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Faculty of Psychology

Colloquium lecture by Prof. Erika Comasco

From the Countryside to the City Center: The Ovarian Hormone Roller Coaster of Affective State

Of relevance to females' mental health is the cross-talk between ovarian hormones and the brain. Indeed, throughout a female's life, significant variations in ovarian hormone levels occur, especially during puberty, pregnancy, postpartum, and menopause. Additionally, the menstrual cycle causes regular hormonal fluctuations, often linked to mood and cognitive symptoms. These hormonal changes can influence neurophysiological and behavioral dynamics, which are relevant to wellbeing and sex differences in mental disorders.

In this seminar, we will explore how ovarian hormones, particularly progesterone, interact with the brain and affect female's mental health. Progesterone, a fat-soluble steroid hormone, can easily cross the blood-brain barrier. Studies on rodents show that progesterone influences various brain processes, such as the neurogenesis, the formation of synapses, myelination, and neurotransmitter signaling.

Research on humans has highlighted progesterone's effects during hormonal changes like the menstrual cycle. Notably, since affective symptoms of premenstrual dysphoric disorder (PMDD) seem to be triggered by progesterone fluctuations, the disorder serves as a model to study the interplay between ovarian hormones and the brain.

In this seminar, we will discuss findings from a pharmaco-neuroimaging randomized controlled trial examining how selective progesterone receptor modulators (SPRMs) impact the brain and mood in patients with PMDD. These results not only suggest SPRMs as a potential PMDD treatment but also enhance our understanding of how progesterone affects the brain and mental health in females.

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**This lecture takes place at Liebiggasse 5, 1010 Vienna,
Lecture Hall G 2nd floor and will be streamed.**

Thursday, June 6 2024; 3pm

