ZyVersa Therapeutics Announces Article Published in Brain Pathology Addressing Inflammasome Signaling Proteins in Alzheimer's Disease

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- *Increased inflammasome protein expression, NLRP1, NLRP3, ASC, and caspase-1, occurs early in Alzheimer's disease (AD), indicating a role for multiple types of inflammasomes in disease development*
- *Expression of ASC correlates with Aβ and p-tau in postmortem AD, indicating increased deposition is associated with disease progression*
- *IC 100, targeting inflammasome ASC, identifies neurons in early stages of AD and has potential to serve as a diagnostic and early therapeutic intervention*

WESTON, Fla., April 10, 2023 (GLOBE NEWSWIRE) -- ZyVersa Therapeutics, Inc. (Nasdaq: ZVSA, or "ZyVersa"), a clinical stage specialty biopharmaceutical company developing first-in-class drugs for treatment of inflammatory and renal diseases, is pleased to announce that world renowned inflammasome researchers and inventors of ZyVersa's Inflammasome ASC Inhibitor IC 100 have published a scientific paper in the peer-reviewed journal, *Brain Pathology*. The researchers are from the University of Miami Miller School of Medicine.

In the paper titled, "Identification of inflammasome signaling proteins in neurons and microglia in early and intermediate stages of Alzheimer's disease," the researchers observed expression of the inflammasome NLRP1 sensor mainly in neurons, while inflammasome sensor NLRP3 was detected mainly in microglia of donors with low and intermediate AD pathology. The confirmation of these inflammasomes in specific cell types during early stages of neurodegeneration in AD bolsters evidence for the role of a pathogenic inflammatory response in the disease, and the role of a diverse set of inflammasomes in the disease process. The research also demonstrated that ZyVersa's Inflammasome ASC Inhibitor IC 100, which inhibits multiple types of inflammasomes and ASC specks to block initiation and perpetuation of damaging inflammation, has the potential to identify neurons in the brains of patients with early stages of AD, and the potential to serve as an early therapeutic intervention.

"Inflammasome activation is implicated in the early stages of AD, but the cell types that express inflammasomes have remained undefined. This study demonstrates that IC 100 identifies neurons in areas of the brain that are particularly susceptible to death in the early and intermediate stages of the disease process. These findings offer potential for developing imaging studies that will identify inflammatory neurons in the early stages of AD," said Dr. Regina T. Vontell, Research Assistant Professor and Associate Director, Brain Endowment Bank at the University of Miami Miller School of Medicine.

"The reported data, combined with our earlier data demonstrating that IC 100 decreases inflammasome activation and ASC speck formation in aging mice, suggest that IC 100 has potential to not only identify early stages of AD, but also to control the chronic neuroinflammation that contributes to AD and its progression early in the disease process," stated Dr. Robert W. Keane, Professor, Physiology and Biophysics, Neurological Surgery and Microbiology, and Immunology at the University of Miami Miller School of Medicine.

Stephen C. Glover, ZyVersa's Co-founder, Chairman, CEO and President, stated: "The research on AD published in *Brain Pathology* provides additional support for the therapeutic potential of ZyVersa's proprietary monoclonal antibody inflammasome ASC inhibitor, IC 100, in neurological diseases. Preclinical studies have demonstrated reduced inflammatory activity and/or improved outcomes in multiple sclerosis, age-related inflammation, spinal cord injury, and two different models of brain injury."

To review the publication, Click Here.

About Inflammasome ASC Inhibitor 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 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, also attenuates the adaptive immune response.

About ZyVersa Therapeutics, Inc.

ZyVersa (Nasdaq: ZVSA) is a clinical stage specialty biopharmaceutical company leveraging advanced, proprietary technologies to develop first-in-class drugs for patients with renal and inflammatory diseases who have significant unmet medical needs. The Company is currently advancing a therapeutic development pipeline with multiple programs built around its two proprietary technologies – Cholesterol Efflux Mediator™ VAR 200 developed to ameliorate renal lipid accumulation that damages the kidneys' filtration system in patients with glomerular kidney diseases, and Inflammasome ASC Inhibitor IC 100, targeting damaging inflammation associated with numerous CNS and other inflammatory diseases. For more information, please visit www.zyversa.com.

Cautionary Statement Regarding Forward-Looking Statements

Certain statements contained in this press release regarding matters that are not historical facts, are forward-looking statements within the meaning of

Section 21E of the Securities Exchange Act of 1934, as amended, and the Private Securities Litigation Reform Act of 1995. These include statements regarding management's intentions, plans, beliefs, expectations, or forecasts for the future, and, therefore, you are cautioned not to place undue reliance on them. No forward-looking statement can be guaranteed, and actual results may differ materially from those projected. ZyVersa Therapeutics, Inc ("ZyVersa") uses words such as "anticipates," "believes," "plans," "expects," "projects," "future," "intends," "may," "will," "should," "could," "estimates," "predicts," "potential," "continue," "guidance," and similar expressions to identify these forward-looking statements that are intended to be covered by the safe-harbor provisions. Such forward-looking statements are based on ZyVersa's expectations and involve risks and uncertainties; consequently, actual results may differ materially from those expressed or implied in the statements due to a number of factors, including ZyVersa's plans to develop and commercialize its product candidates, the timing of initiation of ZyVersa's planned preclinical and clinical trials; the timing of the availability of data from ZyVersa's preclinical and clinical trials; the timing of any planned investigational new drug application or new drug application; ZyVersa's plans to research, develop, and commercialize its current and future product candidates; the clinical utility, potential benefits and market acceptance of ZyVersa's product candidates; ZyVersa's commercialization, marketing and manufacturing capabilities and strategy; ZyVersa's ability to protect its intellectual property position; and ZyVersa's estimates regarding future revenue, expenses, capital requirements and need for additional financing.

New factors emerge from time-to-time, and it is not possible for ZyVersa to predict all such factors, nor can ZyVersa assess the impact of each such factor on the business or the extent to which any factor, or combination of factors, may cause actual results to differ materially from those contained in any forward-looking statements. Forward-looking statements included in this press release are based on information available to ZyVersa as of the date of this press release. ZyVersa disclaims any obligation to update such forward-looking statements to reflect events or circumstances after the date of this press release, except as required by applicable law.

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