Neurodevelopmental Disorders: Gene-Environment-Immune Interactions NEURO-GxE

Heads: Adeline Orts-Del Immagine, Andrée Delahaye-Duriez

Effectives: 10-15

Language: English

Prerequisites: **Basic background in life sciences or medicine Introductory knowledge of molecular biology and neuroscience**

Where? **Hôpital Robert Debré – Bingen Building, 6th Floor**

Evaluation: **30% continuous assessment, 70% final written exam**

Questions:

Number ECTS: 3

Total numbers of hours: 28 HETD

Teaching format: presential

Teaching objectives : **This course equips students with an integrated understanding of how genetic architecture, environmental exposures, and neuro-immune interactions jointly determine the developmental trajectories of neurodevelopmental and psychiatric disorders. Students will gain critical insight into the translational tools and approaches used to investigate and diagnose neurodevelopmental diseases in both clinical and research settings.**

Teaching outline: **The course addresses the cellular and molecular mechanisms underlying gene-environment and neuro-immune interactions across neurodevelopment, with emphasis on periods of developmental vulnerability, brain plasticity, and the mergence of psychiatric phenotypes. It further introduces multidisciplinary investigative frameworks, including clinical phenotyping, neuroimaging and multi-omics, as applied in contemporary neurodevelopmental research and medicine.**