

Monday January 28th, 2008	Issues in marine Biology	Cell Polarization and Differentiation	S. COELHO	9h00 – 10h20	Lecture 1's goal is to make students familiar with the concepts of early development in plants and algae at molecular and cellular levels. Particular attention will be given to the <i>Fucus</i> zygote model of polarization	Conference room
			Coffee Break	10h20 – 10h35		
			B. CHARRIER	10h35 – 12h		
			LUNCH	12h00 – 14h00		
		Evolution of development patterns in Metazoans	J. SALAMERO	13h30 – 14h45	This Lecture 2 will focus on the recent technology development in image analysis in cell biology, and will be illustrated by analysis of cellular trafficking using dynamic imaging.	
			Fruit Juice break	14h45 – 15h00		
P. CORMIER	15h00 – 16h30		Lecture 3 will cover the course of development from fertilisation to adulthood in model systems. Emphasis will also be placed to evolutionary patterns of development : positional information and body axes. The course is designed to build on the regulation of gene expression and cellular signalling during development.			
Tuesday January 29th, 2008	Workshop 1	Electrophysiology & Optical and electronic microscopy	S. EGEE S. LEPANSE B. COSSON	9h – 12h	Workshop 1 part 1 will deal with electrophysiology techniques such as patch-clamp and Ussing Chambers . Particular emphasis will be given to the advantages and limitations of each technique handled by the students.	Hotel de France, room 3 & Laboratories
			LUNCH	12h – 14h		
			S. EGEE S. LEPANSE B. COSSON	14h – 18h		

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Wednesday January 30th, 2008	Workshop 1	Electrophysiology & Optical and electronic microscopy	S. EGEE S. LEPANSE B. COSSON	9h00 – 12h00	Workshop 1 continues	Hotel de France, room 3 & Laboratories	
			LUNCH				12h00 – 14h00
			S. EGEE S. LEPANSE B. COSSON	14h00 – 18h00			Workshop 1 continues
Thursday January 31st, 2008	Issues in marine Biology	The Bricks and Architects of Multi- cellularity	M. COCK	9h00 – 10h15	Lecture 4 highlights the finding that the genes of Eukaryotes are not contiguous block of protein-coding sequences, but rather mosaics of exons interspersed with often vast tracts of intervening sequences called introns. Introns could have progressively acquired genetic function mediated by RNA. RNA-RNA and RNA-DNA interactions could in turn create structures that recruit proteins to convert the signal to actions.	Conference room	
			Coffee Break				10h15 – 10h30
			M. COCK	10h30 – 12h00			
	LUNCH		12h00 – 14h00	12h00 – 14h00			
	Workshop 2	statistics	P. RIERA	14h00 – 17h00	Workshop 2 dealing with the use of statistics for biological studies in marine ecosystems. The students will experience how to analyse concrete cases. This workshop is a complement of the first year	Hotel de France, room 3	

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Friday February 1st, 2008	Workshop 2	statistics	P. RIERA	9h00 – 12:00	WS 2 continues	Hotel de France, room 3
			LUNCH	12h00 – 14h00		
	Issues in marine Biology	Allelopathic Relationships in the Marine Environment	P. POTIN	14h00 – 17h00	Lecture 5 deals with the role of secondary metabolites of plants and their role as attractants or antifeedants to animals and as allelopathic or antifungal agents. Emphasis will be placed on co-evolution of plants and phytophagous organisms and the ecological and physiological dimensions of this relationship.	Hôtel de France, room 3
Monday February 4th, 2008	Issues in marine Biology	The cell cycle machinery	L. MEIJER	9h00 – 10h30	Lecture 6 focuses on molecular events which regulate cell cycle transitions and their relevance to human cancer. Topics will include control of the G1/S and G2/M transitions, the role of the complexes CDK/cyclin in the control of cell cycle. Particular emphasis will be given to the marine models used.	Conference Room
			Coffee Break	10h30 – 10h45		
			F-Y. BOUGET	10h45 – 12h30	Lecture 7 focuses on integration of metabolic and circadian signals in the regulation of cell division. Recent data obtained using the unicellular marine microalga <i>Ostreococcus</i> , will illustrate how this simple model system can help to understand the molecular mechanisms of light-dependent regulation of cell division in eucaryotes.	
			LUNCH			
	Workshop 3	Early Development in Multicellular Algae and Metazoans	S. COELHO P. CORMIER	14h00 – 18h00	Workshop 3 will focus on the molecular mechanism controlling the principal steps of the development and the different pattern of body plan in a context of evolution. The analysis of different types of cleavage (radial, spiral and bilateral) will be studied in a handling context by the students and compared to the development pattern in algae.	Lacaze Duthiers TP3

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Tuesday February 5th, 2008	Workshop 3	Early Development in Multicellular Algae and Metazoans	S. COELHO P. CORMIER	9h00 – 18h00	WS 3 continues	Lacaze Duthiers TP3
Wednesday February 6th, 2008	Workshop 4	Abiotic and Biotic Stresses in Algae and Cyanobacteria.	P. POTIN N. BLOT	9h00 – 12h00 14h00 – 18h00	Workshop 4 will deal with the response of marine organisms (algae and cyanobacteria) to stresses . Main emphasis will be done on the defence responses of algae against parasitism and grazing and on photosynthetic species cyanobacteria to illustrate the molecular adaptation to the light (wavelength and irradiance).	Lacaze Duthiers TP3
Thursday February 7th, 2008	Workshop 5	Advanced Fluorescence Microscopy: FISH, flow cytometry	L. GUILLOU D. MARIE	8h30 – 12h00 14h00 – 18h00	Workshop 5 is designed to present students with state-of-the-art technology and scientific expertise in the use of fluorescence applications (microscopy, flow cytometry and gel imaging for <i>in-situ</i> hybridization), related to localizing DNA and proteins in fixed cells as well as protein and RNA dynamics in living cells.	Hotel de France room 3 & laboratories
Friday February 8th, 2008	Workshop 6	High Throughput Screening of Chemical Libraries for Anti-cancer and other Drugs	S. BACH O. LOZACH C. CORBEL	9h00 – 12h00	Workshop 6 summarizes the current state of high-throughput screening as it is being practiced in the emerging drug discovery enterprise. The course will be designed around the automated facilities present in the UPS 2682 designed for the screening of CDK/cyclin inhibitors .	Hotel de France, room 3
Friday February 8th, 2008	Debriefing	Debriefing		14h00 – 18h00		Hotel de France, room 3

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Name	Status	Institute	Name	Status	Institute
S. BACH	Engineer	SBR	L. GUILLOU	scientist	SBR
N. BLOT	Post-doc	SBR	B. KLOAREG	Scientist	SBR
F-Y. BOUGET	scientist	OOB Banyuls	L. LEPANSE	Engineer	SBR
B. CHARRIER	scientist	SBR	O. LOZACH	Engineer	SBR
M. COCK	scientist	SBR	D. MARIE	Engineer	SBR
S. COEHLO	scientist	SBR	L. MEIJER	scientist	SBR
C. CORBEL	PhD fellow	SBR	P. POTIN	scientist	SBR
P. COSSON	lecturer at UPMC	SBR	P. RIERA	lecturer at UPMC	SBR
S. EGEE	lecturer at UPMC	SBR	J. SALAMERO	scientist	Institut Curie