

# HOWARD HUGHES MEDICAL INSTITUTE

## SEA-PHAGES IN SITU WORKSHOP 8B

University of Maryland Baltimore County | July 12 - 17, 2015

SEA Lab Room 201 Meyerhoff Chemistry Building

# AGENDA

Sunday, July 12		Monday, July 13		Tuesday, July 14	
7:30		7:30   <b>Breakfast</b>   161 Patapsco		7:30   <b>Breakfast</b>   Patapsco	
8:30		8:30   <b>LECTURE: Processing Soil Samples: Enrichment Part 2 (with Serial Dilution) and Direct Plating</b>   Anna Hull   120 Meyerhoff		8:30   <b>Lab Meeting</b>   Sharon Isern, Scott Michael   SEA Lab 201 Meyerhoff	
8:45		9:00   <b>Laboratory Module: Aseptic Technique</b>   Carl Urbinati   SEA Lab 201 Meyerhoff		8:45   <b>Participant Lab Work: Check Enrichment and Direct Plating Plates, Decide Next Steps</b>   Sharon Isern, Scott Michael   SEA Lab 201 Meyerhoff	
9:00		9:15   <b>DEMO: Processing Soil Samples: Enrichment Part 2 (with Serial Dilution) and Direct Plating</b>   Anna Hull   SEA Lab 201 Meyerhoff		9:15   <b>DEMO: Confirming Your Phage (with the Spot Test)</b>   Jackie Washington   SEA Lab 201 Meyerhoff	
9:15		9:45   <b>Participant Lab Work: Processing Soil Samples: Enrichment Part 2 (with Serial Dilution) and Direct Plating</b>   Anna Hull, Carl Urbinati   SEA Lab 201 Meyerhoff		9:30   <b>Participant Lab Work: Confirming Your Phage (with the Spot Test)</b>   Carl Urbinati, Jackie Washington   SEA Lab 201 Meyerhoff	
9:30		10:15   <b>Break</b>   241 Meyerhoff		10:15   <b>Break</b>   241 Meyerhoff	
9:45		10:30   <b>Participant Lab Work: Processing Soil Samples: Enrichment Part 2 (with Serial Dilution) and Direct Plating (Continued)</b>   Anna Hull, Carl Urbinati   SEA Lab 201 Meyerhoff		10:30   <b>DEMO: Purifying Your Phage (with Stick Streak)</b>   Marianne Poxleitner   SEA Lab 201 Meyerhoff	
10:15		10:45   <b>DEMO: Purifying Your Phage (with Serial Dilution)</b>   Carl Urbinati   SEA Lab 201 Meyerhoff		10:45   <b>DEMO: Purifying Your Phage (with Serial Dilution)</b>   Carl Urbinati   SEA Lab 201 Meyerhoff	
10:30		11:00   <b>Participant Lab Work: Purifying Your Phage (with Stick Streak and Serial Dilution)</b>   Marianne Poxleitner, Carl Urbinati   SEA Lab 201 Meyerhoff		11:00   <b>Participant Lab Work: Purifying Your Phage (with Stick Streak and Serial Dilution)</b>   Marianne Poxleitner, Carl Urbinati   SEA Lab 201 Meyerhoff	
10:45		12:00-3:00   <b>Participants Arrive   Registration</b>   161 Patapsco		12:15   <b>Lunch</b>   256 Meyerhoff	
11:00		12:15   <b>Lunch</b>   256 Meyerhoff		12:15   <b>Lunch</b>   256 Meyerhoff	
11:15		1:00   <b>In Lab Lecture: Working with the Bacterial Host (Media, Culture and Streak Plates)</b>   Tanya Riddick   SEA Lab 201 Meyerhoff		1:00   <b>LECTURE: Making Phage Stocks (Web Plates and MTL)</b>   Anna Hull   120 Meyerhoff	
12:00		1:30   <b>DEMO: Working with the Bacterial Host (Cultures and Streak Plates)</b>   Tanya Riddick   SEA Lab 201 Meyerhoff		1:15   <b>LECTURE: Making Phage Stocks (The Empirical Test and HTL Harvest)</b>   Carl Urbinati   120 Meyerhoff	
12:15		1:45   <b>Participant Lab Work: Working with the Bacterial Host (Cultures and Streak Plates)</b>   Tanya Riddick, Marianne Poxleitner   SEA Lab		1:45   <b>Participant Lab Work: Purifying Your Phage (with Stick Streak and Serial Dilution) (Continued) and Open Lab</b>   Marianne Poxleitner, Scott Michael   SEA Lab 201 Meyerhoff	
1:00		2:15   <b>Participant Lab Work: Open Lab</b>   Scott Michael, Marianne Poxleitner   SEA Lab 201 Meyerhoff			
1:15		3:00   <b>Course Directors Welcome and Workshop Overview</b>   Sharon Isern, Scott Michael   120 Meyerhoff		3:15   <b>Break</b>   241 Meyerhoff	
1:30		3:15   <b>LECTURE: Course Overview and Resources</b>   Sharon Isern   120 Meyerhoff		3:15   <b>Break</b>   241 Meyerhoff	
1:45		3:30   <b>LECTURE: Using the Resource Guide, Lab Manual, and TA Handbook</b>   Kevin Bradley   120 Meyerhoff		3:30   <b>LECTURE: Isolating Phage Genomic DNA</b>   Marianne Poxleitner   120 Meyerhoff	
2:15		3:45   <b>LECTURE: Phage Biology Primer</b>   Scott Michael   120 Meyerhoff		3:30   <b>LECTURE: Isolating Phage Genomic DNA</b>   Marianne Poxleitner   120 Meyerhoff	
3:00		4:00   <b>LECTURE: Processing Soil Samples: Enrichment Part 1</b>   Jackie Washington   120 Meyerhoff		4:00   <b>DEMO: Isolating Phage Genomic DNA</b>   Marianne Poxleitner   SEA Lab 201 Meyerhoff	
3:15		4:15   <b>Collect Soil Samples</b>   UMBC grounds		4:15   <b>Participant Lab Work: Isolating Phage Genomic DNA (Purification and Quantitation)</b>   Marianne Poxleitner, Jackie Washington   SEA Lab 201 Meyerhoff	
3:30		4:30   <b>Lab Safety and Orientation</b>   Kevin Bradley   SEA Lab 201 Meyerhoff		4:30   <b>LECTURE: Confirming Your Phage (with the Spot Test)</b>   Jackie Washington   120 Meyerhoff	
3:45		4:45   <b>DEMO: Processing Soil Samples: Enrichment Part 1</b>   Jackie Washington   SEA Lab 201 Meyerhoff		5:00   <b>LECTURE: Purifying Your Phage (with Stick Streak, Serial Dilution, and Calculating Titer)</b>   Carl Urbinati   120 Meyerhoff	
4:00		5:00   <b>Participant Lab Work: Processing Soil Samples: Enrichment Part 1</b>   Jackie Washington, Carl Urbinati   SEA Lab 201 Meyerhoff		5:30   <b>REORIENTATION and Q&amp;A</b>   Sharon Isern, Scott Michael   120 Meyerhoff	
4:15		5:30   <b>REORIENTATION and Q&amp;A</b>   Sharon Isern, Scott Michael   120 Meyerhoff		5:30   <b>REORIENTATION and Q&amp;A</b>   Sharon Isern, Scott Michael   SEA Lab 201 Meyerhoff	
4:30		6:00   <b>Dinner</b>   256 Meyerhoff		6:00   <b>Dinner</b>   256 Meyerhoff	
4:45		7:00   <b>Faculty Bonding</b>   Jackie Washington, Anna Hull   256 Meyerhoff	7:00   <b>TA Bonding</b>   Carl Urbinati, Tanya Riddick   SEA Lab 201 Meyerhoff	7:00   <b>Faculty Pedagogy Moment 2</b>   Jackie Washington   120 Meyerhoff	7:00   <b>TA Activity</b>   Kevin Bradley, Tanya Riddick   SEA Lab 201 Meyerhoff
5:00		8:00   <b>Refreshments/Social</b>   Meyerhoff 256		8:00   <b>Refreshments/Social</b>   Commons Game Room	
5:30		HOMEWORK   <b>READING:</b> Capture and Cultures <b>WEB:</b> Find seaphages.org and phagesdb.org		HOMEWORK   <b>READING:</b> Dissect <b>WEB:</b> Update school and profile information on seaphages.org	
6:00		HOMEWORK   <b>READING:</b> Tame <b>WEB:</b> Create an account on phagesdb.org and/or seaphages.org		HOMEWORK   <b>READING:</b> Dissect <b>WEB:</b> Update school and profile information on seaphages.org	

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# AGENDA

	Wednesday, July 15	Thursday, July 16	Friday, July 17
7:30	7:30   <b>Breakfast</b>   <i>Patapsco</i>	7:30   <b>Breakfast</b>   <i>161 Patapsco</i>	7:30   <b>Breakfast</b>   <i>161 Patapsco</i>
8:30	8:30   <b>LECTURE: Analyzing Phage Genomic DNA (with Restriction Analysis)</b>   Jackie Washington   <i>120 Meyerhoff</i>	8:30-1:30   <b>Group 1: Analyzing Phage (with Electron Microscopy-Staining and Visualization), Open Lab</b>   Marianne Poxleitner, Anna Hull   <i>SEA Lab 201 Meyerhoff</i>	8:30-12:15   <b>Group 2: Analyzing Phage Genomic DNA (with Restriction Analysis-Load and Run Gel), Final Experimental Choices</b>   Carl Urbinati, Jackie Washington   <i>SEA Lab 201 Meyerhoff</i>
9:00	9:00   <b>LECTURE: Analyzing Phage Genomic (Checking DNA Quality Before Sequencing)</b>   Scott Michael   <i>120 Meyerhoff</i>		
9:15	9:15   <b>LECTURE: Making Phage Stocks (Archiving)</b>   Sharon Isern   <i>120 Meyerhoff</i>		
9:30	9:30   <b>Participant Lab Work: Analyzing Phage Genomic DNA (Restriction Analysis Set Up, DNA Quantitation (Continued))</b>   Jackie Washington, Anna Hull   <i>SEA Lab 201 Meyerhoff</i>		
10:15	10:15   <b>Break</b>   <i>241 Meyerhoff</i>	10:15   <b>Break</b>   <i>241 Meyerhoff</i>	10:15   <b>Break</b>   <i>241 Meyerhoff</i>
10:30	10:30   <b>Participant Lab Work: Check Spot Test, Stick Streak, and Serial Dilution Plates, Decide Next Steps</b>   Carl Urbinati, Jackie Washington   <i>SEA Lab 201 Meyerhoff</i>	10:30   <b>Group 1: Analyzing Phage (with Electron Microscopy-Staining and Visualization), Open Lab (Continued)</b>   Marianne Poxleitner, Anna Hull   <i>SEA Lab 201 Meyerhoff</i>	10:30   <b>Participant Lab Work: Lab Clean Up</b>   <i>SEA Lab 201 Meyerhoff</i>
10:45	10:45   <b>Participant Lab Work: Open Lab</b>   Carl Urbinati, Jackie Washington   <i>SEA Lab 201 Meyerhoff</i>		10:45   <b>REORIENTATION and Q&amp;A</b>   Sharon Isern, Scott Michael   <i>SEA Lab 201 Meyerhoff</i>
11:15			11:15   <b>Final Exam and Awards</b>   <i>SEA Lab 201 Meyerhoff</i>
12:15	12:15   <b>Lunch</b>   <i>256 Meyerhoff</i>	12:15   <b>Lunch</b>   <i>256 Meyerhoff</i>	12:15   <b>Lunch</b>   <i>256 Meyerhoff</i>
1:00	1:00   <b>LECTURE: Analyzing Phage (with Electron Microscopy)</b>   Scott Michael   <i>120 Meyerhoff</i>	1:00   <b>Group 1: Analyzing Phage (with Electron Microscopy-Staining and Visualization) (Continued)</b>	1:00   <b>Participants Depart</b>  <b>HHMI STAFF</b> SEA Office   208 Meyerhoff (410) 455-1628 SEA Lab   201 Meyerhoff David J. Asai asaid@hhmi.org Billy Biederman biederma@hhmi.org Cell (301) 806-5508 Kevin Bradley bradleyk@hhmi.org Cell (240) 507-6923 Vic Sivanathan sivanathanv@hhmi.org HHMI (301) 215-8985  <b>COURSE DIRECTORS</b> Sharon Isern Florida Gulf Coast University Cell (239) 405-4401 Scott Michael Florida Gulf Coast University Cell (239) 405-4402  <b>FACILITATORS</b> Anna Hull Lincoln University Marianne Poxleitner Gonzaga University Tanya Riddick LaSalle University Carl Urbinati Loyola Marymount University Jackie Washington Nyack College
1:30	1:30   <b>DEMO: Analyzing Phage (with Electron Microscopy) Group 1</b>   Marianne Poxleitner, Scott Michael   <b>Open Lab Group 2</b>   Anna Hull, Jackie Washington   <i>SEA Lab 201 Meyerhoff</i>	1:30-5:00   <b>Group 1: Analyzing Phage Genomic DNA (with Restriction Analysis-Load and Run Gel), Final Experimental Choices</b>   Vic Sivanathan, Jackie Washington   <i>SEA Lab 201 Meyerhoff</i>	
2:15	2:15   <b>DEMO: Analyzing Phage (with Electron Microscopy) Group 2</b>   Marianne Poxleitner, Scott Michael   <b>Open Lab Group 1</b>   Anna Hull, Jackie Washington   <i>SEA Lab 201 Meyerhoff</i>		
3:00	3:00   <b>Participant Lab Work: Open Lab</b>   Scott Michael, Marianne Poxleitner   <i>SEA Lab 201 Meyerhoff</i>		
3:15	3:15   <b>Break</b>   <i>241 Meyerhoff</i>	3:15   <b>Break</b>   <i>241 Meyerhoff</i>	
3:30	3:30   <b>Participant Lab Work: Open Lab</b>   Scott Michael, Marianne Poxleitner   <i>SEA Lab 201 Meyerhoff</i>	3:30   <b>Group 1: Analyzing Phage Genomic DNA (with Restriction Analysis-Load and Run Gel), Final Experimental Choices (Continued)</b>   Vic Sivanathan, Jackie Washington   <i>SEA Lab 201 Meyerhoff</i>	3:30   <b>Group 2: Analyzing Phage (with Electron Microscopy-Staining and Visualization), Open Lab (Continued)</b>   Marianne Poxleitner, Anna Hull   <i>SEA Lab 201 Meyerhoff</i>
5:30	5:30   <b>REORIENTATION and Q&amp;A</b>   Sharon Isern, Scott Michael   <i>120 Meyerhoff</i>	5:30   <b>REORIENTATION and Q&amp;A</b>   Sharon Isern, Scott Michael   <i>SEA Lab 201 Meyerhoff</i>	
6:00	6:00   <b>Dinner</b>   <i>256 Meyerhoff</i>	6:00   <b>Dinner</b>   <i>256 Meyerhoff</i>	
7:00	7:00   <b>Faculty Pedagogy Moment 3</b>   Marianne Poxleitner   <i>120 Meyerhoff</i>	7:00   <b>TA Activity</b>   Kevin Bradley, Tanya Riddick   <i>SEA Lab 201 Meyerhoff</i>	7:00   <b>TA Lab Primer Part 2</b>   Kevin Bradley, Tanya Riddick   <i>SEA Lab 201 Meyerhoff</i>
8:00	8:00   <b>Refreshments/Social</b>   <i>Commons Game Room</i>	8:00   <b>Refreshments/Social</b>   <i>Commons Game Room</i>	
	<b>HOMEWORK   READING:</b> Review Resource Guide	<b>HOMEWORK   Study for Final Exam</b>	