

(All times are CET)

NOVEMBER 16th, 2020

- 2:00 p.m.-2:10 p.m. Introduction: **Thierry GALLI**
- Session 1**
- Chairs:** Marie-Hélène VERLHAC (Collège de France /SBCF) & Lionel PINTARD (Institut Jacques Monod)
- 2:10-2:55 p.m. **Keynote LECTURE**
“The generation of neural diversity”, **Claude DESPLAN**, New York University, USA
- 2:55-3:07 p.m. “Contact-area dependent cell communications and the morphological invariance of ascidian embryogenesis”. **Léo GUIGNARD**, Max Delbruck Center for Molecular Biology, Berlin, Germany
- 3:07-3:19 p.m. “Modelling to decipher Pax3 & Pax7 graded transcriptional activity in embryonic stem cells derived spinal organoids”. **Vanessa RIBES**, Institut Jacques Monod, Paris, France
- Short break**
- 3:25-3:55 p.m. “Gastrulation: more important than marriage or death. Really?”, **Patrick LEMAIRE**, CRBM, Montpellier, France
- 3:55-4:07 p.m. “Transient nodal signalling in left precursors coordinates opposed asymmetries shaping the heart loop”. **Audrey DESGRANGE**, Imagine -Institut Pasteur, Paris, France
- 4:07-4:19 p.m. “Sculpting the vertebrate heart – Multiscale interactions between form, forces and fate”. **Rashmi PRIYA**, Max Planck Institute for Heart and Lung Research, Bad Nauheim, Germany
- 4:19-4:31 p.m. ” Mechanical interactions between neurons and the skin drive the opening of the olfactory orifice”. **Marion BARABAN**, Institut de Biologie Paris-Seine, Paris, France
- 4:31-4:50 p.m. **Break**
- Session 2**
- Chairs:** René-Marc MÈGE (Institut Jacques Monod) & Carine ROSSÉ (Institut Curie)
- 4:50-5:20 p.m. “Mechanical impact of cell delamination on morphogenesis”, **Magali SUZANNE**, CBI, Toulouse, France
- 5:20-5:32 p.m. “Control of osteoblast regeneration by a train of Erk activity waves”. **Alessandro DE SIMONE**, Duke University, Durham, USA
- 5:32-5:44 p.m. “EGFR/ERK mechanical feedback on cell death maintains tissue integrity during morphogenesis”. **Léo VALON**, Institut Pasteur, Paris, France
- Short break**
- 5:50-6:20 p.m. “Mechano-chemical models of tissue patterning”, **Edouard HANNEZO**, IST, Vienna, Austria
- 6:20-6:32 p.m. “The timing and trigger of mouse embryo polarization and cell fate segregation”. **Meng ZHU**, University of Cambridge, Cambridge, UK

- ▶ 6:32-6:44 p.m. “The MAP NuMA controls nuclear positioning and microtubule assembly from the nuclear envelope in fly oocyte”. **Antoine GUICHET**, Institut Jacques Monod, Paris, France
- ▶ 6:44-6:56 p.m. “Pushing things into place: mechanical control of mesoderm migration during gastrulation”. **Arthur BOUTILLON**, Ecole Polytechnique, Palaiseau, France

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Session 3

Chairs: Katja WASSMANN (Institut de Biologie Paris-Seine) & Romain LEVAYER (Institut Pasteur)

- ▶ 9:00-9:30 a.m. “Floral regulators: structure, function and evolution”, **François PARCY**, LPCV, Grenoble, France
- ▶ 9:30-9:42 a.m. “Temporal control of early chick embryo development: lessons from in vivo real-time imaging”. **Ana MAIA-FERNANDES**, Universidade do Algarve, Faro, Portugal
- ▶ 9:42-9:54 a.m. “Scaling between cell area and stress fiber number adjust cell elongation and mechanosensitivity during epithelial tissue dynamic”. **Jesús M. LÓPEZ-GAY**, Institut Curie, Paris, France
- ▶ 10:00-10:30 a.m. “Questions of shape, growth and patterning in retinogenesis”, **Caren NORDEN**, Instituto Gulbenkian de Ciência, Oeiras, Portugal
- ▶ 10:30-10:33 a.m. Presentation of the thesis award of the French Society of Developmental Biology (SFBD)
- ▶ 10:33-10:45 a.m. “Mechanical impact of EMT on epithelial morphogenesis in *Drosophila melanogaster*”. **Mélanie GRACIA**, LBCMCP-CBI, Toulouse, France (SFBD Thesis Prize awardee)
- ▶ 10:45-11:05 a.m. **Break**

Session 4

Chairs: Yohanns BELLAICHE (Institut Curie) & Manos MAVRAKIS (Institut Fresnel)

- ▶ 11:05-11:35 a.m. “Massaging the oocyte nucleus to make a good egg”, **Marie-Hélène VERLHAC**, Collège de France, Paris, France
- ▶ 11:35-11:47 a.m. “PLK-1 promotes the merger of the parental genome into a single nucleus by triggering lamina disassembly”. **Griselda VELEZ-AGUILERA**, Institut Jacques Monod, Paris, France
- ▶ 11:47-11:59 a.m. “Microtubules deform the nucleus and force heterochromatin reorganization during early stages of hematopoietic differentiation”. **Stéphane BRUNET**, Université de Paris, INSERM, CEA, Paris, France
- ▶ 12:05-12:35 p.m. “Cell and tissue mechanics in zebrafish gastrulation”, **Carl-Philip HEISENBERG**, IST, Vienna, Austria
- ▶ 12:35-12:47 p.m. “Uncoupling nuclear size and cell size during early development: Perinuclear endoplasmic reticulum as a limiting factor for nuclear growth”. **Jérémy SALLÉ**, Institut Jacques Monod, Paris, France

12:47-2:15 p.m.

Lunch break

Session 5

Chairs: Frédérique CLÉMENT (INRIA Saclay-Île-de-France) & Aude DUPRÉ (Institut de Biologie Paris-Seine)

2:15-2:45 p.m.

“Mechanics of blastocyst morphogenesis”, **Jean-Léon MAITRE**, Institut Curie, Paris, France

2:45-2:57 p.m.

“A switch in the last step of division regulates exit from naive pluripotency”. **Agathe CHAIGNE**, MRC/LMCB, University College London, UK

2:57-3:09 p.m.

“A release-and-capture mechanism generates an essential non-centrosomal microtubule array during morphogenesis”. **Ghislain GILLARD**, MRC Laboratory of Molecular Biology, Cambridge, UK

Short break

3:15-3:45 p.m.

“Patterning of the avian skin”, **Marie MANCEAU**, Collège de France, Paris, France

3:45-3:57 p.m.

“Full tracing of single cell transcriptome and morphological dynamics from zygote to gastrula in *Phallusia mammillata*”. **Ulla-Maj FIUZA**, European Molecular Biology Laboratory, Heidelberg, Germany

3:57-4:09 p.m.

“Patterning and growth control in vivo by an engineered GFP gradient”. **Kristina S. STAPORNWONGKUL**, The Francis Crick Institute, London, UK

4:09-4:30 p.m.

Break

Session 6

Chairs: Laurent HÉLIOT (Université de Lille) & Aude MAUGARNY-CALES (Institut Curie/SFBD)

4:30-5:00 p.m.

“Comparative approach to tissue morphogenesis”, **Pavel TOMANCAK**, MPI, Dresden, Germany

5:00-5:12 p.m.

“Evo-Devo approaches to non-embryonic development in colonial tunicates”. **Alexandre ALIÉ**, Sorbonne Université, CNRS, Villefranche-sur-mer, France

5:12-5:24 p.m.

“Transcriptomic and epigenetic view of regeneration in the annelid worm *Platynereis Dumerilii*”. **Michel VERVOORT**, Institut Jacques Monod, Paris, France

Short break

5:30-6:00 p.m.

“Reaching shape robustness in plants with mechanical signals”, **Olivier HAMANT**, ENS Lyon, France

6:00-6:12 p.m.

“Nature of active forces dictate cell sorting”. **Lakshmi BALASUBRAMANIAM**, Institut Jacques Monod, Paris, France

6:12-7:00 p.m.

Keynote LECTURE

“Principles of cell dynamics and function captured by live imaging”, **Valentina GRECO**, University of Yale, USA

7:00-7:10 p.m.

Awards for the best short communications, concluding remarks