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Review Article, Authored by ZyVersa Therapeutics' Esteemed Scientific Advisors, Demonstrates the Role of Inflammasomes in the Exacerbated Immune Response Associated with COVID-19 Infection (Just Published in *Frontiers in Immunology*)

Authored by esteemed experts in immunology and leaders at the forefront of inflammasome research at University of Miami Miller School of Medicine

Highlights inflammasomes as promising drug targets for treatment of COVID-19 and its associated complications

Overviews current and pipeline drugs with potential to treat COVID-19 and its complications, including information about IC 100, ZyVersa Therapeutics' novel inflammasome inhibitor targeting the adaptor ASC component

WESTON, Fla., Oct. 12, 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 *Frontiers in Immunology* has just published a review article titled, *The Inflammasome in Times of COVID-19*. This article addresses how inflammasome signaling pathways contribute to the hyperactive immune response leading to poor outcomes in patients with COVID-19 infection. It summarizes data on the mechanism of inflammasome activation by COVID-19 infection and the role of inflammasomes in development of common COVID complications, acute respiratory distress syndrome, ventilator-induced lung injury, and disseminated intravascular coagulation. It also addresses potential mechanisms by which inflammasomes may contribute to the damaging effects of inflammation in the cardiac, renal, digestive, and nervous systems of COVID-19 patients. Finally, it addresses inflammasomes as potential drug targets. To review the publication, [Click Here](#).



"Tissue damage associated with inflammasome-precipitated over-activation of the inflammatory response in patients infected with COVID-19 tends to be more detrimental than damage induced by the viral load of SARS-CoV-2," says Dr. Juan Pablo de Rivero Vaccari, Research Assistant Professor, Department of Neurological Surgery, University of Miami Miller School of Medicine, and an author of the manuscript. "Thus, modulation of the inflammatory response is critical to improving patient outcomes."

"As an ASC inhibitor, IC 100 targets all common inflammasomes, and its mechanism of action is independent of triggers and types of inflammasomes," stated Stephen C. Glover, Co-founder, Chief Executive Officer, and President of ZyVersa Therapeutics. "Based on this, and the promising data in animal models of diverse chronic and acute diseases, including acute respiratory distress syndrome, we are excited about the potential of IC 100 as an effective therapeutic option for a broad range of inflammatory conditions."

About COVID-19

Coronaviruses are a large family of viruses that can cause illness. There are several known coronaviruses that cause respiratory infections, ranging from the common cold to more severe diseases such as severe acute respiratory syndrome (SARS), Middle East respiratory syndrome (MERS), and COVID-19. COVID-19 was identified in Wuhan, China in December 2019. COVID-19 is caused by the virus, severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2), a new virus in humans causing respiratory illness which can be spread from person-to-person through respiratory droplets.

The estimated incubation period is between 2 and 14 days with a median of 5 days. COVID-19 is associated with inflammasome activation, which triggers what is often called a "cytokine storm," with massive activation of pro-inflammatory cytokines including IL-1 β , IL-6, TNF, and IL-8.

A wide range of COVID-19 symptoms have been reported, with most patients experiencing mild symptoms, such as fever, cough, chest pain, nausea, and body pain. Around 5% of patients develop severe symptoms including respiratory failure, septic shock, and/or multiple organ dysfunction or failure. These patients have a high mortality rate. Current care for patients with COVID-19 is primarily supportive to help relieve symptoms and manage respiratory and other organ failure. There are no specific approved treatments at this time, but many are under investigation.

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, inhibiting inflammasome formation, thereby blocking activation of IL-1 β early in the inflammatory cascade. IC 100 also binds to ASC in ASC Specks, both intracellularly and extracellularly, further blocking activation of IL-1 β 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 a broad range of 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.

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