EVOLUTION, BIOGENESIS AND DYNAMICS Of ENERGY TRANSDUCING MEMBRANES

A DYNAMO LABEX SYMPOSIUM, ***Paris, April 9th-12th 2014***

Program

April 9th

12h – 14h
Registration of participants

14h – 14h15
FRANCIS-ANDRE WOLLMAN: Welcome, Presentation of the DYNAMO Consortium

The broad picture: ENDOSYMBIOSIS AND EVOLUTION

Chair: MARC FONTECAVE

14h15-15h45
PAUL FALKOWSKI: Light to Life
WOLFGANG NITSCHKE: Energy conversion links the evolution of the biosphere to that of the planet, from life's origin to eukaryotes (… and beyond)
RALPH BOCK: Endosymbiotic and horizontal gene transfer: experimental evolution meets synthetic biology

15h45-16h15: Coffee-break

16h15-17h45
ABDELAZIZ HEDDI: Endosymbiont Evolution and Control in Insects
EVA NOWACK: The evolution of a photosynthetic organelle - Lessons learned from the photosynthetic amoeba Paulinella chromatophora (Cercozoa, Rhizaria)
ARTHUR GROSSMAN: The Complexities of Fermentation and Dark Metabolism in *Chlamydomonas reinhardtii*

18h30-20h30: ***Welcome party at « Le Couvent des Cordeliers »***

April 10th

EVOLUTION OF GENE EXPRESSION AND PROTEIN TRANSLOCATION IN ENERGY PRODUCING (SUBCELLULAR)-COMPARTMENTS

Chair: MARC DREYFUS

9h-10h30

GUNNAR VON HEIJNE: Co-translational insertion and folding of membrane proteins in vivo

CHRISTIANE SCHAFFITZEL: Structure of the SecYEG-SecDFYajC-YidC Holotranslocon Complex by Cryo-EM

MASATO NAKAI: The evolution of the chloroplast protein import system

10h30-11h: Coffee break

11h-12h30

MICHAEL SCHRODA: On the role of VIPP1 and molecular chaperones in thylakoid biogenesis

IAN SMALL: Predicting and verifying binding sites for PPR proteins

ALICE BARKAN: Genome-wide analysis of translational dynamics in chloroplasts

12h30-14h: Lunch

Chair: CIARAN CONDON

14h-15h30

ANTONIO BARRIENTOS: Biogenesis of the mitochondrial translation machinery

WOLFGANG HESS: Non-coding RNAs in the regulation of cyanobacterial photosynthesis

CHRISTIAN SCHMITZ-LINNEWEBER: Short non-coding RNA fragments in chloroplasts:
just debris or regulators?

15h30-17h: Poster viewing (P1-P34)

17h-18h

MAUDE GUILLIER : Post-transcriptional control by small bacterial RNAs : from membrane homeostasis to the control of transcription regulators

LAURENCE MARECHAL DROUARD : Organellar plant tRNA Fragments as a new source of small non-coding RNAs

GENEVIEVE DUJARDIN : Coupling of mitochondrial biogenesis to oxidative phophorylation through the ATP-dependent activity of Bcs1

MICHEL GOLDSCHMIDT-CLERMONT:Chloroplast RNA metabolism: why so complex?

18h-19h

HARALD PUTZER: Evolution of RNAse J from bacteria to chloroplasts

MARIA MITTAG: Circadian clock in green microalgae

April 11th

BIOGENESIS OF ENERGY-RANSDUCING MEMBRANES AND PROTEINS

Chair: STEPHANE LEMAIRE

9h-10h30

SUSAN GOLDEN: How Cyanobacteria Tell Time
MANUEL ROJO: Bioenergetic control of mitochondrial fusion
THOMAS LANGER: Proteolytic control of mitochondrial dynamics

10h30-11h: Coffee break

11h-12h: Professor P. LESLIE DUTTON as the speaker of the Edmond de Rothschild Foundations Lecture : *Engineering biogenesis of man-made light- and redox-active protein maquettes*

12h-12h30

CHRISTOPHE TRIBET: Polymer photoswitches to manipulate lipid membranes and cells with light
SILVIA ZAMBOLIN: Structural and functional studies of the heme-hemopexin acquisition system Hxu from Haemophilus influenza

12h30-14h: Lunch

Chair: BRUNO MIROUX

14h-15h30

BENOIT KORNMANN: Broadband Connections Within the Cell: How the Mitochondria Talk to the Endomembrane
ERIC MARECHAL: Coordinated biosynthesis and dynamics of thylakoid lipids
EMMANUELLE BOUVERET: Coupling lipid biogenesis with growth in bacteria

15h30-17h: Poster viewing (P35-P63)

17h-18h

JENNY HINSHAW: Structural insights into the mechanism of dynamin-mediated membrane fission and fusion
MICHAEL COHEN: Role of dynamins in the fusion of mitochondrial membranes

18h-19h

JÖRG NICKELSEN : Biogenesis of cyanobacterial thylakoid membranes
FABIEN PIERREL : Ubiquinone biosynthesis in Saccharomyces cerevisiae
LUCIE BERGDOLL: Study of a respiratory supercomplex from Geobacillus stearothermophilus, electron transfer in a menaquinone world
AXEL MAGALON: Spatio-temporal regulation of a respiratory complex in Escherichia coli

April 12th

SUPRAMOLECULAR ORGANIZATION AND MODELISATION OF ENERGY TRANSDUCING MEMBRANES AND PROTEINS

Chair: DANIEL PICOT

9h-10h30

ZIV REICH: 3D organization of the higher-plant thylakoid membrane: What have we learned in the past 70 years?
EGBERT BOEKEMA: Electron Microscopy studies of protein supercomplexes in chloroplasts
DANIELA STOCK: Structure and dynamics of rotary ATPases

10h30-11h: Coffee break

11h-12h30

FABRICE RAPPAPORT: The role of supercomplex formation in mitochondrial and chloroplast membrane compartmentalization
HELMUT KIRCHHOFF: Design Principles of Photosynthetic Membranes
DAVID KRAMER: The ancillary functions of photosynthesis

12h30-14h: Lunch

Chair : PHILLIPE DEREUMEAUX

14h-15h30

KLAUS SCHULTEN: Molecular Dynamics of membranes et photosynthetic proteins
PETRA FROMME: Femtosecond crystallography opens in new era in protein structure
PHILLIP STANSFELD: Biomolecular Simulations of the Twin-Arginine Translocase

15h30-17h: Poster viewing (P64-P93)

17h- 17h30

SAMUELA PASQUALI : Predicting RNA complex architectures
MARIE-FRANCE GIRAUD: Different strategies to get structural data on the yeast ATP-synthase

17h30-18h30

FREDERIC BARRAS: Biogenesis of Fe-S proteins, from bacteria to organelles
FEVZI DALDAL: Photosynthetic and Respiratory Cytochromes c Supercomplexes (bc1~cy~cbb3) of Rhodobacter capsulatus

20h : ***Farewell Dinner for invited speakers***