



**G**enome, **E**nvironment, **M**icrobiome and **M**etabolome in **A**utism

## GEMMA Study

*Do you have a child diagnosed with autism spectrum disorder (ASD)?*

*Are you pregnant or planning to get pregnant, and wondering what the risk of ASD will be in your newborn?*

**What is the goal of this study?** To understand the role that our genes, gut microbiome, and environmental factors play in the development of autism. To identify potential biomarkers (in the blood, stool, urine and saliva) predictive of autism development and ultimately predict, prevent and treat ASD symptoms and GI comorbidities.

**Who can participate?** Infants 0-6 months of age who have a sibling diagnosed with ASD.

### **What is involved?**

- Periodic collection of blood, stool, urine and saliva samples over a 3-year period
- Periodic questionnaires regarding child's social, medical and dietary history
- Autism evaluation every 6 months starting at 1 year of age

**Children who develop autism while enrolled will be eligible for the GEMMA interventional study: This study will use the identified biomarkers to implement personalized prevention and treatment of ASD and ASD-related symptoms.**

For more information, contact us at  
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