

Gradients and Signalling: from chemotaxis to development 2013

-Last Update: Oct. 23, 2013

Program

Monday, November 11

12:00-14:00 Bento box lunch

14:00-18:30 Registration

18:30-20:30 Welcome dinner

Tuesday, November 12

Development I

9:00-9:40 **01 Hiroshi Hamada** (Osaka University): "Role of Wnt signaling in polarization of node cells of the mouse embryo"

9:40-10:20 **02 Mary Mullins** (University of Pennsylvania): "BMP morphogen gradient patterning the embryonic dorsoventral axis"

10:20-10:40 **03S Nobukazu Takizawa** (University of Tokyo): "Roles of lymphotoxin signaling in the development of medullary thymic epithelial cells essential for preventing autoimmunity"

10:40-11:00 Coffee

11:00-11:20 **04S Gisela D'Angelo** (Université de Nice -Sophia Antipolis): "Contribution of endocytosis and recycling in shaping Hedgehog long range activity"

11:20-12:00 **05 Yoshiki Sasai** (RIKEN CDB): "Self-organization of embryonic patterns and structures"

12:00-12:30 **06S Yoshihiko Umesono** (University of Tokushima): "The determination of stem cell fate along the anterior-posterior axis in planarians"

12:30-14:00 Bento box lunch

14:00-17:00 Posters

Axon Guidance

17:20-18:00 **07 Hisashi Umemori** (University of Michigan): "Wiring the Functional Brain"

- 18:00-18:40 **08 Rüdiger Klein** (Max Planck Institute of Neurobiology):
“Guidance cue integration in the neuron’s growth cone and the logic of axon guidance”
- 18:40-19:00 **09S Miguel Tillo** (University College London):
“2-O-sulfated heperan sulfate proteoglycans are essential for the VEGF/NRP1-dependent migration of facial branchiomotor neurons”
- 19:00-21:00 Dinner in Chura Hall

Wednesday, November 13

Chemotaxis/Cell migration

- 9:00-9:40 **10 Judith Armitage** (University of Oxford):
“Chemosensory control of bacterial motility”
- 9:40-10:20 **11 Ikue Mori** (Nagoya University): “Molecular dissection of neural coding underlying behavior”
- 10:20-10:40 Coffee
- 10:40-11:00 **12S Hiroyuki Kuwahara** (King Abdullah University of Science and Technology): “Emergence of stochastic effects purely from interactions of signaling proteins”
- 11:00-11:40 **13 Heping Cheng** (Peking University)
- 11:40-12:00 **14S Csaba Verasztó** (Max Planck Institute for Developmental Biology): “Thermotaxis in the marine annelid *Platynereis dumerilii*”
- 12:00-14:00 Bento box lunch
- 14:00-19:00 Afternoon off
- 19:00-20:20 Light meal

Modelling I

- 20:20-21:00 **15 Arthur Lander** (University of California, Irvine):
“Controlling Morphogen Gradients”
- 21:00-21:40 **16 James Briscoe** (MRC National Institute for Medical Research): “The Gene Regulatory Logic of Sonic Hedgehog Morphogen Pattern Formation”
- 21:40-22:00 **17S Peter Gordon** (University of Akron): “ Local kinetics and self-similar dynamics of morphogen gradients”

Thursday, November 14

Small RNAs

9:00-9:40 **18** **Marja Timmermans** (Cold Spring Harbor Laboratory):
“Small RNAs as morphogen-like signals in the patterning
of leaves”

9:40-10:20 **19** **Akiko Hata** (University of California, San Francisco):
“Regulation of miRNA biogenesis by p53 determines cell
survival following genotoxic stress”

10:20-10:40 Coffee

10:40-11:20 **20** **Martine Collart** (University of Geneva): “The Not5 subunit
of the Ccr4-Not complex connects transcription with
translation”

Modelling II

11:20-11:40 **21S** **Kotaro Kimura** (Osaka University): “Navigation along
odor gradient regulated by two counteracting sensory
pathways in *C. elegans*”

11:40-12:10 **22S** **Shinsuke Uda** (University of Tokyo): “Robustness and
compensation of information transmission of signaling
pathways despite perturbation”

12:10-14:00 Bento box lunch

14:00-17:00 Posters

Modelling II (cont.)

17:20-18:00 **23** **Ryoichiro Kageyama** (Kyoto University): “Oscillatory
control of determination factors for multipotency versus fate
choice in mouse neural progenitors”

18:00-18:40 **24** **Eric Siggia** (Rockefeller University): “Recapitulation of
early embryonic spatial patterning in human embryonic
stem cells using micropatterned control of colony
architecture”

18:40-19:00 **25S** **Hisaaki Shinohara** (RIKEN IMS-RCAI): “Switch-like
activity of NF- κ B is generated by CARMA1-TAK1-IKK β
positive feedback loop in BCR-signaling”

19:00-20:20 Dinner in Chura Hall

Signal Release

20:20-21:00 **26** **Jean-Paul Vincent** (MRC National Institute for Medical
Research): “Using genome engineering to revisit the range
of the Wnt signal in *Drosophila*”

- 21:00-21:40 **27 Tom Kornberg** (University of California, San Francisco):
“Communicating by touch”
- 21:40-22:00 **28S Osamu Shimmi** (University of Helsinki): “A Feed-Forward
Loop Coupling Extracellular BMP Transport and
Morphogenesis in *Drosophila* Wing”

Friday, November 15

Development II

- 9:00-9:40 **29 Pascal Thérond** (Université de Nice -Sophia Antipolis):
“Hedgehog Secretion and Extra-Cellular Transport in
Drosophila melanogaster”
- 9:40-10:20 **30 Alex Schier** (Harvard University):
“Nodal Morphogen Interpretation”
- 10:20-10:40 Coffee
- 10:40-11:00 **31S Garth Iisley** (Okinawa Institute of Science and
Technology): “A simple model of gradient interpretation
can explain the precise pattern of even skipped in the
Drosophila embryo”
- 11:00-11:40 **32 Roel Nusse** (Stanford University):
“Wnt signals can be autocrine stem cell factors”
- 11:40-12:00 **33S Shang-Yun Liu** (Max Planck Institute of Molecular Cell
Biology and Genetics): “Reactivating head regrowth in
a regeneration deficient planarian species”
- 12:00-13:30 OIST lab tour
- 13:30-19:00 Bento box lunch on bus & Excursion to Churaumi Aquarium
(not compulsory)
- 19:00- Final banquet

Saturday, November 16

- ~11:00 Check out (Seaside House) and Departure