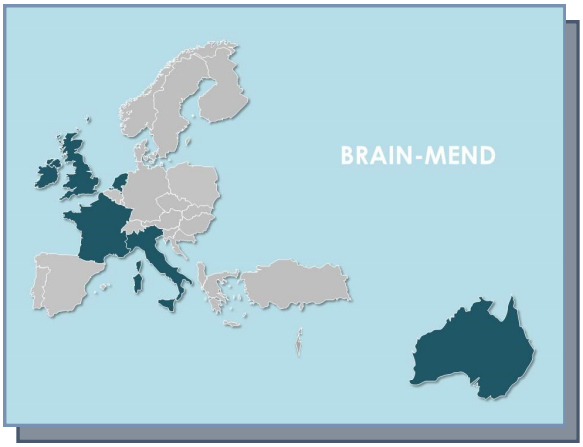
BRAIN-MEND

Biological Resource Analysis to Identify New MEchanisms and phenotypes in Neurodegenerative Diseases

Neurodegenerative diseases include Alzheimer's disease, Parkinson's disease, amyotrophic lateral sclerosis, frontotemporal dementia, corticobasal degeneration, multiple system atrophy and progressive supranuclear palsy. We currently classify and treat these conditions based on symptoms and clinical findings. Although this approach seems logical, it does not take into account the causes of each condition or any overlap between them, which hinders the development of new treatments. A better approach would be to reclassify the different conditions based on their causes, and this is the idea behind BRAIN-MEND.

We will use the latest methods in genetics and epigenetics to find causes of neurodegenerative diseases, combining these results to identify new drug targets. At the same time, we will use machine learning to analyse medical literature and patient records to find clusters of symptoms which might suggest new disease groups. A key outcome of BRAIN-MEND is to disentangle the different neurodegenerative diseases, so that for any patient group we can understand how, in some cases, different causes may produce the same clinical picture, while in other cases the same cause may produce different clinical pictures. This new way of thinking will enhance our understanding of neurodegenerative diseases and make it easier to develop new treatments.



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