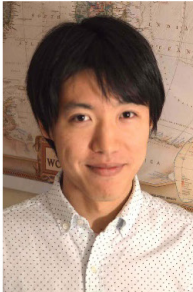


**DEPARTMENT OF GENETICS &  
HUMAN GENETICS INSTITUTE OF NEW JERSEY**  
**RESEARCH SEMINARS**



Takashi Akera, Ph.D.  
Postdoctoral fellow  
University of Pennsylvania  
Department of Biology  
10:30 am – 11:30 am

**Molecular and evolutionary strategies of meiotic cheating by selfish genetic elements**  
Meiotic drive is a genetic cheating, where selfish genetic elements violate Mendel's Law of Segregation to bias their own transmission. Investigating such genetic cheating provides a unique window to reveal essential aspects of reproduction.



Shawn Liu, Ph.D.  
Damon Runyon fellow  
MIT  
Whitehead Institute for Biomedical Research  
11:45 am – 12:45 pm

**Decoding the Epigenome to Explore Biological Functions and Therapeutic Opportunities**  
To elucidate the functional significance of individual epigenetic events, I developed a molecular tool (CRISPR/dCas9-Tet1/Dnmt3a) for precise DNA methylation editing that enables functional interrogations of individual DNA methylation events. Using this tool I demonstrated that demethylation of the hypermethylated CGG repeats at the pathological locus of FMR1 can restore FMR1 expression and rescue the electrophysiological abnormalities associated with Fragile X syndrome neurons. Therefore, epigenome editing represents a new way to study the epigenetic mechanisms in physiology and diseases.

**Monday, March 4, 2019**

**Auditorium, Life Sciences Building, 145 Bevier Road, Busch Campus, Piscataway, New Jersey**