

# **Your Brain on Hormones**

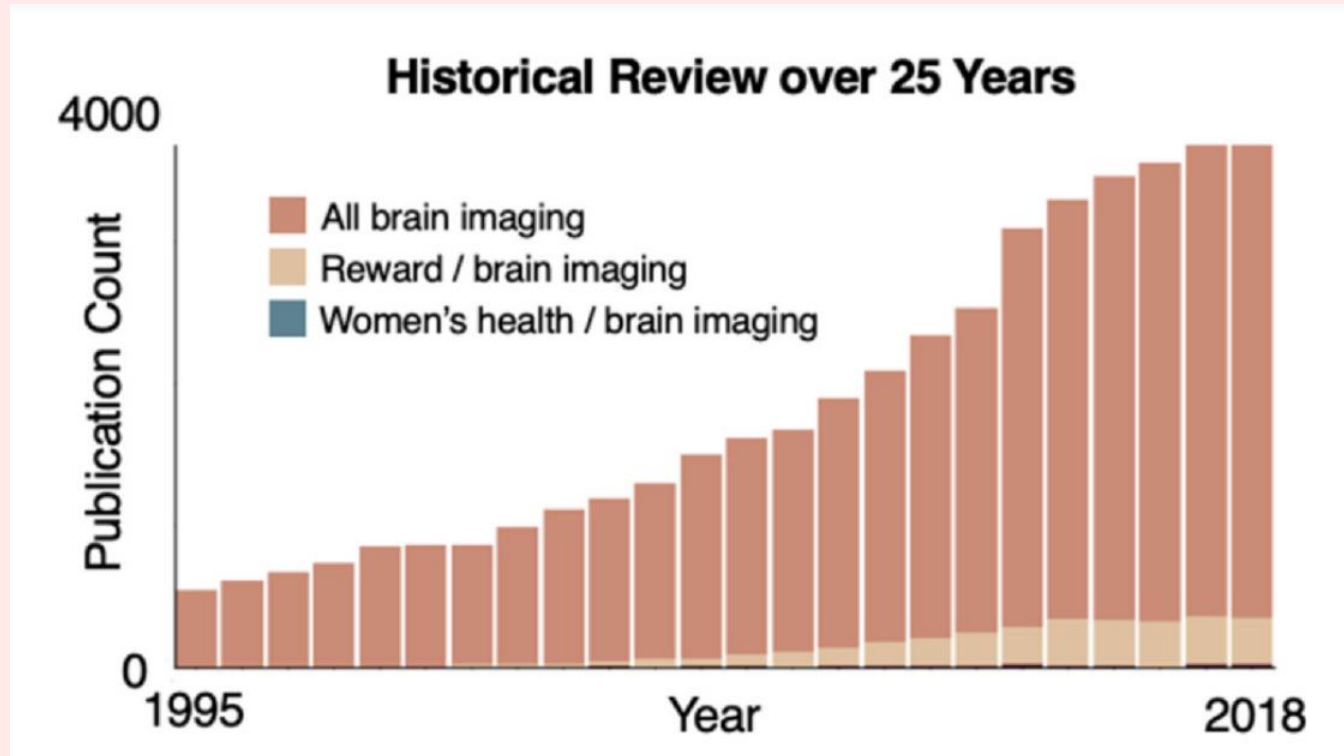
## **Impact of Ovarian Hormone Suppression on Brain Structure and Cognition**

By: Jessica Chan, Melissa Chavez, Aliza Lam, & Sithu Madigapola

Mentor: Elle Murata

Jacobs Lab

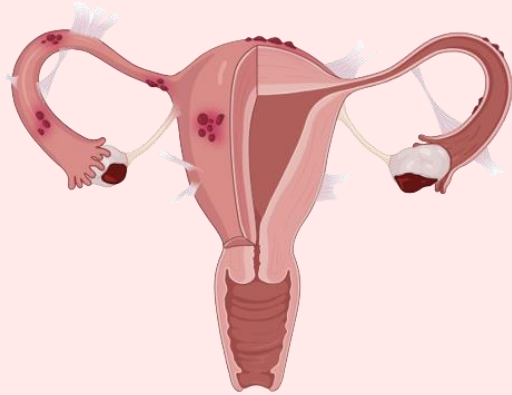
# Women's health is understudied in neuroscience



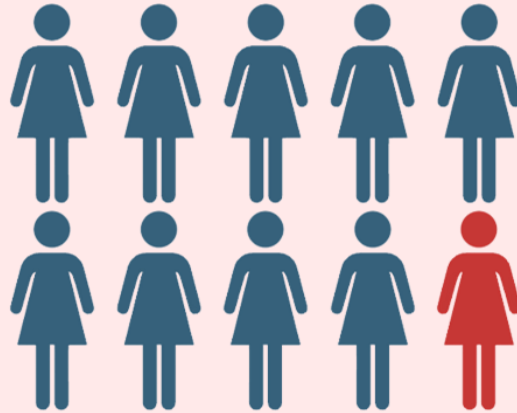
Taylor et al., 2021, *Front. Neuroendocrinol.*

# Understanding the effect of Elagolix on cognition and brain structure

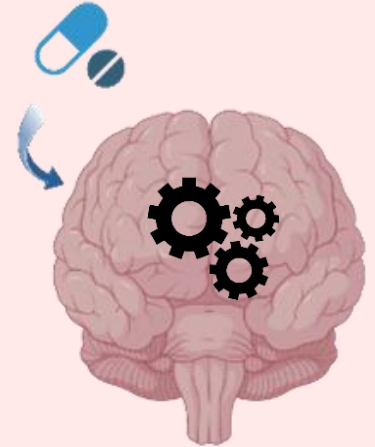
Endometriosis



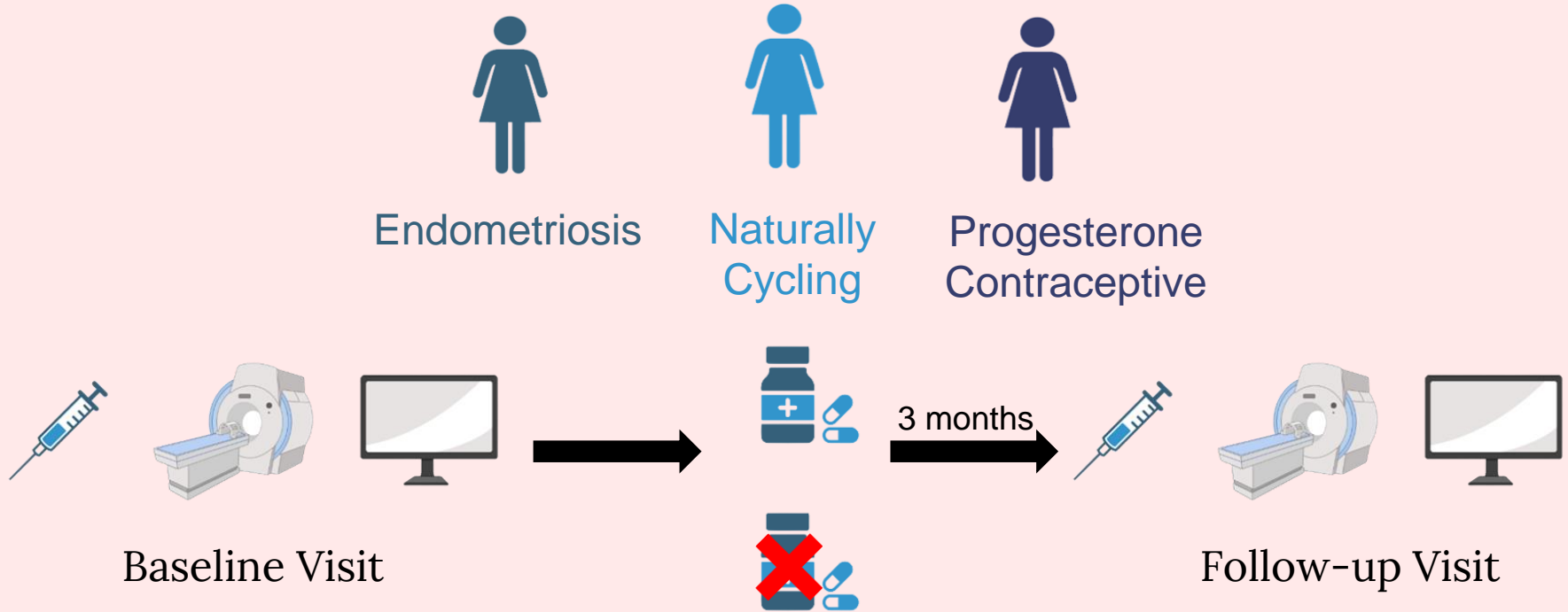
Common Disorder



Elagolix



# Three study groups come in for a baseline and follow-up visit



# Women go through different tasks in the study



**Hormones: Estrogen  
& Progesterone**

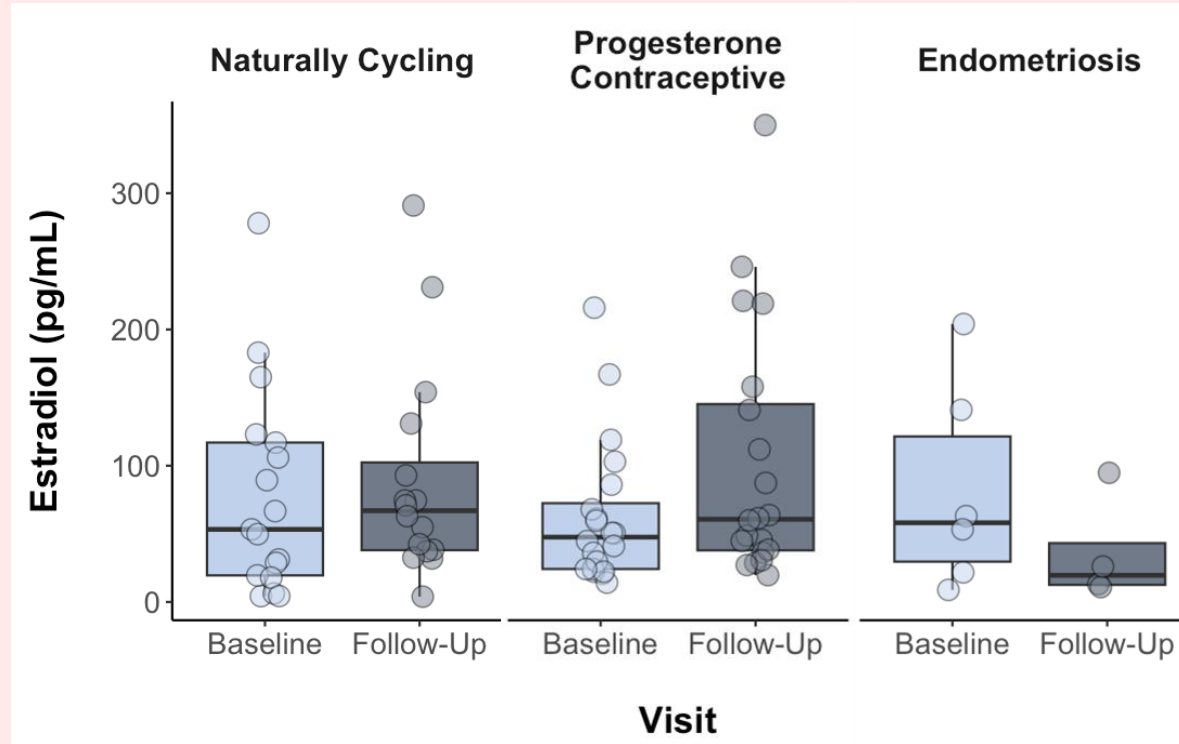
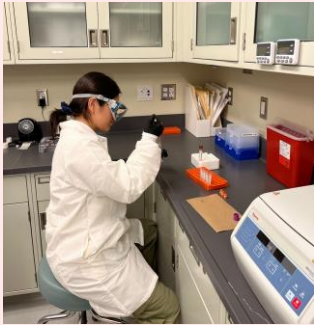


**Cognition:  
Associative Memory**

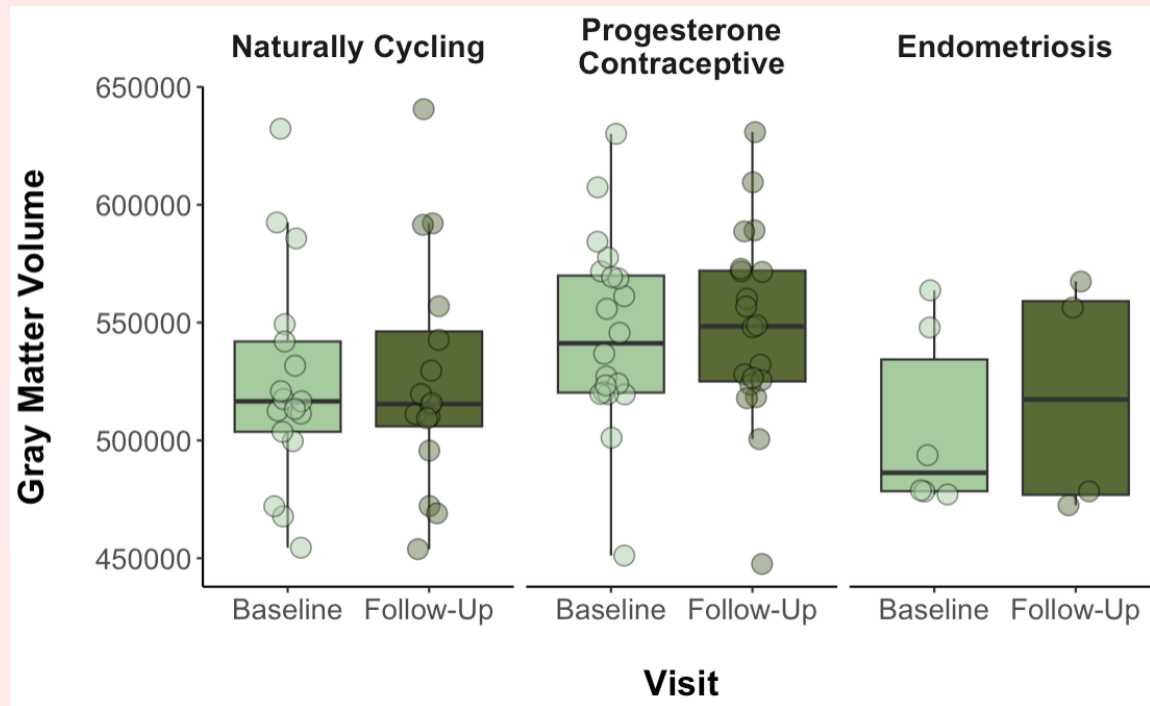


**Brain Structure:  
Grey Matter Volume**

# Ovarian hormone suppression drug decreases estrogen

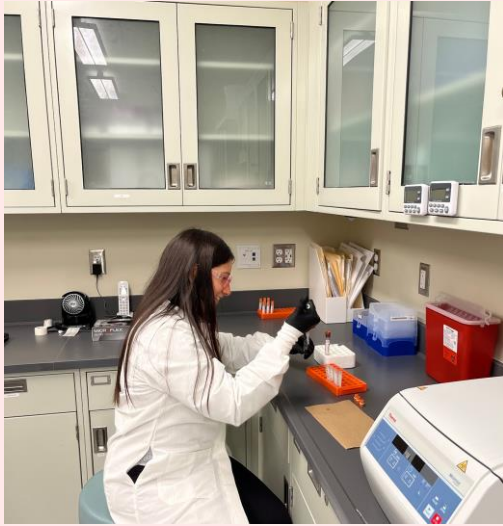


# Ovarian hormone suppression alters memory, but not gray matter volume





# Ovarian hormone suppression does not affect brain structure, but impacts other factors



**Elagolix Decreases Estrogen**



**No Memory Improvement in Elagolix Group**



**No Change in Brain Structure**



# One step closer to ensuring science serves women and men equally



# Acknowledgements



Jacobs Cognitive  
Neuroendocrinology Lab



SIMS

