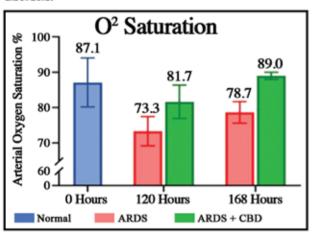
## CBD May Be Key to Reducing ARDS, the Leading Cause of Covid-19 Deaths

A new cannabinoid composition is showing promise to halt a destructive immune response catalyzed by the coronavirus.

Researchers at Augusta University found that a proprietary broad-spectrum CBD formulation, developed by Dallas-based ThriftMaster Global Bioscience, quelled so-called cytokine storms—reactions that lead to sometimes fatal lung inflammation and tissue damage—by increasing levels of apelin in COVID-19 infected mice. During these catastrophic events, the body is its worst enemy as it zeroes in on the infection, sending off responses to attack its own cells and tissue, rather than thwarting off the virus. In lab tests, apelin peptide levels, a natural-occurring protein with anti-inflammatory and antioxidant properties, increased about 20-fold with a metered dose of CBD, nearly normalizing lung function and blood oxygen saturation, according to findings published in October. Salles, Évila Lopes et al. "Cannabidiol (CBD) modulation of apelin in acute respiratory distress syndrome." Journal of cellular and molecular medicine vol. 24,21 (2020): 12869-12872. doi:10.1111/jcmm.15883

Furthermore, these trials showed potential to reverse the physical lung damage in laboratory models of acute respiratory distress syndrome (ARDS), a life-threatening condition onset when fluid leaks into the lungs. ARDS, often associated with multiple organ failure, is a leading cause of death in COVID-19 patients, with mortality rates between 30% and 40%, according to published studies. The findings in mice could hold vast potential for humans because of shared physiology and illness

...characteristics, according to the study's lead author, Dr. Babak Baban. "The symptoms of the experimental model of ARDS were almost identical to human symptoms," says Dr. Baban, a professor and associate dean for Research at The Dental College of Georgia at Augusta University. "Further, mice and humans have homology in physical traits as well as susceptibility to several disease, including cardiorespiratory disorders."



## About Thriftmaster Global Bioscience

Thriftmaster Global Bioscience is a manufacturer and distributor of CBD and CBC products focused on expanding Cannabidiol's use and acceptance in the medical world. The company uniquely emphasizes the exploration the clinical applications for cannabidiol. Over the past several years, Thriftmaster has been heavily involved in clinical studies, with a goal of proving CBD and CBC's efficacy to improve conditions related to aliments such as Arthritis, Alzheimer's and Post Traumatic Stress Disorder. Thriftmaster has worked with physicians and researchers alike – such as those at Augusta University - to break new ground in the evolving

world of cannabidiol, aiming to bring a fact and science-oriented clarity to this exciting emerging market. The company hopes to pave the way for CBD and CBC to be recognized as a tool to fill in gaps in current medical treatments, improving lives and promoting general wellness.

"These trials showed potential to reverse the physical lung damage in laboratory models of acute respiratory syndrome, a life threatening condition onset when fluid leaks into the lungs."

## CBD Research in Alzheimer's:

A separate Augusta University study, conducted by Dr. Baban and lead investigator Dr. Jack Yu, showed promising results linking CBD and CBC (cannabichromene, another cannabinoid), in breaking down plaque buildup on receptors in the brain, a condition associated with Alzheimer's disease, the leading cause of dementia, a degenerative decline in memory and cognitive skills. High doses of CBD and CBC, according to their findings published in February in the Journal of Alzheimer's Disease, helped restore the function of two key proteins, TREM2 and IL-33, which help the brain's immune cells attack plaque pile up, thereby improving cognition while also reducing the levels of IL-6, an immune protein associated with high-inflammation levels in Alzheimer's. CBD appears to modulate IL-6 in both ARDS and Alzheimer's studies. Khodadadi, Hesam et al. "Cannabidiol Ameliorates Cognitive Function via Regulation of IL-33 and TREM2 Upregulation in a Murine Model of Alzheimer's Disease." Journal of Alzheimer's disease: JAD, 10.3233/JAD-210026. 17 Feb. doi:10.3233/JAD-210026.

A follow-up study utilizing Thriftmaster Global Bioscience's proprietary CBD formulation has been submitted for peer review.



## **Preventative Maintenance:**

Researchers, scientists, and general practitioners are uncovering new health benefits associated with CBD and CBC. The benefits have been linked to mitigating inflammation and helping treat anxiety, insomnia, and pain—all without serious side effects. The Augusta University team is furthering its research with clinical studies using Thriftmaster formulations, studying CBD's potential role in activating apelin, and other proteins that are easily measured and could serve as biomarkers, or predictors of disease, infection and/or environmental exposure. For now, CBD is gaining adoption among the masses as a preventative maintenance measure for health and good living. "CBD is a relatively safe, available, affordable, and beneficial compound," says Dr. Baban. "Therefore, adding it to the daily food basket maybe very useful and beneficial."



Pictured from Left to right: Dr. Baban, Dr. Morgan, and Dr. Hesam Khodadad

For more information about Thriftmaster Global Holdings, please scan the QR code:

\*This product is not intended to prevent, treat, diagnose or cure any condition or disease and has not been tested or approved by the FDA.

