

Welcome to the Embryology Course !



Embryology: Concepts & Techniques in Modern Developmental Biology Course Date: June 13 - July 26, 2009








2009 Schedule (all lecture titles are tentative, very tentative)

“average day”




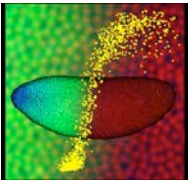

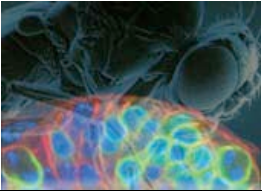


9:00 – 10:30AM	lecture	10:30 – 11:00AM	break, quick lab work
11:00 – Noon	discussion	Noon – 1:30PM	lunch
1:30 – 6:00PM	lab	6:00 – 7:30PM	dinner
7:30PM - ???	lab		








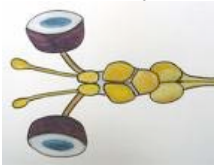



Week 1

Sat, 13 June		6:30 PM meet in Swope lobby; grab dinner at Chez Jimmy's; tour the hotspots of Woods Hole
Sun, 14 June		9:30 AM All Courses Student Brunch at Swope Center 7:00 PM Reception & dinner – 2 nd floor Loeb Bring your posters
Mon, 15 June 	Morning Lecture	[Nipam Patel] Key concepts in developmental biology
	Morning Lab	General orientation and MBL tour; Safety orientation
	Afternoon Lab	[Paul Maddox] Microscopy I: Seeing is Believing And Other Flights of Fantasy [Nipam & Dave "ZeissMan Cometh" Matus] Cameras and Software
	Evening Lab 	[Prof. Henry and Prof. Martindale] Toolmaking & Pyromania; [Maddox, Patel, Matus] Practical Microscopy II
Tues, 16 June 	Lecture	[Scott Nichols] Animal origins: Are we human, or are we nothing more than fancy SpongeBob dancers?
	Afternoon Lab	Choanoflagellates & sponges 1
	Chalk Talk	
	Evening Lab	Choanoflagellates & sponges 2
Wed, 17 June 	Lecture	[Mark Quentin Martindale]; Cnidarians and Ctenophores: Our squishy cousins that are really hard to cook on the grill and are just derived Dipoblasts anyway.
	Afternoon Lab	Cnidaria 1 + Intro to injections
	Chalk Talk	
	Evening Lab	Cnidaria 2
Thurs, 18 June 	Lecture	[Joel Rothman] <i>C. elegans</i> : Not really a worm
	Afternoon Lab	<i>C. elegans</i> 1
	Chalk Talk	
	Evening Lab	<i>C. elegans</i> 2
Fri, 19 June 	Lecture	[Dave "Forest" Sherwood] <i>C. elegans</i> space invaders: The ultimate cancer model
	Afternoon Lab	<i>C. elegans</i> 3
	MBL lecture	[Hollis "Holly" T. Cline] Building Brain Circuits
	Evening Lab	<i>C. elegans</i> 4
Sat, 20 June 	Lecture	[David Fitch] Nematodes: A male's tale of hermaphrodite tyranny
	Afternoon Lab	<i>C. elegans</i> 5
	Chalk Talk	
	Evening Lab	<i>C. elegans</i> 6







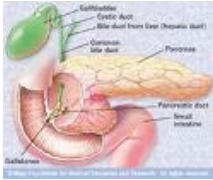
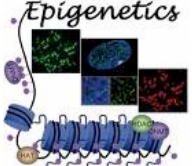
Week 2

<p>Sun, 21 June <i>DISCOVERY</i></p>  <p><i>HAPPENS AT MBL</i></p>	Morning	Student Choice - and Joel says you better finish all 1001 RNAi experiments
	Afternoon	Scavenger Hunt – honestly, this is what you have to do since Swope doesn't serve food on Sundays
	Evening	Group Dinner 
<p>Mon, 22 June</p> 	Lecture	[Nipam Patel] Arthropods: More than just crunchy snacks
	Afternoon Lab	Flies / arthropod 1
	Chalk Talk	
	Evening Lab	Flies / arthropod 2
<p>Tues, 23 June</p> 	Lecture	[Steve Small] Early embryo patterning in <i>Drosophila</i> : Death to gradients
	Afternoon Lab	Flies/ arthropod 3
	Chalk Talk	
	Evening Lab	Flies / arthropod 4
<p>Wed, 24 June</p> 	Lecture	[Matt Ronshaugen] Regulatory RNAs: The key to life, liberty, and the pursuit of happiness
	Afternoon Lab	Flies/ arthropod 5 (+ plankton tow & snorkeling) Bring your shark repellent
	Chalk Talk	[Cassandra Extavour] Your germline: Philosophical musings on the great chain of being.
	Evening Lab	Flies/ arthropod 6
<p>Thurs, 25 June</p> 	Lecture	[Andrea Brand] Crawling on your brain: The brilliance of <i>Drosophila</i> neurogenesis
	Afternoon Lab	Flies/ arthropod 7
	Chalk Talk	
	Evening Lab	Flies/ arthropod 8
<p>Fri, 26 June</p> 	Lecture	[Nipam Patel] What do you get when you cross a beetle and a butterfly? Paul McCartney and Wings
	Afternoon Lab	Flies/ arthropod 9
	MBL lecture	[Patricia J. Johnson] The Human Parasite <i>Trichomonas vaginalis</i> : One Cell, Multiple Revelations
	Evening Lab	Flies/ arthropod 10
<p>Sat, 27 June</p> 	Lecture	[Richard Harland] <i>Xenopus tropicalis</i> : More than an ugly frog that ended up in the arthropod module
	Afternoon Lab	Flies/ arthropod 11
	Evening	Show 'N Tell - ОДИН

Week 3

<p>Sun, 28 June</p> 	<p>All Day</p> 	<p>Whale watching trip in Provincetown Join Captain Ahab for a Three Hour Tour, a Three Hour Tour.</p>
<p>Mon, 29 June</p> 	<p>Lecture</p>	<p>[Ray Keller] <i>Xenopus</i> gastrulation: Harley Davidson hits the road.</p>
	<p>Afternoon Lab</p>	<p>Frog 1</p>
	<p>Chalk talk</p>	<p>[Richard Harland & Lee Niswander] Frog meets chick at a bar ...</p>
	<p>Evening Lab</p>	<p>Frog 2</p>
<p>Tues, 30 June</p> 	<p>Lecture</p>	<p>[Alex “Charles W. Kingsfield Professor” Schier] Zebrafish question and answer: Socratic method reborn at Harvard</p>
	<p>Afternoon Lab</p>	<p>Frog 3</p>
	<p>Chalk Talk</p>	
	<p>Evening Lab</p>	<p>Fish 1 Note: Today is not a leap second adjustment day: don't change your clocks!</p>
<p>Wed, 1 July</p> 	<p>Morning Lab</p>	<p>Fish 2</p>
	<p>Afternoon Lecture</p>	<p>[Sharon Amacher] Zinc finger nucleases: Bringing respectability back to <i>Danio rerio</i> genetics one base pair at a time</p>
	<p>Chalk Talk</p>	
	<p>Evening Lab</p>	<p>Frog/fish</p>
<p>Thurs, 2 July</p> 	<p>Lecture</p>	<p>Frog/fish</p>
	<p>Afternoon Lecture</p>	<p>[Bruce Appel] Zebrafish: They make me nervous and excited</p>
	<p>Chalk Talk</p>	<p>[Andres Collazo] Ear development: Can you hear me now?</p>
	<p>Evening Lab</p>	<p>Frog/fish</p>
<p>Fri, 3 July</p> 	<p>Morning Lab</p>	<p>Frog/fish</p>
	<p>Afternoon Lecture</p>	<p>[Mike Shapiro] Sticklebacks: If zebrafish were cool and on steroids</p>
	<p>MBL lecture</p>	<p>[Susan K. Avery] Coastal Cities, Coastal Impacts: The Tides They Are A-Changin'</p>
	<p>Evening Lab</p>	<p>Frog/fish</p>
<p>Sat, 4 July</p> 	<p>Lecture</p> 	<p>President Obama – Change we can believe in Republican response by Mark Q. Martindale (R, Hawaii)</p>
	<p>Afternoon</p>	<p>America's Fighting Embryologists On Parade (under the command of Grand Poobah Richard Harland – Knight of the Round Table; Commander of the British Light Brigade)</p>
	<p>Evening</p>	<p>Fireworks – Way, way cool display of American firepower</p>







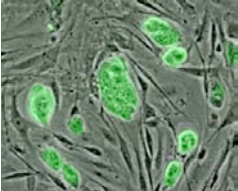

Week 4

<p>Sun, 5 July</p> 	<p>All Day</p>	<p>Student Choice (A) Sleep (B) Sleep (C) Sleep</p>
<p>Mon, 6 July</p>  <p>Mike The Headless Chicken</p>	<p>Lecture</p>	<p>[Olivier Pourquie] Somitogenesis: The Developmental Basis for Mike the Headless Chicken</p>
	<p>Afternoon Lab</p>	<p>Chick lab 1</p>
	<p>Chalk Talk</p>	<p>[Federica Bertocchini] Early chick development: Now the topologically challenged can finally understand what goes on in mice and frogs</p>
	<p>Evening Lab</p>	<p>Chick lab 2</p>
<p>Tues, 7 July</p> 	<p>Lecture</p>	<p>[Lee Niswander] Chicken Limbs: Taste just like Buffalo Wings</p>
	<p>Afternoon Lab</p>	<p>Chick lab 3</p>
	<p>Chalk Talk</p>	<p>[Clare Baker] Chicks: More than just flying dinosaurs</p>
	<p>Evening Lab</p>	<p>Mouse lab</p>
<p>Wed, 8 July</p> 	<p>Lecture</p>	<p>[Paul Trainor] Cocktail Lovers Guide: Fun with Blue Mice</p>
	<p>Afternoon Lab</p>	<p>Mouse lab</p>
	<p>Evening Lab</p>	 <p>Chick mouse lab 6</p>
<p>Thurs, 9 July</p> 	<p>Morning lecture</p>	<p>[Richard Behringer] Mouse Genetics: Kicking fly and nematode butt with homologous recombination</p>
	<p>Afternoon lab</p>	<p>Chick mouse lab 7</p>
	<p>Evening Lecture</p>	<p>[Lee Niswander] Lung branching morphogenesis: Why Embryology students should stop smoking</p>
	<p>Evening Lab</p>	<p>Chick mouse 8</p>
<p>Fri, 10 July</p> 	<p>Lecture</p>	<p>[Lori Sussel] Pancreas: <i>Larousse Gastronomique</i> says its sweetbread, but I respectfully disagree</p>
	<p>Afternoon Lab</p>	<p>Chick mouse 9</p>
	<p>MBL lecture</p>	<p>[Dan Rokhsar] GATTACA: The future is now</p>
	<p>Evening lab</p>	<p>Chick mouse 10</p>
<p>Sat, 11 July</p> <p><i>Epigenetics</i></p> 	<p>Morning lecture</p>	<p>[Terry Magnuson] Epigenetics: Really scary genetics</p>
	<p>Afternoon lecture</p>	<p>Last chick/mouse lab + Zoo</p>
	<p>Evening</p>	<p>Show 'N Tell - ДВА</p>









Week 5

<p>Sun, 12 July</p> 	Morning & Afternoon	Student Choice
	Evening	Group Dinner: Student Created Fiesta Bring your Alka Seltzer and wear loose pants
<p>Mon, 13 July</p> 	Lecture	[Bob "Foezzy" Zeller] Notochord and Nervous System Development in Ascidians: What does this have to do with golf?
	Afternoon Lab	Ascidian 1
	Chalk Talk	
	Evening Lab	Sea urchin 1
<p>Tues, 14 July</p> 	Lecture	[Dave McClay] Sea urchin development: Cooking with Uni
	Afternoon Lab	Sea urchin 2
	Chalk Talk	
	Evening Lab	Ascidian 2
<p>Wed, 15 July</p> 	Lecture	[他的神圣第十四达赖喇嘛] 我的生活在西藏 :
	Afternoon Lab	Marine Collection (Zoo labs?)
	Chalk Talk	
	Evening Lab	Zoo lab & look at marine collection
<p>Thurs, 16 July</p> 	Lecture	[Mike Levin] Left versus Right: The Truth will Shock You
	Afternoon Lab	Sea urchin/ascidian
	MBL lecture	[David Julius] The Molecular Biology of Thermosensation and Pain
	Evening Lab	Sea urchin/ ascidian
<p>Fri, 17 July</p> 	Lecture	[Alejandro Sanchez Alvarado] The planarian nightmare: You can slice 'em and dice 'em, but they always come back for more
	Afternoon lab	Planaria
	MBL lecture	[David Julius] From Peppers to Peppermints: Understanding Pain Through the Power of Folk Medicine and Natural Products
	Evening Lab	Planaria
<p>Sat, 18 July</p> 	Lecture	[Margaret McFall-Ngai] Symbiosis: Bacterial infections that light up your life and give you hope to carry on
	Afternoon lab	Squid lab
	Chalk Talk	
	Evening Lab	Sea urchin/squid

Week 6

<p>Sun, 19 July</p> 	<p>Evening BBQ</p>  <p>Woods Hole Floating BBQ Donut Kitchen Grill</p>	
<p>Mon, 20 July</p> 	<p>Morning lab</p>	<p>[Elaine Seaver] All Things Bright and Beautiful, All Things Wormy and Segmented, I Study Them All</p>
	<p>Afternoon Lecture</p>	<p>Annelid lab1</p>
	<p>Chalk Talk</p>	
	<p>Evening Lab</p>	<p>Annelid lab 2</p>
<p>Tues, 21 July</p> 	<p>Lecture</p>	<p>[Alexa Bely] Annelid Regeneration: The Unchained Melody</p>
	<p>Afternoon Lab</p>	<p>Planaria/annelid</p>
	<p>Chalk Talk</p>	
	<p>Evening Lab</p>	<p>Planaria/annelid</p>
<p>Wed, 22 July</p> 	<p>Lecture</p>	<p>[Jon “Steel-Driving Man” Henry] Spiralian: No, they are not related to spinning Raëlians!</p>
	<p>Afternoon Lab</p>	<p>Mollusc lab</p>
	<p>Chalk Talk</p>	
	<p>Evening Lab</p>	<p>Collecting at the dock</p> 
<p>Thurs, 23 July</p> 	<p>Lecture</p>	<p>[Dennis Roop] Stem Cells: They’re Just Not Funny Until You Add a Little p63</p>
	<p>Afternoon Lab</p>	<p>lab</p>
	<p>Chalk Talk</p>	
	<p>Evening Lab</p>	<p>Annelids/molluscs</p>
<p>Fri, 24 July</p> 	<p>Lecture</p>	<p>[Mike Levine] Conclusions: Hedda Gabler and the German Entwicklungsbiologie Movement Peter Travers of <i>Rolling Stone</i> raves “Mike Levine’s portrayal of Hedda in Woody Allen’s adaptation of Henrik Ibsen’s classic play raises the genre of embryo comedy to new heights”</p>
	<p>Afternoon lab</p>	<p>Planaria</p>
	<p>MBL lecture</p>	<p>[Paul G. Falkowski] The Microbial Engines that Drive Earth's Biogeochemical Cycles"</p>
	<p>Evening Lab</p>	<p>Planaria</p>

Tentative 2009 Woods Hole Embryology Schedule – Update by Nipam on April 23, 2009

Sat, 25 July	Morning	Course Review 
	Afternoon	Show 'N Tell – три 3:00 PM Get Ready to Rumble 
	Evening 	End of Course Party No Swimming Allowed  
Sun, 26 July		Departure: Parting Is Such Sweet Sorrow   ALOHA