

## The Netherlands Brain Bank, a biobank for translational neuroscience

- ▶ Drug target discovery in neuroscience is increasingly relying on human samples to generate meaningful data that translates into actionable strategies. Open access to well-characterized brain tissue of high quality is crucial to obtain these insights and is the goal of the Netherlands Brain Bank.

CNS | Biobank samples | Neurology and Psychiatry

### Background

The Netherlands Brain Bank (NBB) collects human brain tissue of donors with a variety of neurological and psychiatric disorders, as well as from control donors. CNS samples are accompanied by an anonymized summary of the complete medical record and neuropathological examination and sent to academic and industry researchers worldwide. The mission of the NBB is increasing our understanding of the human brain and to develop therapies for neurological and psychiatric diseases.

The NBB operates a prospective donor program, allowing for the swift collection of the brain after death. This translates to an average delay of just 6 hours between death and end of tissue collection, which is unparalleled by most biobanks. Disorder specific dissection protocols based on anatomical regions ensures continuity between donor samples. Over 140 autopsies are performed every year.

### CNS samples available for research Non-demented, non-psychiatric controls

#### Neurological disorders

- Alzheimer's disease
- Multiple sclerosis
- Frontotemporal dementia
- Vascular dementia
- Parkinson's disease
- Lewy body dementia
- Progressive supranuclear palsy
- Multisystem atrophy
- Huntington's disease

#### Psychiatric disorders

- Major depression
- Bipolar disorder
- Schizophrenia

### Sample types and opportunities

- ▶ Anatomical region-specific blocks of frozen, or paraffin-embedded tissue
- ▶ Unfixed tissue, collected in medium/buffer
- ▶ DNA, serum, plasma, and CSF samples
- ▶ Pre-matched selections of tissue/RNA of psychiatric and control donors
- ▶ Pure microglial cells (RNA or frozen) from psychiatric and control donors
- ▶ Fibroblast-derived iPSC lines from psychiatric and control donors. This allows a direct comparison between donor-derived neural cells and post-mortem tissue.
- ▶ Custom dissection procedures or tissue processing options for prospective autopsies are possible
- ▶ A collaboration with the Spinoza Centre for neuroimaging allows for the possibility to combine post-mortem MRI with tissue analysis
- ▶ A genetic database of all donors, including cross-disorder polygenic risk scores will be available in the future

The NBB welcomes project applications from academia, industry, and combinations of both. Many industry-initiated projects that make use of NBB samples also involve academic research groups with disorder-specific expertise or methodology. Through the vast network of researchers making use of NBB material, we will be able to help companies with specific research needs by coupling NBB tissue with scientific expertise in the Amsterdam area. This ensures innovative public-private partnerships and allows companies without research facilities to obtain precious insights for their drug discovery pipelines. For more information on sample availability, custom tissue procedures, or pricing see contact details below.