



Invité par l'Assemblée du Collège de France,  
sur proposition de la professeure **Sonia GAREL**.

# Sebastian JESSBERGER

BRAIN RESEARCH INSTITUTE, UNIVERSITÉ DE ZURICH

## *New Neurons for Old Brains: Mechanisms of Lifelong Neurogenesis*

**28 mai > 18 juin 2024** – Conférences en anglais

*Salle 2 – de 17h à 18h*

Neural stem cells generate new nerve cells throughout life in distinct areas of the mammalian brain. One of the brain regions that remains permissive for the lifelong generation of neurons is the dentate gyrus of the hippocampal formation, which is critically involved in certain forms of learning and memory. Failing or altered hippocampal neurogenesis has been associated with a variety of diseases, among others major depression, Alzheimer's disease, and age-related cognitive decline. Thus, understanding the mechanisms underlying lifelong neurogenesis may help developing future therapies targeting adult neural stem cells for endogenous brain repair. I will present distinct projects of our current work using a multi-pronged, interdisciplinary approach to study the molecular and cellular framework of neural stem cell biology in the developing and adult brain. Aim of our research is to understand how physiologic and disease-associated alterations of neurogenesis are translated into stem cell-associated plastic changes in the brain on a molecular, cellular, and behavioral level.

### **Mardi 28 mai 2024**

*New Neurons for Old Brains:  
Life-Long Stem Cell Activity in The Adult Brain*

### **Mardi 4 juin 2024**

*Novel Technology to Characterize The Cellular Principles  
of Stem Cell activity in The Brain*

### **Mardi 11 juin 2024**

*Molecular Mechanisms Regulating Mouse and  
Human Neural Stem Cell Activity*

### **Mardi 18 juin 2024**

*How Aging Affects Neural Stem Cell Behavior*