Prionomics

Prioritizing diagnostics and therapeutics of human prion diseases through integrative omics

Creutzfeldt-Jakob Disease (CJD) is a fatal brain disorder that affects 1 to 2 cases per million people each year worldwide. While progress has been made in understanding the molecular basis of the different disease subtypes and the mechanisms that cause brain damage, effective treatments and early pre-symptomatic diagnostic and prognostic tools are still lacking.

To address this problem, PRIONOMICS unites a team of world-leading experts in prion research, neuropathology, omics, biomarker development, and bioinformatics from seven countries (including external collaborations). This interdisciplinary team will use unique and already existing CJD patient cohorts, and existing and novel omics data complemented by cutting-edge bioinformatics to identify the underlying mechanisms that lead to the development and progression of CJD. We will put strong emphasis on identifying dysregulated pathways involved in age at onset and/or disease progression rate. The potential targets and identified pathways will be validated using human organoids. By combining information from human omics-data and mechanistic data from organoids, PRIONOMICS aims to identify targets which can be used as biomarkers for persons at risk and therapeutic drug targets for CJD.

PRIONOMICS strongly emphasizes on involving patients in the research process and making the results accessible to the public.

Total Funding : 1.5 M€

Duration : 3 years

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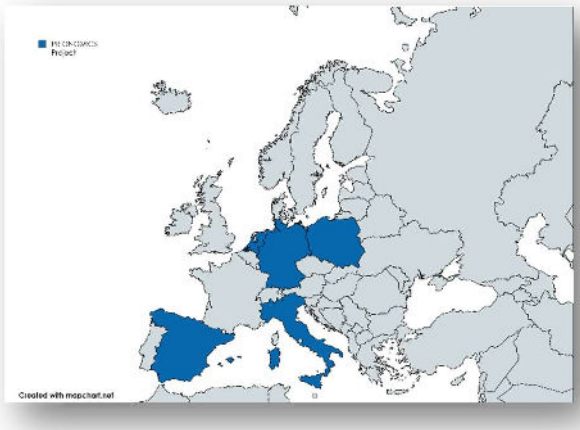

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