



DEPARTMENT OF GENETICS & HUMAN GENETICS INSTITUTE OF NEW JERSEY

RESEARCH SEMINAR

"Post-Genomic Strategies for Elucidating Psychiatric Disorders"



James Knowles, M.D., Ph.D.
Professor and Chair of Cell Biology
Deputy Director of the Institute for Genomic Health
SUNY Downstate Health Sciences University

Over the past 15+ years, the Human Genetics community has been remarkably successful. We now have hundreds of thousands of locations in the human genome where sequence variation influences numerous traits and the risk of developing a wide range of disorders. Unfortunately, we do not understand how most of these DNA sequence variations alter risk (or trait). Consequently, the goal has shifted to determining how the identified genetic basis increases

risk. For the psychiatric/brain traits, this is arguably going to be harder than identifying the sequence variation that increases risk. My research strategy to accomplish this modified goal is to identify which/where/when transcripts are altered in response to the DNA sequence changes, what structural and functional changes occur in the brain as a consequence of transcription, and how do these changes alter risk for disease. To accomplish this, I have multiple projects across various "levels" of analysis. I will present a brief overview of these projects and then focus on the data from several of these as examples of research that might lead to a better understanding of the biology of the brain disorders.

Noon, Monday, October 4, 2021

Zoom Registration Link | Meeting ID: 986 4197 9928 | Passcode: Genetics

Host: Genetics Department, Phone: 848-445-1638, Email: carmona@dls.rutgers.edu