MAX PLANCK SCHOOL of cognition

**Monday, January 20, 2025, 16:00 (CET)**

# Cognition Colloquium


## Professor Marija Kundakovic

Fordham University, NY, USA


# Epigenomic Programming of Brain Plasticity and Disease Risk by Ovarian Hormones.


Women are at twice the risk for anxiety and depression disorders as men are, although the underlying biological factors and mechanisms are largely unknown. In this talk, Dr. Kundakovic will address this sex disparity at both the etiological and mechanistic level. She will discuss the role of fluctuating ovarian hormones as a critical biological factor contributing to the increased depression and anxiety risk in women. Cycling ovarian hormones drive brain and behavioral plasticity in both humans and rodents, and the talk will first focus on rodent studies in Dr. Kundakovic's lab that are revealing the molecular and receptor mechanisms underlying this female-specific brain dynamic. She will highlight a sex hormone-driven epigenetic mechanism, namely chromatin organizational changes, that dynamically regulates neuronal gene expression and brain plasticity but may also prime the (epi)genome for psychopathology. Dr. Kundakovic will also highlight an unconventional role that chromatin dynamics may have in regulating neuronal function across the ovarian cycle, including in sex hormone-driven X chromosome plasticity and hormonally-induced epigenetic priming. Finally, she will present on a translational, post-mortem human brain study that focuses on ovarian hormone shifts across the menopausal transition and aims to uncover the molecular basis of the increased psychiatric risk in women during this period. Dr. Kundakovic will end her talk by mapping out future studies that will facilitate the path for hormone status-informed, precision medicine approach in women's mental health.


**Join online:**
https://zoom.us/j/93526030034?pwd=ZkJnYlFVOEthU2lDeE5nVmV6TlZLZz09

Meeting ID: 935 2603 0034
Passcode: 250171


For more information, please contact Natacha Mendes: mendes@cbs.mpg.de