

Press release

## GeNeuro and Northwestern University enter into a research collaboration on HERV-W ENV in long-haul COVID

- Research aims to confirm evidence of the expression of human endogenous retrovirus W envelope protein (HERV-W ENV or W-ENV) in long-haul COVID patients, and identify affected patients who may benefit from a treatment with GeNeuro's temelimab.
- Northwestern University, Chicago, US, is a pioneer in the comprehensive treatment of longhaul COVID-19 symptomatology, notably through its Neuro COVID-19 Clinic at Northwestern Memorial Hospital led by Prof. Igor Koralnik, MD, chief of Neuroinfectious Diseases and Global Neurology at Northwestern Medicine.

**Geneva, Switzerland, September 24, 2021, 8:00am CEST –** GeNeuro (Euronext Paris: CH0308403085 - GNRO), a biopharmaceutical company developing new treatments for neurodegenerative and autoimmune diseases, such as multiple sclerosis, announces today that it has entered into a research agreement with Northwestern University to further investigate the relationship between HERV-W ENV (W-ENV) and long-COVID neuropsychiatric syndromes.

Northwestern University is a pioneer in the comprehensive treatment of long-haul COVID-19 symptomatology, having established a Neuro COVID-19 Clinic at Northwestern Memorial Hospital as early as May 2020. This clinic, initiated and led by Prof. Igor Koralnik, MD, chief of Neuroinfectious Diseases and Global Neurology at Northwestern Medicine, has provided personalized treatments to over 800 patients to date who experience neurological complications from COVID-19.

The purpose of the research agreement is to establish evidence of W-ENV expression on the transcriptional and protein level, to ascertain whether this protein can be a blood biomarker of neurological complications of long-haul COVID. The pathogenic properties of W-ENV on neural system cells are well established, and its continued presence may provide a biological rationale and a therapeutic lever to treat affected patients. The identification of the characteristics of the patients which would be most likely to benefit from a treatment with temelimab, an anti-W-ENV antibody, is a critical success factor in this new indication.

"At Northwestern we are committed to finding treatments for the patients suffering from long-haul COVID-19, and this research agreement will test an interesting hypothesis," said **Prof. Igor Koralnik**, **MD**, **chief of Neuroinfectious Diseases and Global Neurology at Northwestern Medicine**. "We will determine whether the continued and self-sustained expression of W-ENV after the acute phase of the disease could be associated to some of the neurologic and psychiatric symptoms experienced by long-haul COVID patients."

"We are delighted to work with Prof. Koralnik and the Neuro COVID-19 Clinic at Northwestern Memorial Hospital to validate the contribution of W-ENV on the neuropsychiatric syndromes developed by long-haul COVID patients," said **Prof. David Leppert, Chief Medical Officer of GeNeuro**. "Their leadership in the long-haul COVID field will accelerate our understanding of this complex disease to identify patients who are most likely to benefit from a treatment with temelimab."

This research agreement complements the previously announced efforts in the long-haul COVID field that GeNeuro has launched in Europe with Fondation FondaMental and the CIRI (International Center for Infectiology Research, Lyon, France).

## About W-ENV and COVID-19

SARS-CoV-2 has been shown to trigger the expression of W-ENV in the white blood cells of about 20% of healthy donors, suggesting a genetic and/or epigenetic susceptibility to the production of this pathogenic protein when exposed to the virus.

W-ENV expression was detected in the lymphocytes of hospitalized COVID-19 patients, versus none in healthy subjects, and the level of W-ENV was correlated with the severity of the evolution of the disease.

Post-mortem studies of COVID-19 patients have now shown that the expression of W-ENV can be triggered in the brain, in particular on microglial cells as well as in endothelial cells of brain blood vessels. Previously, an expression of W-ENV in the brain had only been observed in patients who have died from diseases such as multiple sclerosis, consistent with a role in fueling long-term neurodegeneration. W-ENV is not found in the brain of other neurological controls, such as patients suffering from Alzheimer's or Parkinson's diseases.

Analyses of samples from the first pilot cohorts of patients with post-COVID depressive and cognitive symptoms have shown that the W-ENV protein is still present at consistently detectable, and sometimes high, levels in the blood. This may allow early identification and treatment of patients who could benefit from an anti- W-ENV therapy such as temelimab.

## **About GeNeuro**

GeNeuro's mission is to develop safe and effective treatments against neurological disorders and autoimmune diseases, such as multiple sclerosis, by neutralizing causal factors encoded by HERVs, which represent 8% of human DNA.

GeNeuro is based in Geneva, Switzerland and has R&D facilities in Lyon, France. It has rights to 17 patent families protecting its technology.

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