



Schistosomiasis Resource Center Molecular Course:  
“Gene Editing of Adult Schistosome Parasites by CRISPR/cas”  
October 19-21, 2016

**WEDNESDAY, OCTOBER 19**

9:00-9:15 AM	Welcome	<b>Michael Hsieh, M.D., Ph.D.</b> , Principal Investigator and Stirewalt Endowed Director, BRI
9:15-9:30 AM	Introduction	<b>Margaret Mentink-Kane, Ph.D.</b> , Manager, SRC Overview of SRC and BEI
9:30-10:30 AM	Lecture	<b>Paul Brindley, Ph.D.</b> , Professor, Department of Microbiology, Immunology, and Tropical Medicine, George Washington University “Gene Editing and other Functional Approaches for Schistosomes”
10:30-10:45 AM	Break	Coffee in room 245
10:45-11:15 AM	Lecture	<b>James J. Cody, Ph.D.</b> <b>André Miller</b> SRC molecular team Overview of Experiments
11:15 AM-12.30 PM	Lab	CRISPR/Cas reaction set-up and addition to schistosome cultures
12:30-1:30 PM	Lunch	
1:30-2:30 PM	Lecture	<b>James B. Lok, Ph.D.</b> , Professor of Parasitology, Department of Pathobiology, University of Pennsylvania “Transgenesis, gene disruption and gene editing in <i>Strongyloides stercoralis</i> ”
2:30-3:30	Lecture	<b>James Kehler, Ph.D.</b> Director of Scientific Affairs, MTI-GlobalStem, Gaithersburg, MD “Cas9 transfection strategies”
3:30-4:00	Lab	Refresh cultures

**THURSDAY, OCTOBER 20**

9:00-11:00 AM	Lab	Harvest of adult schistosomes and RNA extractions
11:00-12:00 PM	Lab	cDNA synthesis set up ( <i>runs ~30m</i> )
12:00-1:00 PM	Lunch	
1:00-2:00 PM	Lab	qPCR set up ( <i>runs 1h, 20m</i> )
2:00-3:00 PM	Lab	Genomic DNA extractions
3:00-4:00 PM	Lab	qPCR set up, genomic DNA ( <i>runs 1h, 20m or O/N</i> )
4:00-4:30 PM	Lab	Data analysis and discussion, cDNA reactions

**FRIDAY, OCTOBER 21**

9:00-10:30 AM	Lab	PCR, genomic cleavage assay ( <i>15m set up, 1h 15m run</i> ) - prepare gels - Data analysis, genomic DNA reactions
10:30-11:15 AM	Lab	Verification of PCR products on gel ( <i>15m set up, 30m run</i> )
11:15-11:45 AM	Lab	Denaturing/Reannealing reactions ( <i>15m set up, 30m run</i> )
11:45 AM-12:00 PM	Lab	Set up of enzyme digest ( <i>incubates 1h</i> )
12:00 1:00 PM	Lunch	
1:00-1:45 PM	Lab	Gel analysis of digests ( <i>15m set up, 30m run</i> )
1:45-2:30 PM	Lab	Data quantification and analysis
2:30-3:00 PM	Lab	Questions/answers, closing discussion