

**Thursday, 8 7 2010**

***S5) The Molecular and Developmental Mechanisms Underlying Phenotypic Diversification (Patrícia Beldade, Alistair P. McGregor, Sarah Peter, Zeba Wunderlich)***

*Chair: Patricia Beldade, Sarah Peter*

Auditorium 1A

**9.00-9.25**

S5.1: Juliette de Meaux (Max Planck Institute for Plant Breeding Research, Cologne, Germany): Cis-regulatory (epi) divergence between *Arabidopsis* species

**9.25-9.50**

S5.2: Marie Manceau (Harvard University, USA): Agouti and the development of pigment pattern in beach mice

**9.50-10.15**

S5.3: Alistair McGregor (University of Veterinary Medicine Vienna, Austria): Morphological evolution within and among species: the view from the naked valley

**10.15-10.40**

S5.4: Maurijn van der Zee (Leiden University, The Netherlands): On the origins of novelty in development and evolution: a case study on beetle horns

**11.10-11.35**

S5.5: Matt Ronshaugen (University of Manchester, UK): The evolution of Hox microRNAs through duplication and arm switching

**11.35-12.00**

S5.6: Jean-Michel Gibert (University of Geneva, Switzerland): Involvement of the polycomb group gene *cramped* in environmental canalization and local adaptation

**12.00-12.25**

S5.7: Marie-Theres Hauser (University of Natural Resources and Applied Life Sciences Vienna, Austria): A hairy tale - molecular basis of the natural variation of trichome patterning in *Arabidopsis* populations

**12.25-12.50**

S5.8: Gael Yvert (University of Lyon, France): Natural epigenomic variations in the budding yeast

***S6) Evolution of Segmentation and Head Patterning: The Arthropod View (Gregor Bucher, Carlo Brena)***

*Chair: Carlo Brena*

Auditorium 2A

**9.00-9.25**

S6.1: Michael Akam (University of Cambridge, UK): The origins of animal segmentation

**9.25-9.50**

S6.2: Alessandro Minelli (University of Padua, Italy): The segment, the head - evolutionary products of development and adaptation

**9.50-10.15**

S6.3: Carlo Brena (University of Cambridge, UK): Dynamics in centipede segmentation: an ancestral model?

**10.15-10.40**

S6.4: Sue Brown (Kansas State University, USA): Heads and tails of wnt signaling in *Tribolium*

**11.10-11.35**

S6.5: Wim Damen (University of Jena, Germany): A dual mode of segmentation in spiders

**11.35-12.00**

S6.6: Gregor Bucher (University of Göttingen, Germany): How to build an insect head

**12.00-12.25**

S6.7: Teiya Kijimoto (Indiana University, Bloomington, USA): Heads with horns - regulation of size and position of beetle cephalic horns

**12.25-12.50**

S6.8: Graham Budd (University of Uppsala, Sweden): The evolution of the arthropod head: a palaeontological perspective

***S7) Evolution of Flower Development (Annette Becker, Catherine Damerval, Samuel Brockington, Louis Ronse de Craene)***

*Chair: Annette Becker, Samuel Brockington*

Auditorium 4C

**9.00-9.25**

S7.1: Charlie Scutt (ENS de Lyon, France): The recruitment of a light-regulated genetic module to female reproductive development in the angiosperms

**9.25-9.50**

S7.2: Dianella Howarth (St. John's University, Queens, NY, USA): The correlation of gene duplication and morphological shifts in floral symmetry genes

**9.50-10.15**

S7.3: Günter Theißen (Friedrich-Schiller-University Jena, Germany): Saltational evolution of flower development by homeosis – a case study on *Capsella*

**10.15-10.40**

S7.4: Michael Lenhard (John Innes Centre, Norwich, UK): Evolution of flower size – the genus *Capsella* as a model

**11.10-11.35**

S7.5: Maria A Logacheva (Moscow State University, Russia): Floral developmental genetics of buckwheat (*Fagopyrum*) and its evolutionary implications

**11.35-12.00**

S7.6: Heather Whitney (University of Bristol, UK): The production of novel cues for pollinators by the petal surface

**12.00-12.25**

S7.7: Paula M. Rudall (Royal Botanic Gardens, Kew, UK): Centrifugal organ formation and its implications for floral patterning

**12.25-12.50**

S7.8: Samuel F. Brockington (University of Cambridge, UK): Genetic basis of novel petal evolution in the Caryophyllales

***M1) Establishing New Model Systems in Evo-Devo (Jason Robert)***

*Chair: Jason Robert*

Auditorium 5C

**9.00-9.25**

M1.1: Wallace Arthur (National University of Ireland, Galway, Ireland): An emerging model system for evo-devo studies of arthropod segmentation

**9.25-9.50**

M1.2: Andreas Hejnol (SARS International Centre for Marine Molecular Biology, Bergen, Norway): Expanding the species-list for Evo-Devo studies. The case of the brachiopod *Terebratalia transversa*

**9.50-10.15**

M1.3: Ronald Jenner (Natural History Museum, London, UK): Model organism selection in Evo-Devo: e pluribus unum or e unibus plurum?

**10.15-10.40**

M1.4: Rachel A. Ankeny (University of Adelaide, Australia) and Jessica Bolker (University of New Hampshire, Durham, USA): Title TBA

***M2) Evolution and Generative Laws of Morphogenesis (Lev V. Belousov, Victoria Scobeyeva)***

*Chair: Lev V. Belousov, Victoria Scobeyeva*

Auditorium 5C

**11.10-11.35**

M2.1: Emmanuel Farge (Curie Institute, Paris, France): Embryonic development is a coordination of multi-cellular biochemical patterning and morphogenetic movements

**11.35-12.00**

M2.2: Vladimir Cherdantzev (Moscow State University, Russia): Generic geometry of morphogenesis

**12.00-12.25**

M2.3: Rafael Lahoz-Beltra (Universidas Complutense Madrid, Spain): A tentative mechano-fractal morphogenetic field hypothesis: evolving unicellular forms by means of julia sets and pickover biomorphs

**12.25-12.50**

M2.4: Maria Samsonova (Physico-technical Institute, St Petersburg, Russia): Variation and canalization of gene expression in the *Drosophila* blastoderm.

***Keynote Speaker 3***

*Chair: Michel Vervoort*

Auditorium 1A

**14.20-15.00**

Pat Simpson (University of Cambridge, UK): The evolution of bristle patterns in flies

***M3) Epigenetics in Development and Evolution (Angelika Stollewerk)***

*Chair: Angelika Stollewerk*

Auditorium 1A

**15.10-15.35**

M3.1: Angelika Stollewerk (University of London, UK): The evolution of neural precursor selection in arthropods – changes in the expression patterns of achaete-scute homologues and the position of an ancient enhancer element

**15.35-16.00**

M3.2: Paul Hurd (University of London, UK): Genome-wide mapping of chromatin modifications in humans

**16.30-16.55**

M3.3: Ryszard Maleszka (The Australian National University, Canberra, Australia): Epigenetic control of developmental canalization in honey bees

**16.55-17.20**

M3.4: Denis Duboule (University of Geneva, Switzerland): Epigenetic regulation of Hox genes during the development and evolution of the vertebrate body axis

***M4) The Population Genetics of Development (David Garfield, David Lowry)***

*Chair: David Garfield, David Lowry*

Auditorium 2A

**15.10-15.35**

M4.1: David Garfield (Duke University, USA): The quantitative genetics of a sea urchin gene regulatory network

**15.35-16.00**

M4.2: Marie-Anne Felix (Jacques Monod Institute, France): Robustness and evolution of *Caenorhabditis* vulval cell fate patterning

**16.30-16.55**

M4.3: Jukka Jernvall (University of Helsinki, Finland): Is the increase fundamentally different from the decrease in phenotypic complexity?

**16.55-17.20**

M4.4: Courtney Babbitt (Duke University, USA): Influences of hybridization and development on gene expression patterns in a wild primate population

***M5) EcoDevo: Adaptation in Real Time (W. Anthony Frankino, Alexander W. Shingleton)***

*Chair: Alexander W. Shingleton*

Auditorium 4C

**15.10-15.35**

M5.1: Jennifer Brisson (University of Nebraska): Pea aphid wing dimorphisms: linking polyphenism and polymorphism

**15.35-16.00**

M5.2: Christian Braendle (IBDC, Nice): Mechanisms and evolution of developmental plasticity in *Caenorhabditis* nematodes

**16.30-16.55**

M5.3: Robert Denver (University of Michigan): Stress hormones: mediators of developmental plasticity

**16.55-17.20**

M5.4: Goggy Davidowitz (University of Arizona): A physiological framework for the integration of EcoDevo and EvoDevo in body size and development time

***M6) Behavioral EvoDevo (Rinaldo C. Bertossa)***

*Chair: Rinaldo C. Bertossa*

Auditorium 5C

**15.10-15.35**

M6.1: Marla Sokolowski (University of Toronto at Mississauga, Canada): Conservation of gene function in behaviour

**15.35-16.00**

M6.2: Nicholas Strausfeld (University of Arizona, Tucson, USA): Neurocladistics, brain evolution, and behavioral implications

**16.30-16.55**

M6.3: Martin Giurfa (Paul Sabatier University, Toulouse, France): Neural bases of associative learning in invertebrates: what is common, what is specific?

**16.55-17.20**

M6.4: Brian Johnson (University of California, Berkeley, USA): Adaptively regulated behavioral plasticity in the superorganism

***C9) Computational Models of Body Plan Development***

*Chair: Isaac Salazar-Ciudad*

Auditorium 4C

**17.25-17.40**

C9.1 Jaap Kaandorp (University of Amsterdam): Modelling and analysis of embryogenesis in *Nematostella vectensis*

**17.40-17.55**

C9.2 Ram Reshef (Department of Biology Technion): Algorithm of myogenic differentiation in higher-order organisms

***C10) Evolution of Stem cells***

*Chair: Michael Schubert*

Auditorium 1A

**17.25-17.40**

C10.1 Alexandre Alie (Systematique, Adaptation, Evolution UPMC): Evolutionary origin of stem cells: insights from the ctenophore *Pleurobrachia pileus*

**17.40-17.55**

C10.2 Uri Frank (National University of Ireland, Galway): Deep evolutionary roots of animal pluripotent stem cells

***C11) EcoDevo: Adaptation in Real Time***

*Chair: Scott Gilbert*

Auditorium 2A

**17.25-17.40**

C11.1 Alexander Shingleton (Michigan State University): Foxo regulates organ-specific phenotypic plasticity and morphological scaling in *Drosophila*

**17.40-17.55**

C11.2 Yoav Soen (Biological Chemistry, Weizmann Institute of Science): Novel environmental challenges as driving forces of developmental diversification

***C12) Behavioral EvoDevo***

*Chair: Robert Denver*

Auditorium 5C

**17.25-17.40**

C12.1 Daniel Bopp (University of Zürich): Genetic control of courtship behavior in houseflies: evidence for a conserved bifurcation of the sex-determining pathway

**17.40-17.55**

C12.2 Lukas Kratochvil (Faculty of Science, Charles Univ.): Male sexual behavior is not dependent on circulating androgens in a lizard (*Coleonyx elegans*, Eublepharidae)