

## **Characterizing the Effect of Early Life Adversity on Sex-specific Behavioral and Epigenetic Outcomes in Rats over Development**

**Emma Noel, Class of 2023**

Early life adversity (ELA), such as exposure to childhood abuse, neglect, or other forms of trauma may result in maladaptive behavioral and neurological responses in brain regions associated with emotion (Brown et. al, 2019), and an increased risk for mental illness later in life. Largely, the nature of such biological pathways remains unknown. However, studies have suggested that epigenetic factors, via alterations in DNA methylation patterns over development following ELA, may play a crucial role in later life increases in anxiety and depression related disorders (Brown et. al, 2019; Szyf, 2013). DNA methylation represses gene expression in response to environmental stimuli over development (Szyf, 2013), thus possibility

**References:**

Brown, Amanda, Laura M. Fiori, and Gustavo

*Frontiers in*

*Genetics* 10 (2019): 229. <https://doi.org/10.3389/fgene.2019.00229>.

Cohodes, Emily M., Sahana Kribakaran, Paola Odriozola, Sarah Bakirci, Sarah McCauley, H. R. Hodges,