

1. Highlights 2023

Based on research findings obtained by Anders Nykjaer and his group prior to and during the first PROMEMO granting period, he co-founded in 2020 Vesper Bio (www.vesperbio.com). Vesper Bio is world leader in sortilin receptor biology and dedicated to the development of small molecule sortilin modulators that can stabilize memory and slow cognitive decline. In the lead project, Vesper Bio has developed an oral therapy against frontotemporal dementia (FTD), a devastating, rapidly progressing and fatal disease characterized by severe memory impairment. FTD(GRN) is highly heritable with loss-of-function mutations in *GRN* that encodes progranulin (PGRN). PGRN is a secreted protein that plays a key role in the development, survival, function, and maintenance of neurons and microglia. Patients suffering from FTD(GRN) are haploinsufficient in *GRN* and consequently produce half the amount of PGRN. Findings by us identified sortilin as a clearance receptor for PGRN that regulates the extracellular concentrations in the CNS. Vesper Bio has developed a small molecule sortilin antagonist to prevent PGRN endocytosis and reestablish its extracellular level. 2023 was a landmark year for Vesper Bio as it entered phase I clinical trials with its first-in-class oral drug against FTD, and it became a clinical stage biotech company. The translational aspects of the research at PROMEMO, which have enabled the development of a new therapeutic modality for treating cognitive impairment, are very exciting.



The first volunteer dosed with VES001 in the phase I clinical trials.

Representatives from Vesper Bio: Simone Prichander, Ditte Mikkelsen, Mads Kjølby, and Anders Nykjær

To celebrate the Women in Science Day on February 11th, two of our young, female researchers were each followed by a high school student for a day. The visit was video-documented by Rikke Lindhardt (DANDRITE Communication Officer). The video is now used to raise interest among the young generation in doing research and neuroscience research in particular.



The Pint of Science Festival in May is a global event bringing researchers across the world to share their research with the public at pubs, cafés, etc. In 2023, for the first time, Denmark took part in the festival. Three of our young researchers successfully engaged the public at the bars Tir Na Nog and Fairbar in Aarhus and shared their knowledge of memory and the brain with the catching topics “Sweet dreams are... memories”, “The Enigma of Memory: Exploring the Synaptic Secrets of Forgetting”, and “Born Afraid or Taught to Tremble? The Science behind Our Fears”.



Top: Assistant professor Noemie Mermét-Joret and a student from Aarhus Statsgymnasium.

Bottom: Postdoc Macarena Gomez presenting “Sweet dreams are... memories”.