

**Tkach, Colleen**

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**From:** Inform  
**Subject:** EM: Neuroscience talk at CMC

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**From:** Tom Borowski

**Dr. Laura Been:** Thursday, Oct. 19, 1:30-2:30 pm in Bauer South 1  
**Peripartum Hormone Fluctuations Impact the Brain and Behavior in Mice**

*Abstract:* In all placental mammals, including humans, estrogen levels rise precipitously during pregnancy, peaking at the end of the third trimester. Immediately after birth, however, estrogen levels drop quickly and remain suppressed until ovulation resumes, which can be weeks to months later. Put another way, during the postpartum period, individuals go from having the highest levels of estrogens that they will see in their reproductive lifetime to the lowest levels of estrogens they will see in their reproductive lifetime in a matter of hours. Many researchers have hypothesized that this dramatic hormone fluctuation may lead to an "estrogen withdrawal state" in the brain that can increase vulnerability to mood and anxiety disorders. However, how postpartum estrogen withdrawal impacts the brain is understudied and poorly understood. In my lab, we use rodents (mice and hamsters) to model these peripartum hormone fluctuations and measure changes in the brain and behavior. In my talk, I will describe recent undergraduate-driven research from my lab demonstrating that postpartum estrogen withdrawal alters the mesolimbic dopamine pathway in mice, and that this neuroplasticity causes changes in behaviors related to motivation and anxiety.