PROGRAMME OF THE FOURTH WORKSHOP of the COST ACTION PHYCOMORPH

"Imaging seaweed cells and tissues"

12-13 November, 2018, Roscoff, France
Station Biologique Conference room "Jean Painlevé"

Organisers: Christos Katsaros and Bénédicte Charrier

Monday 12 November, 2018

	8.30	Registration		
Morning session I: Chaired by B. Charrier				
		Name	**Organization**	**Title of talk**
	9.00-9.30	*Welcome by the organisers and the chair of the COST Action*		
	9.30-10.00	Bernard Kloareg	Station Biologique, CNRS-SU, Roscoff France	EMBRC and ASSEMBLE plus : European instruments to access the marine laboratories in Europe.
	10.00-10.30	Chikako Nagasato	Muroran Marine Station, Hokkaido University, Japan	Plasmodesmata in brown algae: structure and macromolecular transportation
	10.30-11.00	Coffee break		
Morning session II: Chaired by C. Katsaros				
	11.00-11.30	Clément Laigle	Leica Co.	Light Sheet microscopy
	11.30-12.00	Philippe Andrey	Institut Jean-Pierre Bourgin, INRA-AgroParisTech	Image analysis and computational modelling of cell divisions in plant early embryogenesis
	12.00-12.30	Nadine Peyriéras	Institut des Neurosciences Paris-Saclay / BIOEMERGENCE	3D and 4D imaging in marine metazoa embryos
	12.30-14.00	Lunch		
Afternoon session I: Chaired by C. Nagasato				
	14.00-14.30	Annalisa Falace	University of Trieste, Italy	Scanning electron microscopy for the study of Coralline algae
	14.30-15.00	Christos Katsaros	Department of Biology, University of Athens, Greece	Cell division in brown algae: More than 40 years of research
	15.00-15.30	Amerssa Tsirigoti	Department of Biology, University of Athens, Greece	"Ultrastructural and immunofluorescence study of the infection of brown algae by oomycetes".
	15.30-16.00	Coffee break		
Afternoon session II: Chaired by A. Falace				
	16.00-16.20	Doron Ashkenazi	Faculty of Life Sciences at Tel Aviv University and Israel Oceanographic and	Enhancement of seaweed's molecular sunscreens by integrated aquaculture

			Limnological Research Institute, Haifa, Israel	
	16.20-16.40	Fatemeh Ghaderiardakani	School of Biosciences University of Birmingham	A new tripartite system established with *Ulva intestinalis* and *U. mutabilis*
	16.40-17.00	Frauke Pescheck	Botanical Institute Christian-Albrechts-University of Kiel	The role of chloroplast movements in *Ulva sp*. in UVB resistance
	17.00.17.20	Ynon Deutsch	Agricultural Research Organization (ARO) Volcani center, and the University of Haifa, Israel	Endophytes from algae as biological control of pathogens and pests in aquaculture
	19.00	Farewell Dinner		

Tuesday 13 November, 2018

Morning session I: Chaired by Cecile Hervé				
		Name	**Organization**	**Title of talk**
	9.00-9.30	Frithjof C. Küpper	School of Biological Sciences, University of Aberdeen	Nano X-ray fluorescence tomography (SR-nXRF) for imaging element distribution at the subcellular level in algae
	09.30-10.00	Hervé Rabillé	Station Biologique, CNRS-SU, Roscoff France	Mapping dynamic cell expansion in *Ectocarpus*
	10.00-10.30	Denis Saint-Marcoux	University Saint Etienne, France	Laser capture microdissection in macroalgae: Cell-type specific transcriptome of *Ectocarpus*
	10.30-11.00	Coffee break		
Morning session II: Chaired by Catherine Reeb				
	11.00-11.30	Cécile Hervé	Station Biologique, CNRS-SU, Roscoff France	Cell wall biology: immunolocalisation of polysaccharides using specific probes
	11.30-12.00	Kenny Bogaert	Department of Biology, Ghent University, Belgium	Maternal determination of the direction of the polarization vector in the egg of the brown alga *Dictyota*
	12.00-12.30	Bénédicte Charrier	Station Biologique, CNRS-SU, Roscoff France	Vesicle trafficking dynamics in brown algae: setting up FRAP in *Ectocarpus*
	12.30-14.00	Lunch		
Afternoon session I: Chaired by Frithjof C. Küpper				
	14.00-14.30	Catherine Reeb	Museum National d'Histoire Naturel (ISYEB), Paris	MorphoSnake: A semi-automated analysis of branched shapes
	14.30-15.00	Thomas Torode	Sainsbury Laboratory, University of Cambridge	Biochemical and Biomechanical techniques to study the cell walls of the brown algae
	15.00-15.30	Ioannis	Institute for Inorganic	*Ulva mutabilis* life cycle and

		Theodorou	and Analytical Chemistry, Friedrich Schiller University Jena, Germany	transcription factors
	15.30-16.00	Coffee break		
Afternoon session II: Chaired by Thomas Torode				
	16.00-16.20	Maria Koutalianou	Department of Biology, University of Athens, Greece	Effects of ocean acidification on the cell structure of *Cymodocea nodosa* and *Posidonia oceanica* revealed indications of apoptotic like programmed cell death (AL-PCD)
	16.20-16.40	Tania Tsioli	Fisheries Research Center, Kavala, Greece	Estimation of ecological quality status using epiphytes coverage on leaves of *Cymodocea nodosa*
	17.00-17.30	***Closing - Concluding Remarks***		

PROGRAMME OF THE THIRD PHYCOMORPH TRAINING SCHOOL
"State-of-the-art of modern techniques for imaging cell and tissues of macroalgae"

14-15-16 November, 2018
Microscopy Lab, SBR

Wednesday 14 November, 2018

	Time		Group 1	Group 2	Group 3
	09.00-09.30	*Registration- prg presentation*			
	09.30-12.00	*Image J/ FIJI: lecture + practicals:* ***A (all groups)***			
	12.00-13.30	Lunch			
	13.30-14.00	Group formation : choose only 3 out of B, C, D E, and F; make 4 groups accordingly			
	14.00-17.00		Prac B	Prac C	Prac D
	19.00	Dinner			

Thursday 15 November, 2018

	Time		Group 1	Group 2	Group 3
	09.00-12.00		Prac C	Prac D	Prac E
	12.00-13.30	Lunch			
	13.30-16.00		Prac D	Prac E	Prac F
	16.00-18.30		Prac E	Prac F	Prac G
	19.00	Dinner			

Friday 16 November, 2018

	Time		Group 1	Group 2	Group 3
	9.00-12.00		Prac F	Prac G	Prac B
	12.00-13.30	Lunch			
	13.30-16.00		Prac G	Prac B	Prac C
	16.00-18.00	Additional observations of the sections/preparations or Excursions Ile de Batz (depending on the weather and also of people) **??**			

NOTE :

- **Three groups (1, 2, 3) of 4 persons each.**
- **7 different practicals (A, B, C, D, E, F, G)**

A. Image analysis (J / FIJI) (Trainer: P. Andrey)

B: Immunolocalization (Trainers: A. Tsirigoti, M. Koutalianou)

C: Confocal Microscopy (Trainer: B. Charrier)

D: Microinjection (Trainer: C. Nagasato)

E: Time-lapse microscopy (Trainer: H. Rabillé)

F: TEM (Trainer: C. Katsaros and S. Le Panse)

G: Light sheet microscopy (Trainers: C. Laigle & N. Peyriéras)