Dr. Bridget Barker received her B.A. in Biology and M.S. in Ecological Genetics from the University of Montana. Dr. Barker started her PhD program as an IGERT Fellow at the University of Arizona in 2004. It was at this time she became interested in working on human fungal pathogens, specifically Coccidioides immitis and C. posadasii, the causative agents of coccidioidomycosis, more commonly known as Valley Fever. In 2009, Dr. Barker completed her Ph.D. in Genetics with co-mentors Dr. Scott Kroken and Dr. Steven Rounsley, and then started her postdoctoral work at Montana State University, where she worked to characterize the sterol regulatory element binding protein in Aspergillus fumigatus, in the lab of Dr. Robert Cramer. In 2013, she joined the faculty at TGEN-North, and returned to working on Coccidioides spp. with the assistance of an NIH/NIAID K-22 award. In 2016 she became tenure track faculty at Northern Arizona University (NAU) in the Pathogen and Microbiome Institute (PMI), and a member of the Biology faculty. In 2020, she was promoted to Associate Professor with tenure in the Department of Biological Sciences at NAU.

Dr. Barker has extensive experience with genomics, bioinformatics, population and molecular genetics, and evolutionary biology. Her background in microbiology, work with fungal pathogens, and computational biology allowed her to develop and bring these new techniques to the field of Valley Fever research. As a director of the Animal Biosafety Laboratory (ABSL3) at PMI, Dr. Barker is developing cutting-edge methods for characterizing the in vivo fungal transcriptomes of Coccidioides immitis and C. posadasii. A better understanding of the transcriptional network in a murine model of coccidioidomycosis will provide new insight into interactions between fungus and host. Her current work, funded by an NIH-R21 award, is an investigation of the as yet undescribed sexual life cycle of Coccidioides posadasii and C. immitis. Dr. Barker is also working on developing rapid environmental testing systems to determine potential times and regions for highest exposure potential. Finally, she is looking at the genetics of the fungus itself to determine if there are genomic characteristics of Coccidioides that make it more or less harmful to humans, or if they reveal clues regarding ecological distribution and potential for expansion of the endemic range.

Join Zoom Meeting: https://uits-arizona.zoom.us/j/4712743927?pwd=Nzl5VEF1N0tlanhwVmRVZIRNdjJVZz09
Password: 888639

This University of Arizona event is sponsored by the Division of Infectious Diseases, Department of Medicine, UA College of Medicine - Tucson. It is open to the public, particularly community physicians and other interested health-care professionals.

CONTACT: Carolyn Bothwell, (520) 626-6405 or cbothwell@arizona.edu