

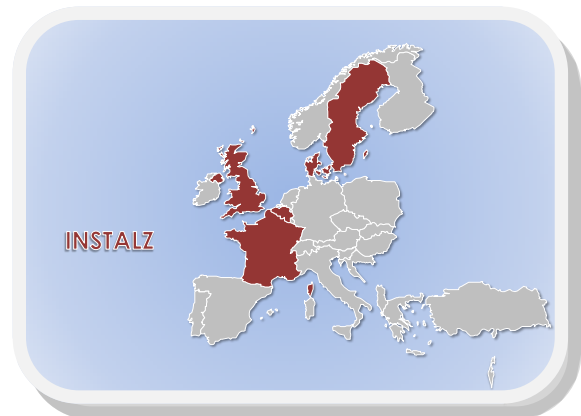
INSTALZ

Genomic Instability in Alzheimer's Disease and Related Disorders: a Single-Cell Approach

Increasing evidence suggests that the genetic information in our bodies can vary from cell to cell. Such variation has also been found in the brain, although its consequences for brain function or disease remain largely unknown.

In this project, we will study the role of genomic instability in Alzheimer's disease and related tauopathies. The INSTALZ consortium aims to understand how altered stability of the neuronal genome in the developing and adult brain determines the risk of developing these chronic disorders in late adulthood. In particular, we will investigate how and when during life this cell-to-cell genomic variation could be generated by applying single-cell sequencing of neurons derived from patient brains and several mouse and fly models. The expected impact is to genetically explain the pathogenesis of a consistent part of sporadic cases, for which no pathogenic cause is yet known and to discover the underlying molecular mechanisms that will lead to new early therapeutic tools.

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Duration: 3 years
Coordinator: Bart Dermaut
 T: + 33 (0)3 20 87 72 39
 E: bart.dermaut@pasteur-lille.fr



Project Partners:



COORDINATOR | BART DERMAUT

-  **Bart Dermaut**, Université de Lille, Inserm U1167, CHU Lille, Institut Pasteur de Lille, Lille, France
-  **Marie-Christine Galas**, Centre de Recherche Jean-Pierre Aubert, Inserm UMR-S1172, Lille, France
-  **Thierry Voet**, Sanger Institute-EBI Single-Cell Genomics Centre, Cambridge, UK
-  **Bart De Strooper**, KU Leuven, Belgium
-  **Vilhelm Bohr**, Copenhagen University, Denmark
-  **Joakim Lundeberg**, KTH Royal Institute of Technology, Stockholm, Sweden