

Mechanisms of Development in Plants and Animals

A seminar series (UE Europe)

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The course comprises **four 1-hour sessions daily**, including two **introductory classes** (held in the 'Amphi Bio') and two **seminars** (held in the *Salle des thèses*)

June 3rd (Monday)

09.30 Introductory class on modelling animal development (**Isaac Salazar-Ciudad**)

10.30 Introductory class on cell division and specification in *Arabidopsis* (**Ross Sozzani**)

13.30 **Isaac Salazar-Ciudad** (Univ. of Helsinki, Finland)

"A general unified mathematical model of animal development"

14.30 **Ross Sozzani** (Duke Univ., USA & Univ. of Pavia, Italy)

"SHR/SCR-mediated signalling pathway controls asymmetric cell division and cell specification in the *Arabidopsis* root"

June 4th (Tuesday)

09.30 Introductory class on flowering time regulation (**Franziska Turck**)

10.30 Introductory class on meiotic cell cycle in the chordate oocyte (**Alex McDougall**)

13.30 **Franziska Turck** (Max-Planck-Institute, Cologne, Germany)

"Cis-regulatory elements, transcription factors and Polycomb Group proteins orchestrate the regulation of *FT* to control flowering"

14.30 **Alex McDougall** (Univ. P. & M. Curie, Villefranche-sur-Mer)

"Egg activation and the meiotic cell cycle in chordate oocytes"

June 5th (Wednesday)

09.30 Introductory class on brain development (**Frédéric Flamant**)

10.30 Introductory class on mechanics in *Arabidopsis* (**Arezki Boudaoud**)

13.30 **Frédéric Flamant** (IGFL, ENS Lyon)

"Hormonal control of cellular interactions in the developing brain"

14.30 **Arezki Boudaoud** & **Olivier Hamant** (RDP ENS Lyon)

"Stochasticity in Plant Growth and Morphogenesis"

June 6th (Thursday)

09.30 Introductory class on modelling plant development (**Arezki Boudaoud**)

11.00 **Christophe Godin** (INRIA, Montpellier) **!! NOTE: Morning Seminar !!**

"Modelling the mechanical regulation of morphogenesis in plants"

13.30 Introductory class on Hox molecular cues in animal development and evolution (**Samir Merabet**)

14.30 **Samir Merabet** (IGFL, ENS Lyon)

"Deciphering Hox function during development and evolution"

June 7th (Friday)

09.30 Introductory class on adult stem cells in zebrafish (**Laure Bally-Cuif**)

10.30 Introductory class on evo-devo studies in plants (**Angela Hay**)

13.30 **Laure Bally-Cuif** (Inst. of Neurobiology Alfred Fessard, Gif-sur-Yvette)

"Formation and maintenance of neural stem cell pools in the adult zebrafish telencephalon"

14.30 **Angela Hay** (Max-Planck-Institute, Cologne, Germany)

"Genetic basis of petal number variation"

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June 10th (Monday)

- 09.30 Introductory class on the *Drosophila* embryo development ([Nathalie Dostatni](#))
- 10.30 Introductory class on sex determination in mammals ([Marie-Christine Chaboissier](#))
- 13.30 **Nathalie Dostatni** (Inst. Curie, Paris)
"Transcriptional precision in the Bicoid system"
- 14.30 **Marie-Christine Chaboissier** (Univ. Nice Sophia Antipolis)
"Male or female: R-spondin1 and sex determination"

June 11th (Tuesday)

- 09.30 Introductory class on patterning of the skin ([Denis Headon](#))
- 10.30 Introductory class on embryo development in plants ([Jean-Christophe Palauqui](#))
- 13.30 **Denis Headon** (Roslin institute, Edinburgh, UK)
"Regional and periodic patterning of the skin"
- 14.30 **Jean-Christophe Palauqui** (INRA, Versailles)
"Descriptive analysis of cell geometry and cell division in plant embryo development"

June 12th (Wednesday)

- 09.30 Introductory class on regeneration studies in animals ([Michalis Averof](#))
- 10.30 Introductory class on root development ([Alexis Maizel](#))
- 13.30 **Michalis Averof** (IGFL, ENS Lyon)
"Development, regeneration and evolution: old questions, new models"
- 14.30 **Alexis Maizel** (Univ. of Heidelberg, Germany)
"Shining sheets of light onto plant root development"

June 13th (Thursday)

- 09.30 Introductory class on sex determination in plants ([Abdel Bendahmane](#))
- 10.30 Introductory class on morphogenesis in *Drosophila* ([Thomas Lecuit](#))
- 13.30 **Abdel Bendahmane** (URGV, Évry)
Sex determination in plants
- 14.30 **Thomas Lecuit** (Dev. Biol. Inst. of Marseille)
Mechanisms of morphogenesis in *Drosophila*

June 14th (Friday)

Closing Plenary Seminar

- 13.30 **Lewis Wolpert** (University College London)
"The future of developmental biology"