

**EMBO Conference on the Molecular and Cellular Basis of  
Regeneration and Tissue Repair  
Programme**

**Sunday 26<sup>th</sup> September 2010**

19:00 Registration, welcome drinks and putting up posters

20:45 Welcome address by conference organisers

**Chair: Karen Echeverri**

21:00 Keynote Speaker: Jeremy Brockes University College London, UK  
*The nerve dependence of vertebrate limb regeneration*

**Monday 27<sup>th</sup> September 2010**

*Day 1: Epithelial stem cells, wound healing & signalling during regeneration*

**Morning Session**

**Chair: Enrique Amaya**

08:30 Fiona Watt University of Cambridge, UK  
*Stem cells in mammalian epidermis*

09:10 Paul Martin Bristol University, UK  
*Epigenetics and immune cell recruitment – parallels between wound repair and cancer*

09:50 Luke Pase The Walter and Eliza Hall Institute, Australia  
*Myeloperoxidase-containing leukocytes dampen wound induced hydrogen peroxide*

10:10 Coffee Break

11:00 Brigitte Galliot University of Geneva, Switzerland  
*Plasticity of head regeneration in Hydra, what does it mean?*

11:40 Federico Brown Universidad de los Andes, Colombia  
*Regeneration in colonial sea squirts and flatworms*

12:00 Lunch

14:00 Poster Session

## **Afternoon Session**

**Chair: Brigitte Galliot**

- 16:30      António Jacinto                      Institute of Molecular Medicine, Portugal  
*Genetic analysis of epithelial repair in Drosophila*
- 17:10      Thomas Holstein                      University of Heidelberg, Germany  
*Wnt Signaling in Hydra Regeneration*
- 17:50      Bea Christen                      Centre for Regenerative Medicine Barcelona, Spain  
*Regeneration and reprogramming compared*
- 18:10      Coffee Break
- 18:40      Alejandro Sánchez Alvarado      University of Utah, USA  
*Planarians, stem cells, and regeneration*
- 19:20      Enrique Amaya                      University of Manchester, UK  
*A role for NADPH metabolism during Xenopus tropicalis tail regeneration*
- 20:00      Eugene Berezikov                      Hubrecht Institute, Netherlands  
*Experimental potential of the regenerating flatworm Macrostomum lignano*
- 20:20      Session End

## **Tuesday 28<sup>th</sup> September 2010**

*Day 2: Muscle satellite cells and molecular mechanisms of regeneration*

## **Morning Session**

**Chair: Jeremy Brockes**

- 08:30      Michael Rudnicki                      Ottawa Hospital Research Institute, Canada  
*Molecular Regulation of Muscle Stem Cell Function*
- 09:10      Eileen Furlong                      EMBL Heidelberg, Germany  
*Gene Regulatory Networks During Development: Is there a code?*
- 09:50      Florenci Serras                      University of Barcelona, Spain  
*Regeneration of Drosophila Wing Imaginal Discs*
- 10:10      Coffee Break
- 10:40      Elly Tanaka                      Center for Regenerative Therapies, Germany  
*Serum protease control of BMP activity and its relation to cell cycle re-entry during regeneration*

- 11:20 Margaret Buckingham Pasteur Institute, France  
*Quiescent and activated muscle satellite cells: transcriptome analysis and mi-RNA regulation*
- 12:00 Soeren Alsheimer MPI for Developmental Biology, Germany  
*In vivo Imaging of Muscle Stem Cells and Muscle Regeneration in Zebrafish*
- 12:20 Lunch with round table discussion
- 14:00 Excursion

### **Afternoon Session**

**Chair: Alejandro Sanchez Alvarado**

- 16:30 Randall Moon University of Washington, USA  
*Wnt signaling in regeneration and regenerative medicine*
- 17:10 Karen Echeverri Center for Regenerative Therapies, Germany  
*Molecular analysis of regeneration: investigating the role of miRNAs*
- 17:50 Joana Monteiro Instituto Gulbenkian de Ciencia, Portugal  
*Dynamic extracellular ion fluxes during fin regeneration in Zebrafish*
- 18:10 Coffee Break
- 18:40 Koji Tamura Tohoku University, Japan  
*Molecular and cellular aspects of limb regeneration and wound repair in Xenopus*
- 19:20 Ben Szaro State University of New York at Albany, USA  
*Amphibian metamorphosis and the regeneration of spinal cord axons in Xenopus laevis*
- 19:40 Yuval Rinkevich Stanford University, USA  
*From whole body regeneration to digit tip regrowth: common premises and emerged unique regeneration themes*
- 20:00 Session End

## Wednesday 29<sup>th</sup> September 2010

### Day 3: Organ Regeneration

#### Morning Session

Chair: Elly Tanaka

- 08:10 Keynote Speaker: Brigid Hogan Duke University, USA  
*Epithelial stem and progenitor cells in lung development, homeostasis and repair*
- 09:10 Didier Stainier UCSF, USA  
*Drug discovery in zebrafish: Chemical screen for  $\beta$ -cell regeneration*
- 09:50 David Forsthoefel University of Illinois at Urbana-Champaign, USA  
*Intestinal renewal and regeneration in the planarian *Schmidtea mediterranea**
- 10:10 Coffee Break

Chair: Antonio Jacinto

- 10:40 Anne Grapin-Botton ISREC, Lausanne, Switzerland  
*Role of 3D architecture in pancreas progenitor expansion and differentiation in vitro*
- 11:20 Harry Heimberg Vrije Universiteit Brussel, Belgium  
*Stem/progenitor cells endogenous to the pancreas for expansion of the beta cell mass*
- 12:00 Kimberly Mace University of Manchester, UK  
*Hoxa3 promotes the differentiation of hematopoietic progenitor cells into proangiogenic Gr-1<sup>+</sup>CD11b<sup>+</sup> myeloid cells*
- 12:20 Lunch
- 13:30 Meeting about the future of the conference series
- 14:00 Poster Session

#### Afternoon Session

Chair: Didier Stainier

- 16:30 James Hudspeth The Rockefeller University, USA  
*Regeneration and polarization of mechanosensory hair cells in the lateral line of the larval zebrafish*
- 17:10 David Raible University of Washington, USA  
*Hair cell regeneration in the zebrafish lateral line*

- 17:50 Shawn Burgess NHGRI/NIH, USA  
*Digital Gene Expression identifies the stat3/socs3 pathway as a key regulator of supporting cell division and hair cell regeneration in the zebrafish inner ear*
- 18:10 Coffee Break
- 18:40 Anna Jazwinska University of Fribourg, Switzerland  
*Zebrafish heart regeneration after myocardial infarction*
- 19:20 Greg Nachtrab Duke University, USA  
*Androgen control of regenerative capacity in zebrafish*
- 19.40 Session End
- 20:00 Conference Dinner

## Thursday 30<sup>th</sup> September 2010

*Day 4: Neural stem cells and regeneration of the nervous system*

### Morning Session

**Chair: Brigid Hogan**

- 09:00 Magdalena Götz Helmholtz Center Munich, Germany  
*Neurogenesis from glial cells – novel sources for new neurons in the adult brain*
- 09:40 Kiyo Agata Kyoto University, Japan  
*"Distalization and intercalation", a fundamental mechanism of regeneration - insights from planarian regeneration*
- 10:20 Coffee Break
- 11:00 Volker Krohne CRTD, Germany  
*Regeneration of the adult zebrafish brain after a traumatic brain injury*
- 11.20 Isabel Fariñas Valencia University, Spain  
*Stem cell niches and tissue renewal in the adult brain*
- 12:00 Andrés Simon Karolinska Institute, Sweden  
*Suppression and activation of neurogenesis in normally quiescent brain stem cell niches*
- 12:40 Closing remarks by conference organisers