacy and potency of this unique peptide drug candidate in animal models of lupus. There are currently few therapeutic

options for patients suffering from severe lupus. The STING pathway protects people from infections and malignant diseases when activated correctly. However, STING can be activated excessively such as in autoimmune diseases. There is strong evidence that STING pathway overactivation is at play as a master key in a subgroup of lupus patients with severe disease and therefore ISD017 is being developed as a first-in-class personalized drug to treat this underserved patient population.

Prof. Søren Riis Paludan is a world-renowned leader in STING research from Aarhus University's Department of Biomedicine who is dedicated to the study of the innate immune response and who is a forerunner in advancing the understanding of the role of STING in innate immunity and in disease. Prof. Paludan states, “The advances presented in this paper offer an increasingly detailed picture of the molecular and cellular alterations underlying autoimmunity and lupus which is needed. In lupus there is tremendous variability between individuals and patients at the symptom, molecular and cellular level. Ultimately this will help get us closer to our goal of a more personalized treatment for lupus patients in which molecular and cellular markers help tailor patient management to each individual.”

Tara Heitner, CEO of ISD Immunotech, commented: “We are pleased to have this work published in EBioMedicine by our academic collaborators and members of our Scientific Advisory Board. We appreciate this work provides important new insights into the mode of action of ISD017 and may facilitate a better understanding of pathogenesis in severe Lupus. We anticipate that these additional biological insights will help to inform how ISD Immunotech can develop ISD017 to the benefit of many underserved lupus patients.”

About the STING Pathway
STING (stimulator of interferon genes) is a key mediator of innate immunity and the STING pathway has been shown to be overactivated in severe lupus and a central mediator of all downstream events leading to disease symptoms. When overstimulated, as in the case of severe lupus, STING induces the expression of type I interferon and other pro-inflammatory cytokines which activate immune cells leading to severe organ damage complications.

About ISD Immunotech
ISD Immunotech is a private preclinical biotech startup focusing on the development of a peptide therapeutic, ISD017, which uniquely blocks all aspects of STING pathway overactivation in severe SLE. The company, headquartered in Copenhagen, is a spinout of Aarhus University, Denmark, which is an academic center of excellence in STING biology. The company is funded by Novo Seeds. www.isd-immunotech.com

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