

**GEORGE MASON UNIVERSITY  
COLLEGE OF SCIENCE  
BIOLOGY DEPARTMENT SEMINAR  
Fall 2014**

**Aurora Kersher  
Department of Microbiology & Molecular Cell Biology  
Eastern Virginia Medical School**

***“Of Mice and Men: A Tale about MicroRNAs in the Prostate”***

MicroRNAs (miRNAs) are ~21-nucleotide non-coding RNAs that regulate important developmental events and are often misexpressed in human cancers. Little is known how these small RNAs contribute to tumor formation and progression to advanced, metastatic disease in the prostate. Our laboratory developed expressed prostatic secretions in urine (EPS urine) as an innovative biomarker source for miRNA detection - prostatic fluids that are easily obtained non-invasively in the clinic during a standard urological exam. We recently identified a subset of miRNAs in clinically annotated human EPS urine specimens that discriminate for advanced prostate cancer. We found that EPS urine-derived miRNAs, such as miR-888, which closely correlate with high-grade disease, also play important functional roles in the prostate. This work could lead to promising diagnostic and therapeutic targets for this prevalent and deadly disease.

**TUESDAY October 21, 2014  
3:00-4:15 PM  
Johnson Center Room 334 Meeting Room E**