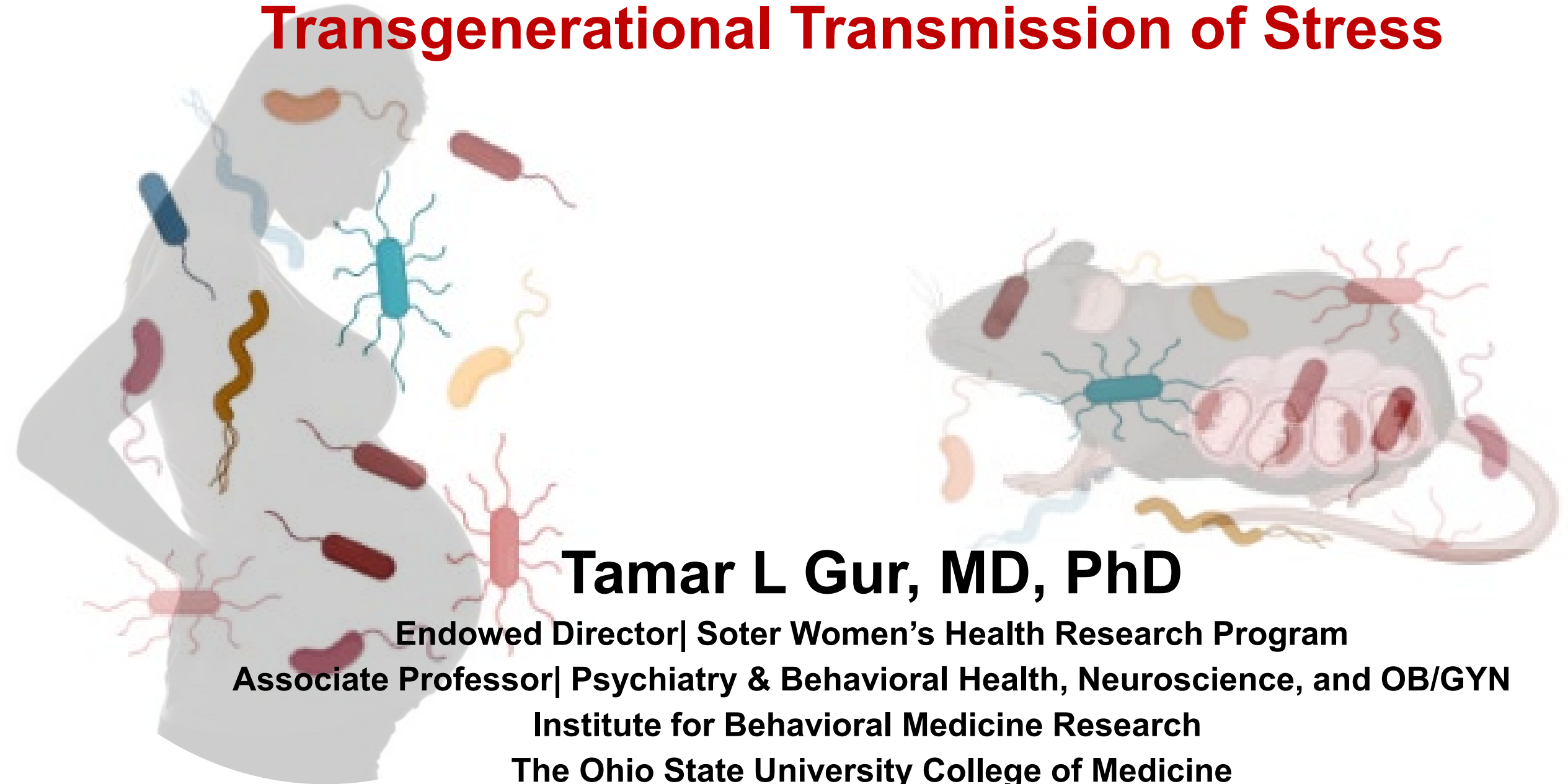


Harnessing Translational Approaches to Fight the Transgenerational Transmission of Stress



Tamar L Gur, MD, PhD

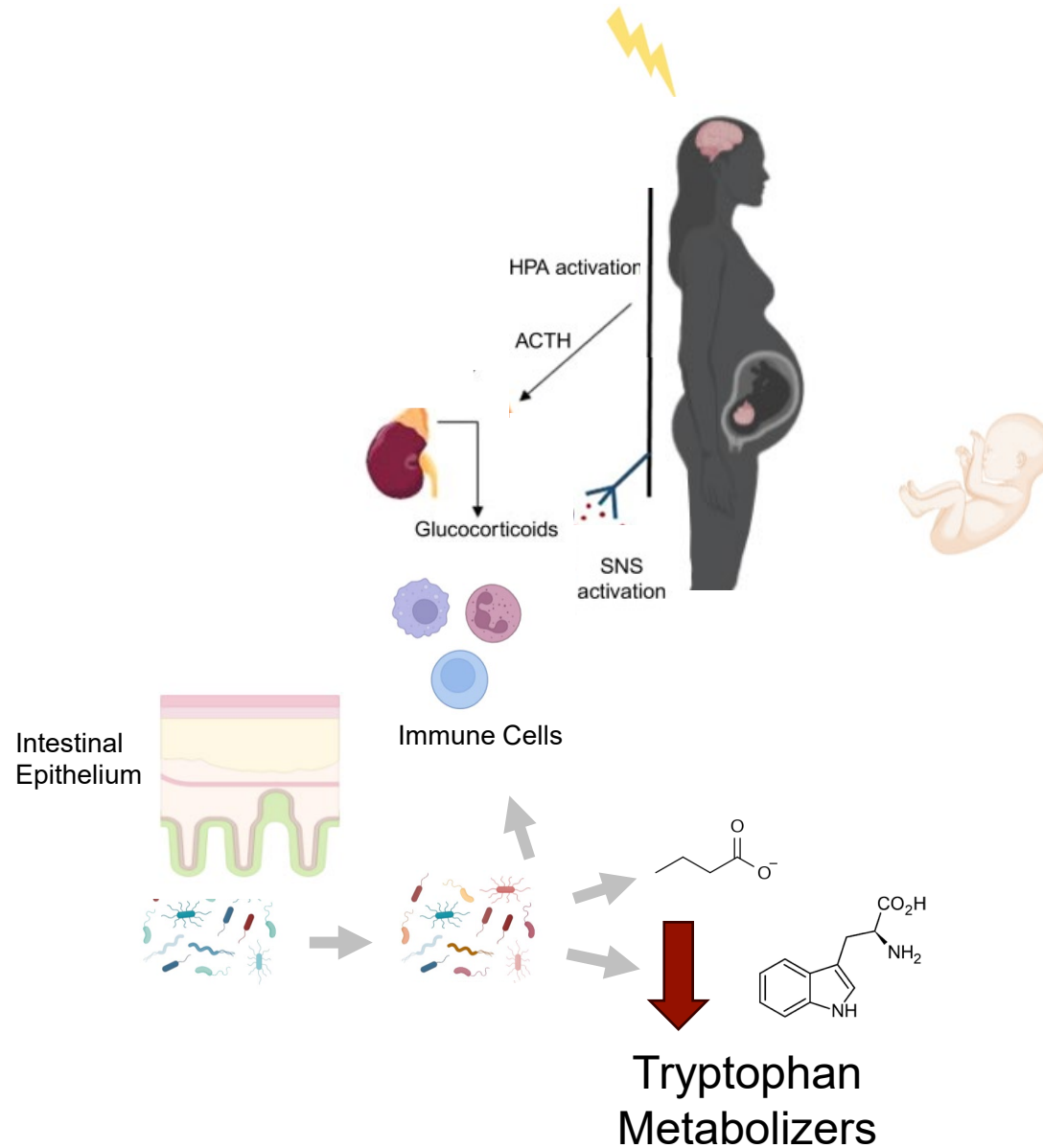
Endowed Director| Soter Women's Health Research Program

Associate Professor| Psychiatry & Behavioral Health, Neuroscience, and OB/GYN

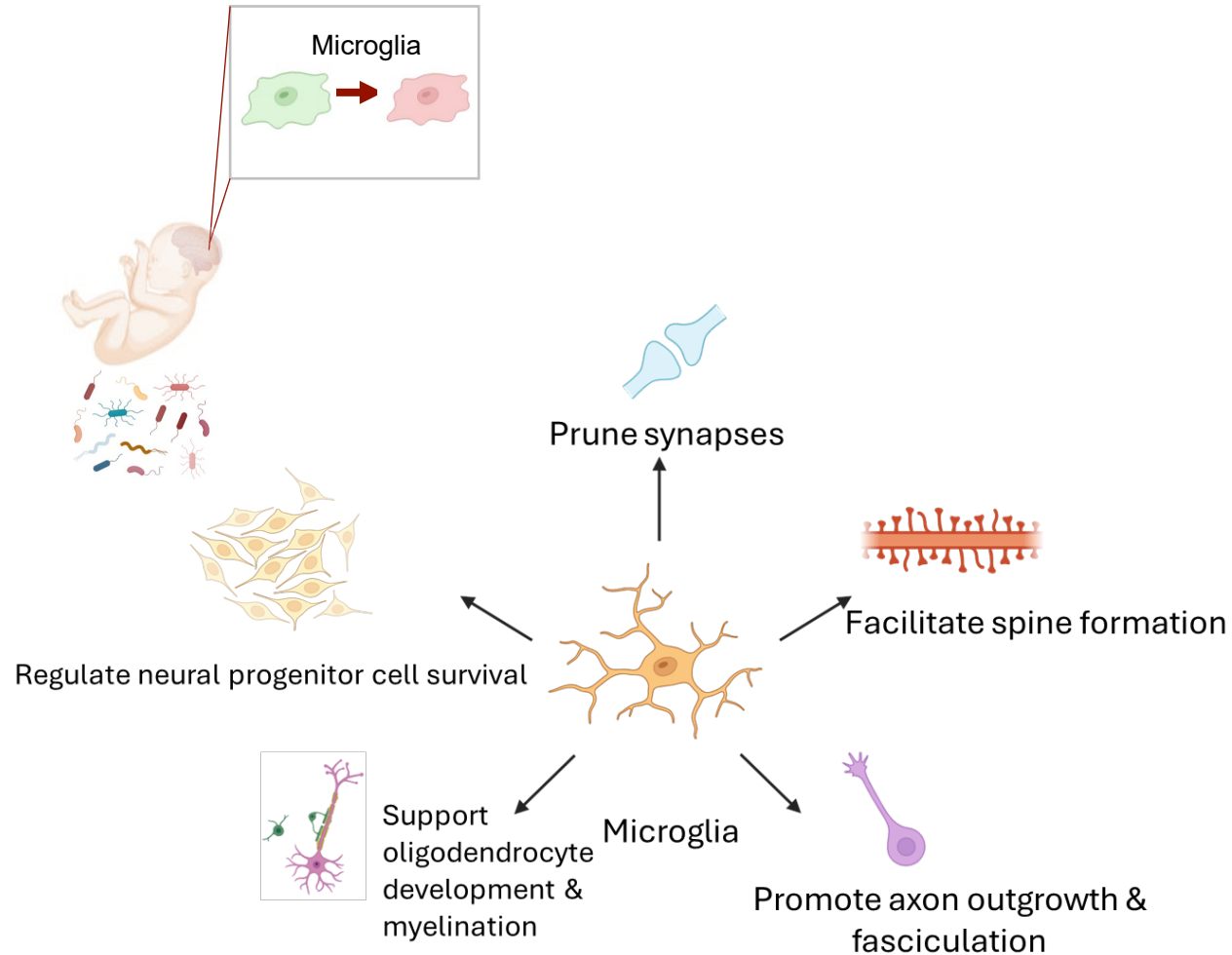
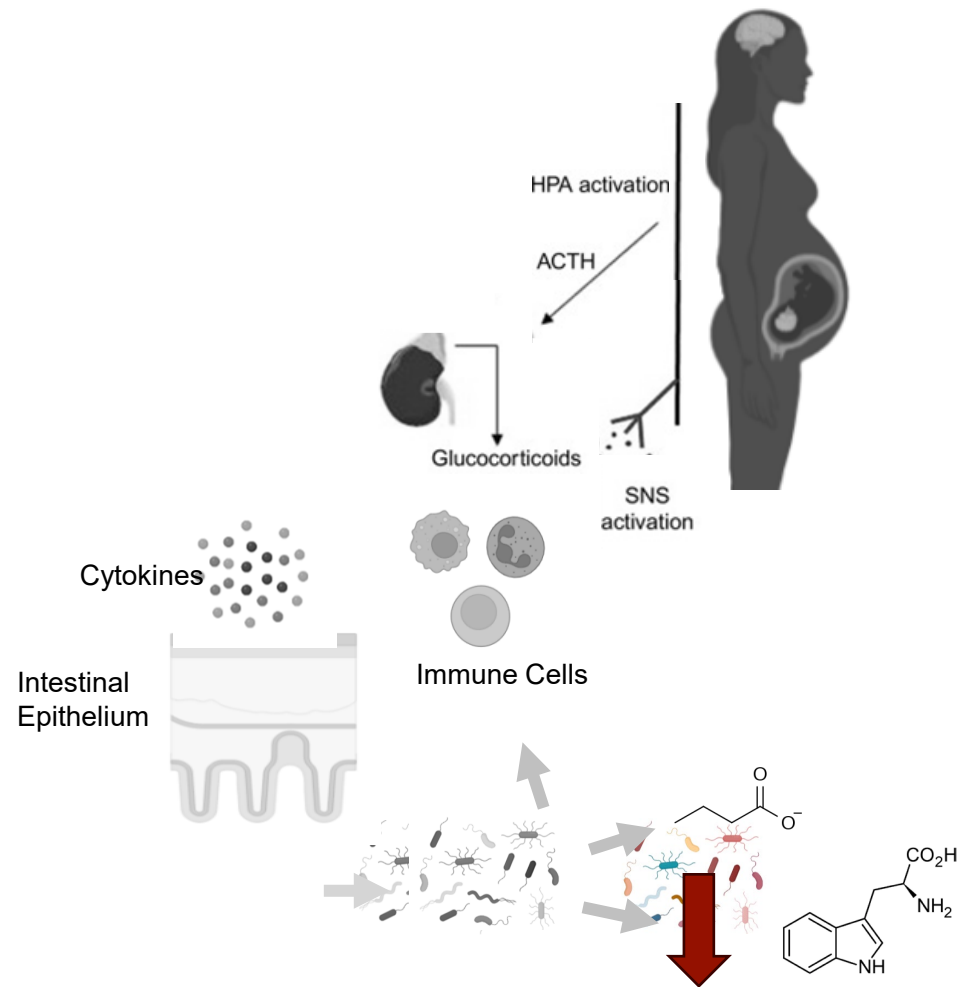
Institute for Behavioral Medicine Research

The Ohio State University College of Medicine

Maternal Stress and Infant Neurodevelopment: The Role of the Microbiome

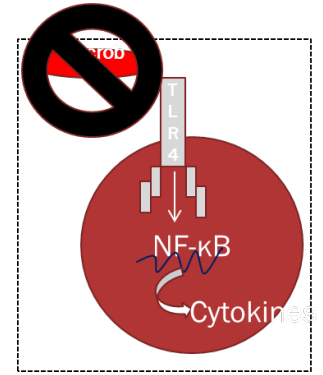
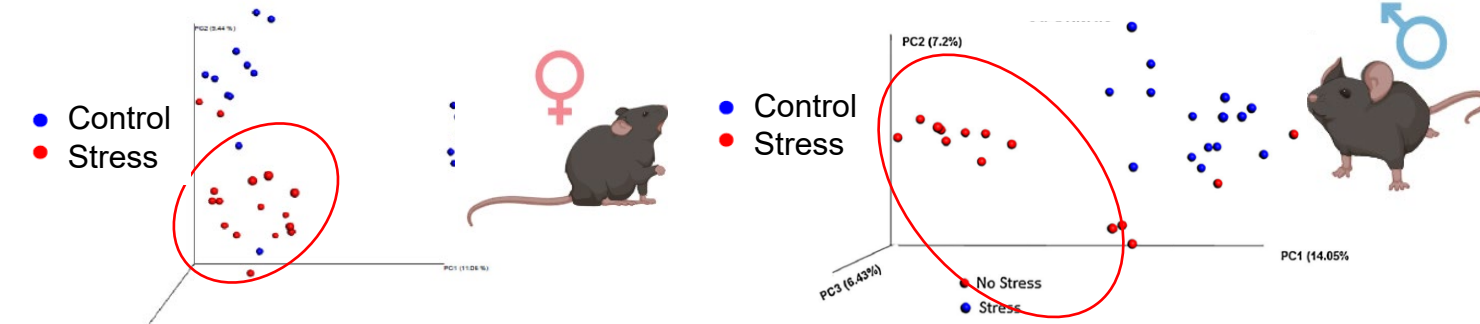


Maternal Stress and Infant Neurodevelopment: The Role of the Microbiome

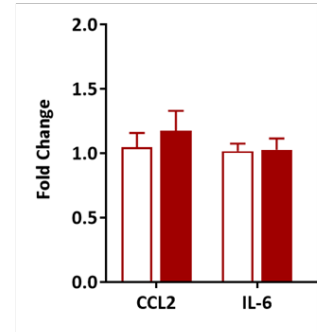


Prenatal Stress Disrupts Microbiota, Neuroinflammation and Social Behavior in Offspring

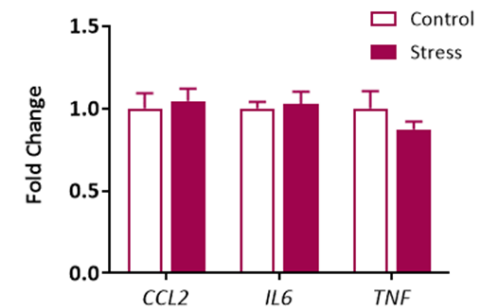
Microbiome



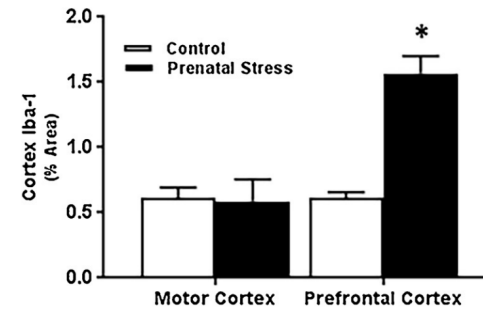
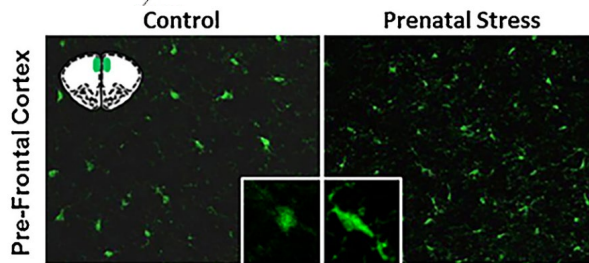
Antibiotic-Treated Fetal Brain Gene Expression



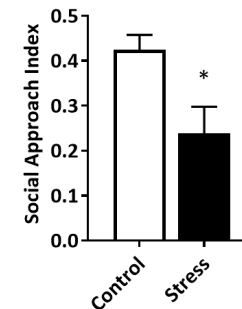
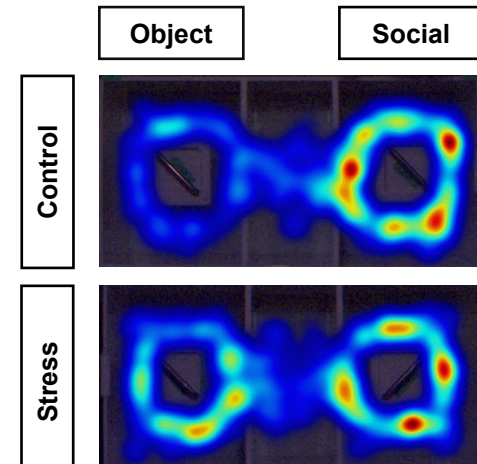
Germ Free Fetal Brain



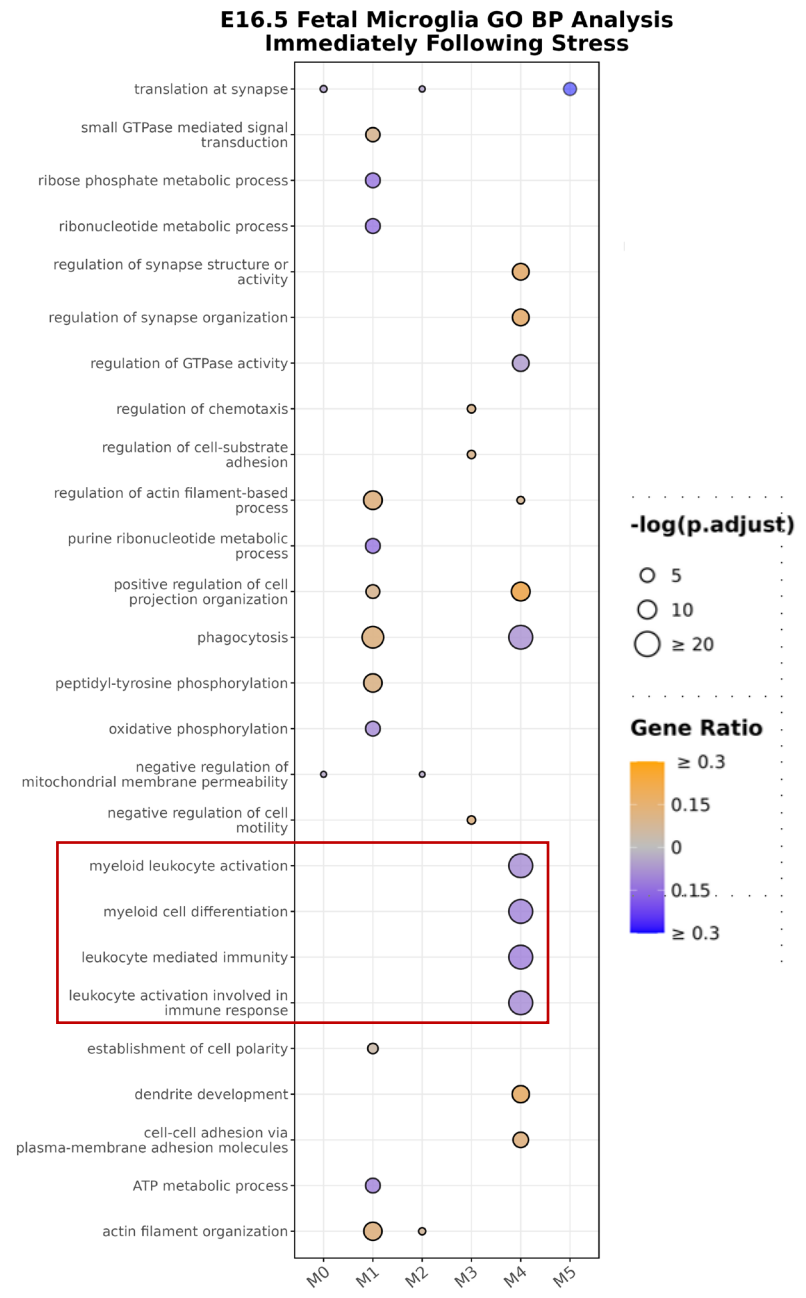
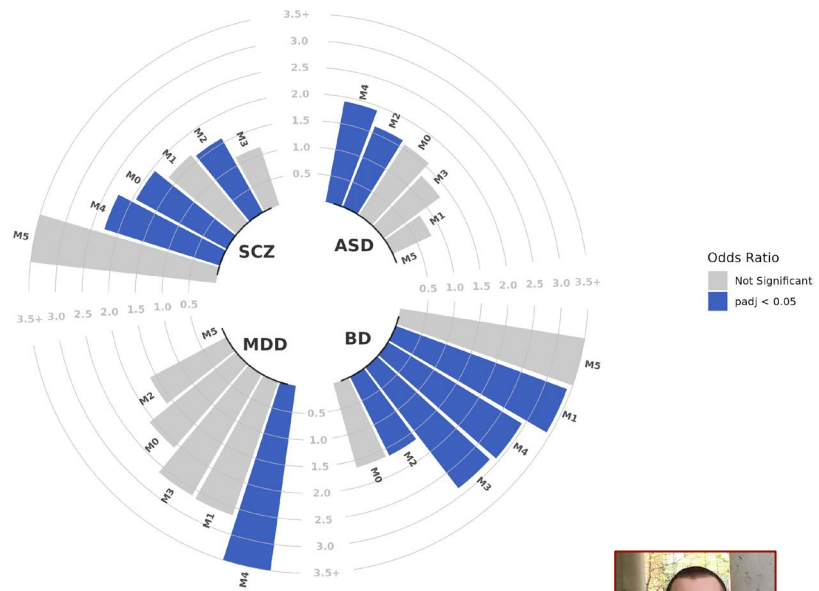
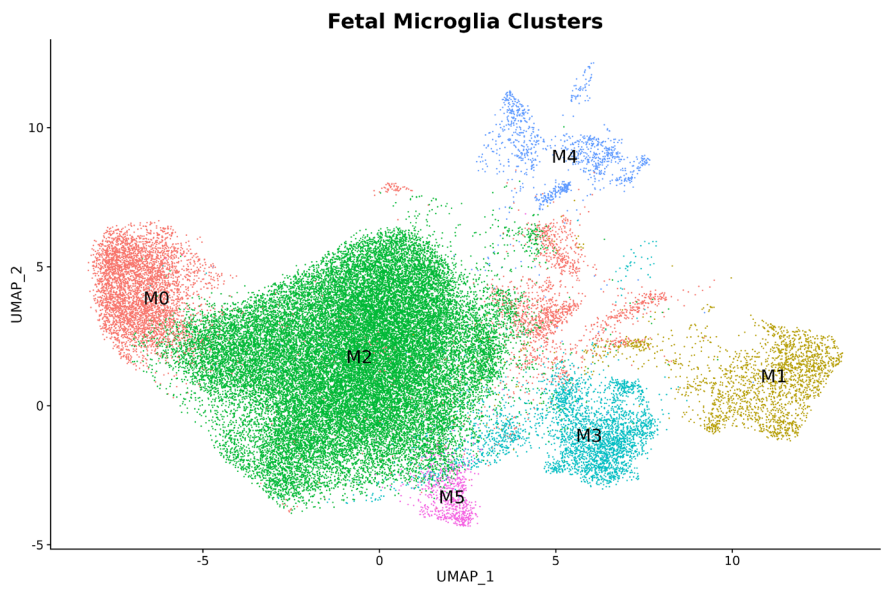
Neuroinflammation



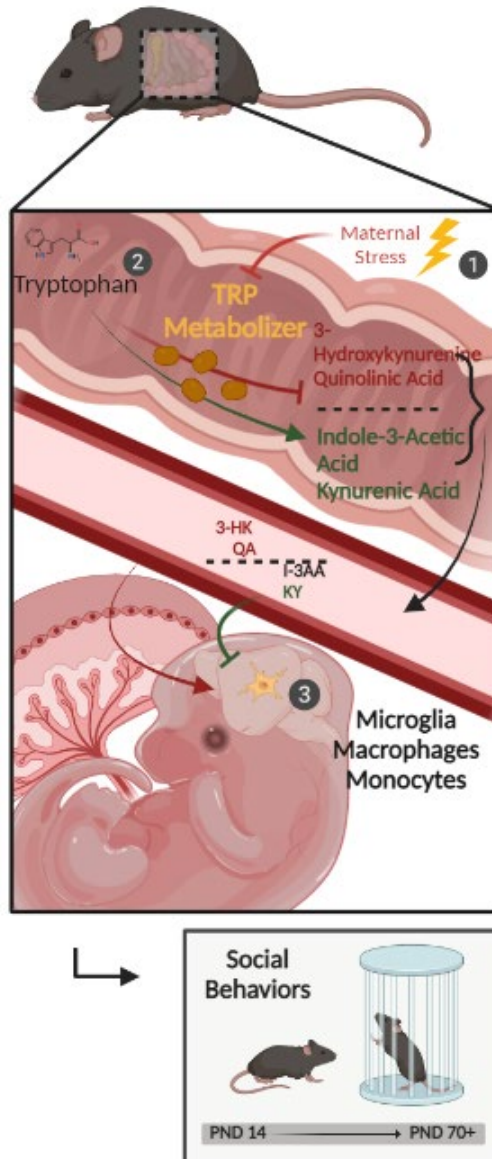
Social Behavior



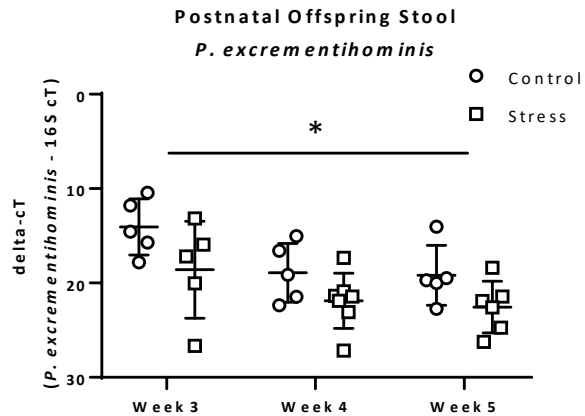
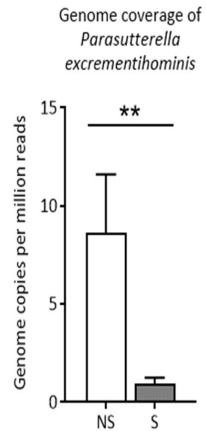
Prenatal Stress Perturbs Microglial Inflammatory Phenotype with Enrichment of Psychiatric Disorder Susceptibility Genes



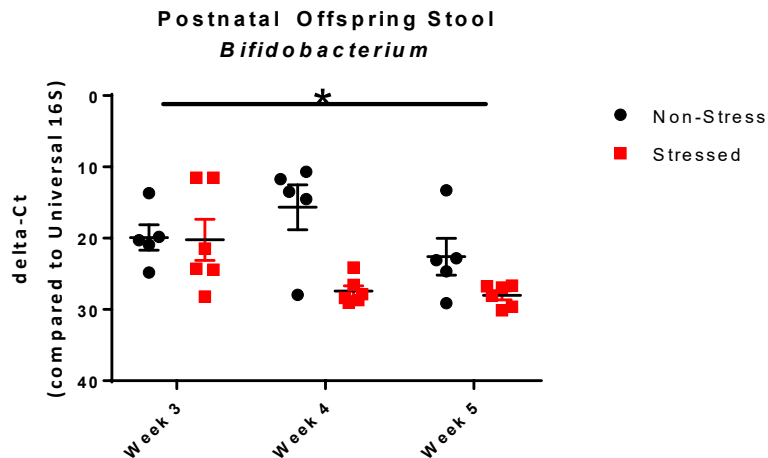
Orchestrating tryptophan metabolites to protect neurodevelopment from prenatal stress



Prenatal Anxiety Associated with Reduced Trp Metabolizers in Mice and Humans



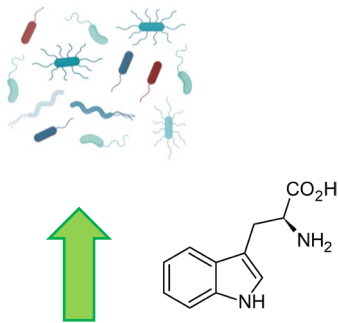
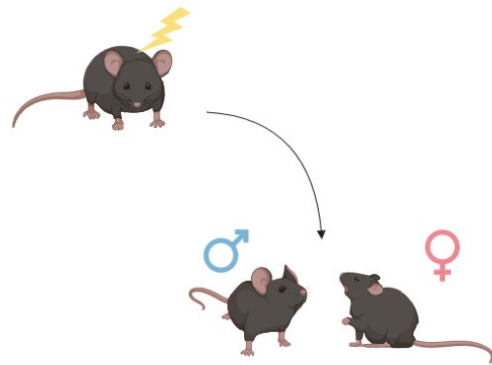
Maternal survey timepoint	Infant fecal timepoint	Comparison	Microbial species	Fold change	Adjusted p-value
T0 OASIS	P2	Low vs High	<i>Bifidobacterium dentium</i>	30.00	<0.0001
			<i>Ruminococcus gnavus</i>	6.92	0.053
			<i>Lactobacillus rhamnosus</i>	21.62	<0.0001
P3 OASIS	P2	Low vs High	<i>B. dentium</i>	18.97	0.0012



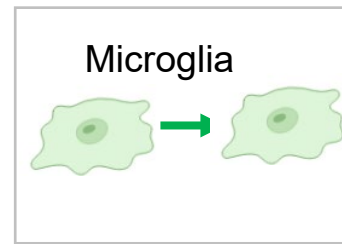
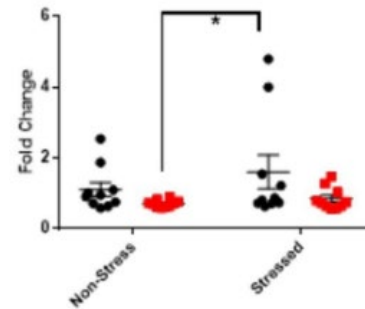
Collaboration with Chris Dunkel Schetter, UCLA



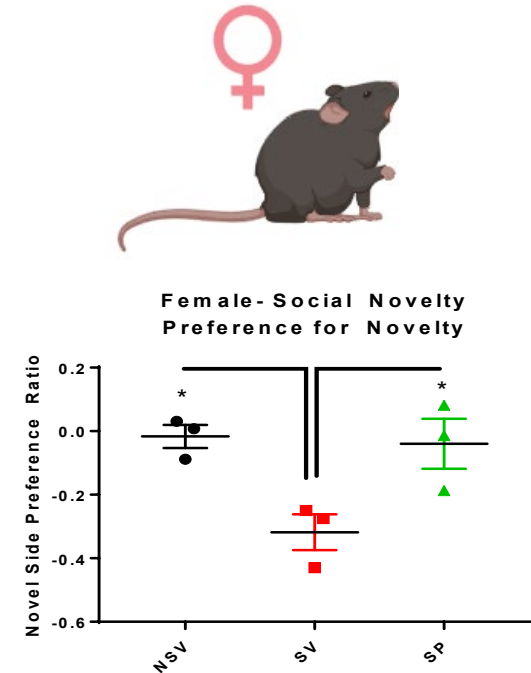
Orchestrating tryptophan metabolites to protect neurodevelopment from prenatal stress



Increase tryptophan metabolizers



Prevents neuroinflammation

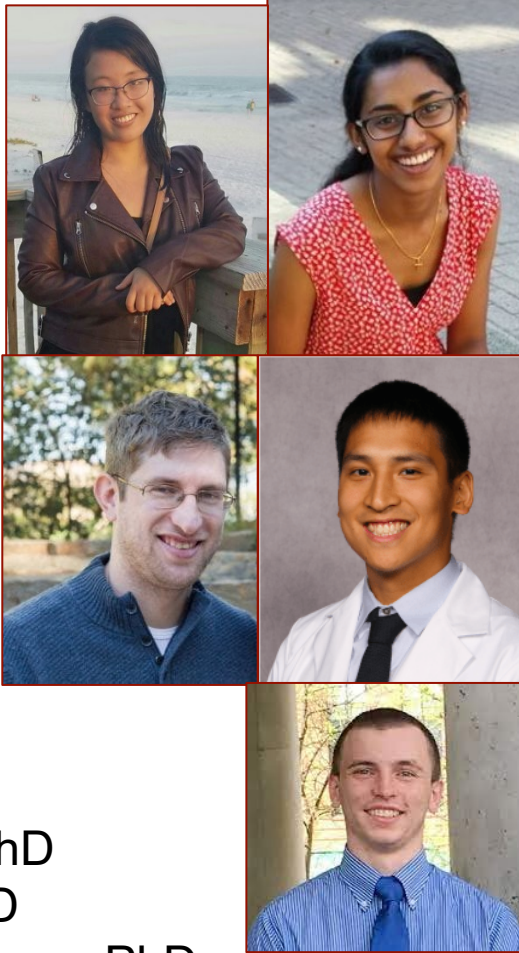


Prevents reductions in Social Behavior

Conclusions

I didn't waste a decade of my life

Thank You



Gur Lab

Jeffrey Galley, PhD

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Michael Bailey, PhD



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