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COVID-19: Study with targeted therapy launched in Vienna

A phase II clinical trial for the treatment of patients with COVID-19 is currently starting at the Medical University of Vienna as part of the Austrian CoronaVirus Adaptive Clinical Trial (ACOVACT). The trial was initiated as a collaboration between academia and industry, including Henning Walczak and his teams at the University of Cologne (UoC) and University College London (UCL) as well as Apogenix AG [1], a biotech company in Heidelberg.

Patients with severe to critical COVID-19 disease are now being treated with an immunotherapeutic agent, a Fas ligand blocker developed by Apogenix, in the framework of the ‘Austrian CoronaVirus Adaptive Clinical Trial (ACOVACT)’. ACOVACT is an open-label, MedUni Vienna sponsored, scientifically initiated, randomized, controlled, multi-centre clinical trial. ACOVACT will compare different treatments for COVID-19.

The sub-study of ACOVACT was initiated by Henning Walczak, Michael Bergmann and Apogenix. Walczak is an expert on the role of cell death and inflammation in inflammatory diseases and cancer. He is Alexander von Humboldt Professor of Biochemistry at the Cluster of Excellence for Aging Research CECAD of the University of Cologne and Professor of Cancer Biology at the UCL Cancer Institute. Bergmann is a surgeon at MedUni Vienna and an expert on oncolytic viruses and cancer immunotherapies.

Novel approach in the therapy of COVID-19

The study is based on a scientific concept developed by Walczak and Bergmann together with Apogenix. In conjunction with results published by other researchers, they concluded that tissue destruction and lung failure in patients with severe COVID-

19 may actually be the result of the overactivity of so-called death ligands, rather than the virus infection itself.

Death ligands are proteins that our own body cells normally produce in the course of immune defence. The immunotherapeutic agent now being trialled intercepts the death ligand known as Fas ligand or CD95 ligand.

'It appears that SARS-CoV-2 infection induces an overreaction of our immune system, resulting in overproduction of Fas ligand. This killer protein can then kill healthy, uninfected cells in the lungs of COVID-19 patients, thus causing lung damage,' Walczak explained. 'The concept of preventing cell death in the treatment of COVID-19 is completely novel. We are very excited about the outcome of this clinical trial,' Bergmann added. Until now, the search for effective treatments for COVID-19 has focused primarily on drugs aimed at neutralizing either the virus itself or the effects of the cytokine storm. 'By the time physicians see patients, however, the viral load has usually dropped significantly, and the systemic cytokine storm proved to be quite mild in COVID-19 patients compared with diseases such as septic shock,' Bergmann said.

'Blocking Fas ligand offers the opportunity to address the cause of severe COVID-19 disease. By blocking the cell death that fuels and continues to feed the fire of inflammation in the lungs of these patients, so to speak, we are depriving the fire of fuel,' said Christian Schörgenhofer, who coordinates the study together with Bernd Jilma (both University Department of Clinical Pharmacology at MedUni Vienna).

[1] Henning Walczak is founder and scientific advisor of Apogenix AG

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