



## Office of Faculty Development

### Pathology & Immunology

**Dr. Molly Schroeder** grew up in a small town in eastern Iowa. Growing up in an agricultural community and family, her introduction to the principles of genetics came through their application to crops and livestock. After graduating from high school, Molly embarked on her first chapter in St. Louis, attending Saint Louis University on a full scholarship. Studying biology and psychology at SLU allowed her to explore a range of potential career paths through research laboratory projects in molecular genetics and plant phylogenetics, observing nights in the BJH Emergency Department, and behavioral ecology studies of mantled howler monkeys in Nicaragua. Despite truly enjoying traipsing through rain forest after while taking notes, this experience confirmed that Molly's preferred scientific environment is the laboratory.



After SLU Molly started her PhD in the Developmental Biology graduate program at Baylor College of Medicine in Houston, Texas. The program, directed by Hugo Bellen, was grounded in the application of experimental genetic approaches to investigate how the genome is regulated in time and space to build an organism. Molly joined the laboratory of Georg Halder at MD Anderson Cancer Center, which focused on the genetics of tissue growth control, where she studied how cell competition regulated the Hippo signaling pathway. BCM is home to a major genome center and has been a leader in translating genetic research into clinical testing, providing Molly the opportunity to explore clinical laboratory genetics as a graduate student. She was inspired by the possibilities for translating rapidly evolving knowledge about human genetic variation into clinical testing to inform and improve patient care. During graduate school Molly married Matt Roode, who was a space shuttle engineer, a Rice University doctoral student, and her high school prom date.

After completing her doctorate, Molly began fellowships in clinical cytogenetics and molecular genetics in the Center for Human Genetics Lab at Case Western Reserve University and University Hospitals in Cleveland. During her three years at CWRU/UH she was given the daunting challenge/opportunity to develop and validate the lab's first next generation sequencing assay, including performing the library prep, sequencing runs, and data analysis. It was a terrific learning experience. Molly's first lab director position was at HudsonAlpha Institute for Biotechnology's Clinical Services Lab. One of Matt's colleagues who had been trying to recruit him to Huntsville, AL, to work on the Space Launch System program, emailed Matt a news article on HAIB's plans to launch a genomic medicine clinic and lab with the message, "Isn't this what your wife does?". No longer able to argue that she'd never find interesting work in Huntsville, Molly cold emailed her CV to Shawn Levy at HAIB and soon had a job offer. At HAIB she worked with pioneers in the adoption of clinical genome-scale sequencing and analyzed genomes for the Undiagnosed Diseases Network. A highlight of Matt and Molly's stint in Huntsville was welcoming their son Calvin.

In 2018, the family moved to St. Louis and Molly joined the clinical laboratory genetics group in LGM. She was drawn by the opportunity to participate in a wide variety of clinical testing as well as the opportunity to work more closely with clinical colleagues and trainees. She has a particular interest in the use of genome-scale

sequencing for both constitutional and acquired conditions and is involved in the American College of Medical Genetics and Genomics efforts to develop evidence-based guidelines for the use of genomic testing.

Molly and her family live in Webster Groves. They are known on their block for their solar panels and a front yard pollinator garden that attracts butterflies as well as neighborhood kids wielding nets. Matt works for Boeing Research and Technology. Calvin (5) enjoys swimming and inventing gadgets. Maeve (20 months) endeavors to hug all animals and enjoys socializing with dogs on the sidelines of her brother's baseball games.



The Schroeder-Roode family visiting with corgis.