WHO WE ARE

Cheryl Gale, MD
Cheryl is an Associate Professor at the University of Minnesota and is a Pediatric Neonatologist at the University of Minnesota Masonic Children’s Hospital. She studies how fungi are associated with disease and health in infants.

Dan Knights, PhD
Dan is an Assistant Professor in the Department of Computer Science and Engineering and the Biotechnology Institute at the University of Minnesota. He specializes in ways to best study the trillions of microbes that live in and on our bodies.

Mary Pat Osborne, MN, RN
Mary Pat is a clinical research nurse coordinator at the University of Minnesota Masonic Children’s Hospital. She specializes in initiating new trials, coordinating the enrollment of eligible patients, and handling patient data.

Tonya Ward, PhD
Tonya is a Postdoctoral Associate in the Biotechnology Institute at the University of Minnesota. She specializes in determining which microbes inhabit our bodies, how they impact our immune system and their role in health and disease.

Carrie Ann Terrell, MD, FACOG
Carrie Ann is the Division Chief of Ob-Gyn and the Medical Director of the University of Minnesota’s Women’s Health Specialists’ Clinic. She teaches learners from multiple disciplines as well as medical students and residents.
The microbiome is a term used to describe all of the microbes, like bacteria and fungi, which live in the intestinal tract of all humans.

Not all microbes are bad! In fact, the microbes that live in our intestines perform important functions for us, such as digesting our food, protecting us from infections, and helping our immune systems develop.

How do we get our microbiome?

Humans are born without a microbiome and we develop our own unique collection of microbes as we grow. We know certain factors help to shape our microbiome, such as:

Mom’s microbiome
Your baby will get its microbes from your birth canal and skin, as well as the skin of other caregivers.

Environmental Exposures
Where you live, how many people are in your family and whether or not you have pets can all impact the types of microbes you and your baby will have.

Formula or Breast Feeding
Breast milk and formula have different types of sugars that microbes eat. That’s one reason why breast-fed babies have different microbes than formula-fed babies.

Taking Antibiotics
Most people take antibiotics at least once to clear up an infection. Antibiotics can also change your microbiome, sometimes forever.

Scientists don’t yet know what a healthy microbiome looks like, how the microbiome changes as we grow, or how the microbiome may impact the development of disease, such as allergy and asthma.

Join us!

We would like to invite you to participate in the Infant Microbiome Dynamics study that determines the microbiome of infants and its relation to allergy development.

As scientists and clinicians, we want to determine:
- Which bacteria and fungi make up a healthy microbiome
- How the microbiome develops as we grow
- If the microbiome can influence allergy and asthma development

To participate, we would require from you:

- Birth canal & skin swab at routine prenatal visit
- Birth canal & skin swab during labor
- Baby skin swab after birth
- Baby’s first stool sample
- 3 at-home baby stool samples
- 1 breast milk or formula sample
- 3 at-home phone questionnaires (10 min each)

You will be compensated for your participation.

For more information:
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or
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