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Journal of Neuroinflammation Article Highlights the Role of Inflammasomes in the Pathogenesis of Multiple Sclerosis, and Mentions the Potential for ASC Inhibitor, IC 100, to Interfere with Inflammasome Signaling at Multiple Points in the Inflammatory Pathway

Article authored by acclaimed experts in neuro-inflammation, and leaders at the forefront of inflammasome research at University of Miami Miller School of Medicine

IC 100 is ZyVersa Therapeutics' lead anti-inflammatory candidate in development for numerous inflammatory conditions

WESTON, Fla., Sept. 8, 2020 /PRNewswire/ -- ZyVersa Therapeutics, Inc. (ZyVersa), a clinical stage specialty biopharmaceutical company developing first-in-class drugs for treatment of inflammatory and renal diseases, is pleased to announce that the *Journal of Neuroinflammation* has just published a review article summarizing data demonstrating how different inflammasome signaling pathways contribute to the etiology of multiple sclerosis (MS). It also addresses inflammasomes as potential drug targets.

The article presents data on IC 100, inflammasome ASC inhibitor, in an EAE mouse model

of MS. Data reveal that IC 100 resulted in a significant reduction in CD4 and CD8 T cell infiltration into the spinal cord, which was associated with improved functional outcomes in EAE mice. IC 100 also reduced microglial activation, a hallmark of MS pathogenesis and progression.

"The ASC inflammasome component is expected to be a powerful target against chronic inflammation associated with MS and other inflammatory diseases," stated Dr. Robert W. Keane, an author of the review article, and Professor, Physiology and Biophysics, Neurological Surgery and Microbiology, and Immunology, University of Miami Miller School of Medicine. "ASC mediates amplification of the inflammasome response by at least three mechanisms: (1) In the presence of ASC, caspase-1 can activate a greater number of caspase-1 molecules; (2) caspase-1-mediated processing of pro-IL-1β and pro-IL-18 affects infiltration of immune cells, hence exacerbating the inflammatory response; and (3) ASC specks are released by pyroptosis and taken up by neighboring cells, promoting ASC assembly in the target cells. ASC inhibitor, IC 100, has potential to interfere with inflammasome signaling at each of these three levels of amplification."

"Multiple types of inflammasomes, including NLRP3, NLRP1, NLRC4, and AIM2, have been shown to contribute to the pathology of MS," said Stephen C. Glover, Co-founder, Chief Executive Officer, and President of ZyVersa Therapeutics. "As an ASC inhibitor, IC 100 has the ability to block each of these types. Based on this, and the promising data from the EAE mouse model of MS, we are excited about the potential of IC 100 as an effective therapeutic option for MS."

To review the publication, Click Here.

About Multiple Sclerosis

MS is a potentially disabling disease of the brain and spinal cord, affecting around 400,000 people in the U.S. and 2.1 million people worldwide. It occurs as a result of the immune system attacking the protective sheath (myelin) that covers nerve fibers, resulting in communication problems between the brain and the rest of the body. Eventually, the disease can cause permanent damage or deterioration of the nerves.

Common signs and symptoms of MS include numbness or weakness in one or more limbs, electric-shock sensations with certain neck movements, tremor, lack of coordination, or unsteady gait. Some people with severe MS may lose the ability to walk independently or at all. Vision problems are also common, including partial or complete loss of sight. Other symptoms may include slurred speech, fatigue, dizziness, and tingling or pain in parts of the body. Significant disability occurs in more than 30% of patients within 20-25 years.

About IC 100

IC 100 is a novel humanized IgG4 monoclonal antibody that inhibits the inflammasome adaptor protein ASC. IC 100 attenuates both initiation and perpetuation of the inflammatory response. It does so by binding to a specific region of the ASC component of multiple types of inflammasomes, including NLRP1, NLRP2, NLRP3, NLRC4, AIM2, Pyrin. Intracellularly, IC 100 binds to ASC monomers, inhibiting inflammasome formation, thereby blocking activation of IL-1β early in the inflammatory cascade. IC 100 also binds to ASC in ASC Specks, both intracellularly and extracellularly, further blocking activation of IL-1β, and the

perpetuation of the inflammatory response that is pathogenic in inflammatory diseases. Because active cytokines amplify adaptive immunity through various mechanisms, IC 100, by attenuating cytokine activation, attenuates the adaptive immune response as well.

For more information about inflammasomes, Click Here to review our White Paper.

About ZyVersa Therapeutics, Inc.

ZyVersa is a clinical stage specialty biopharmaceutical company leveraging advanced, proprietary technologies to develop first-in-class drugs. Our focus is on patients with inflammatory or renal diseases who have significant unmet medical needs. Our lead anti-inflammatory candidate is IC 100, a novel monoclonal antibody that inhibits the inflammasome adaptor protein ASC. IC 100 has potential to treat multiple inflammatory diseases. Our lead renal candidate is Phase 2a-ready VAR 200, a cholesterol efflux mediator for treatment of a rare renal disease, focal segmental glomerulosclerosis (FSGS). For more information, please visit ZyVersa.com.

View original content to download multimedia:http://www.prnewswire.com/news-releases/journal-of-neuroinflammation-article-highlights-the-role-of-inflammasomes-in-the-pathogenesis-of-multiple-sclerosis-and-mentions-the-potential-for-asc-inhibitor-ic-100-to-interfere-with-inflammasome-signaling-at-multiple-points-301124825.html

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