Two studies on ALS published in Annals of Neurology demonstrate the neurotoxic role of human endogenous retrovirus envelope protein (HERV-K/HML-2 ENV) and the rationale for targeted therapy with specific antibody

- **The first publication confirms the neurotoxic role of HERV-K/HML-2 ENV detected in the cerebrospinal fluid of sporadic ALS patients and the preclinical therapeutic effect of GeNeuro's anti-HERV-K ENV antibody in neutralizing HERV-K/HML-2 ENV toxicity.**

- **The second publication provides a clinically based rationale for the therapeutic use of a specific neutralizing antibody addressing sporadic ALS neuropathology, by demonstrating the positive role of HERV-K ENV-specific but low-abundant natural autoantibodies on the duration of patients' survival.**

- **Sporadic ALS is a devastating disease affecting 10,000 new patients per year in the U.S. and Europe, with a very limited survival prognosis.**

Geneva, Switzerland, August 30, 2022 – 6:00pm CEST - GeNeuro (Euronext Paris: CH0308403085 - GNRO), a biopharmaceutical company developing new treatments for neurodegenerative and autoimmune diseases such as multiple sclerosis (MS), amyotrophic lateral sclerosis (ALS) and the severe consequences of COVID-19 (post-COVID), announced today the joint publications in the leading scientific journal "Annals of Neurology" of the results of the collaboration between GeNeuro and the National Institute of Neurological Disorders and Stroke (NINDS). NINDS is part of the National Institutes of Health (NIH) of the United States. The two publications describe the novel pathogenic mechanism of HERV-K in sporadic ALS and confirm the rationale for the therapeutic relevance of GeNeuro's antibody to neutralize this neurotoxic protein.

Annals of Neurology is an official journal of the American Neurological Association. The online publications and their hard copy version in the last issue of the journal ([HERV-K envelope in spinal fluid of Amyotrophic Lateral Sclerosis is toxic - Steiner et al, & Antibody response to HML-2 may be protective in Amyotrophic Lateral Sclerosis - Garcia-Montojo et al. - Annals of Neurology](#)) present preclinical data showing that HERV-K/HML-2 Envelope protein (HERV-K ENV) is present in the cerebrospinal fluid (CSF) of sporadic ALS patients, leads to neuronal cell injury and death, and targets a now identified cellular receptor. The studies also show that the neurotoxic properties of the HERV-K ENV protein from ALS patients' CSF are neutralized by GeNeuro's anti-HERV-K ENV antibody and that, in patients with sporadic ALS, higher levels of autoantibodies targeting the HERV-K ENV protein are associated with a longer survival.

"*Our pre-clinical work on ALS has evidenced that HERV-K ENV mediates toxicity via three interlinked pathways, leading to neuronal cell death. GeNeuro's GN-K01 antibody has demonstrated to neutralize this effect in pre-clinical in vivo and in vitro models,*" **said Dr. Avindra Nath, clinical director at the National Institute of Neurological Disorders and Stroke.** "*Our second publication confirms the rationale for conducting clinical trials with the anti-HERV-K ENV antibody to address sporadic ALS neuropathology*".

Dr. Hervé Perron, Scientific Director of GeNeuro, said: "*These publications highlight the results obtained through the collaboration between the NINDS and GeNeuro. They support and confirm the relevance of GeNeuro's approach to sporadic ALS via its novel monoclonal antibody that inhibits the neurotoxic effects of the HERV-K ENV protein, an endogenous toxin detected in the cerebrospinal fluid*

of patients. We now want to move forward as quickly as possible to provide what could be a prospective life-changing treatment for patients".

As previously mentioned, GeNeuro's preclinical development program has confirmed the ability to detect HERV-K ENV in sporadic ALS patients and has enabled its anti-HERV-K ENV antibody to be humanized and ready to enter GMP production. The published findings now open the way for precision medicine with a biomarker-based clinical approach, administering GeNeuro's neutralizing antibody only to sporadic ALS patients who are positive to the HERV-K ENV protein.

Amyotrophic lateral sclerosis (ALS), often referred to as Lou Gehrig's disease, is a rapidly progressing neurodegenerative disorder characterized by the destruction of motor neurons leading to progressive muscle paralysis. About 90% of ALS cases occur in patients with no family history of the disease: these cases are known as sporadic ALS, and occur randomly. In the remaining 10% of patients, the disease affects multiple people in the same family with an inherited genetic cause and is called familial ALS. ALS affects approximately 50,000 patients worldwide, with about 10,000 new patients per year in the United States and Europe.

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 owns rights to 17 patent families protecting its technology.

For more information, visit: www.geneuro.com

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