

# "The origin of metazoans"

October 14<sup>th</sup>-16<sup>th</sup>, 2015

« PORQUEROLLES » room: talk sessions  
« PORT CROS » & « LEVANT » rooms: poster sessions

## WEDNESDAY, October 14<sup>th</sup>

10:00-12:00 Registration

12:30-14:00 *Lunch*

14:00-14:10 Welcome

14:10-17:00 **Session 1: Concepts, methods and limits for reconstructing evolution**

Chairman Bernard Degnan

- **Hervé Philippe**, USR CNRS 2936, Moulis, FR  
*"Between data quality and model violations, what can tell phylogenomics about deep metazoan relationships?"*
- **Ronald Jenner**, Natural History Museum, London, UK.  
*"Evidence and imagination in the quest to understand animal origins"*
- **Gert Wörheide**, University of Munich, DE.  
*"Is my oldest sister really a sea walnut? Debugging the myth..."*

16:00-16:20 *Coffee break*

- **Eric Bapteste**, Pierre et Marie Curie University, Paris, FR.  
*"Making sense of the origins of metazoans: a naïve perspective on a true challenge"*
- **Bernd Schierwater**, ITZ- Ecology & Evolution - Hannover, DE.  
*"The Triple T Approach fuels the New Placula Hypothesis"*

17:30-18:30 **Poster session I**

18:30-19:30 **Selected short presentations**

- **Warren Francis / Nathan Whelan / Richard Copley** (cf ANNEXE)

19:30-20:00 Welcome reception offer by Macherey Nagel Sponsor.



20:00 *Dinner*



## THURSDAY, October 15th

8:30-10:40      **Session 2:    Origin of multicellularity and communication**

**Chairman Abdel Aouacheria**

- **Abderrazzak El Albani**, University of Poitiers, FR  
*"Fossils from Gabon show early steps toward multicellularity and the oldest biodiversity 2.1 billion years ago : A new chapter of Life history"*
- **Thomas W. Holstein**, University of Heidelberg, DE.  
*"On the evolution of metazoan body axes"*
- **Timothy Jegla**, PennState University, PA, USA.  
*"The evolution of ion channel signaling in early metazoans"*
- **Iñaki Ruiz-Trillo**, IBE-UPF-CSIC, Barcelona, ES.  
*"The origin of multicellular animals: a perspective from their unicellular relatives"*

10:40-11:00      *Coffee break*

11:00-12:45      **Session 3:    Epithelial morphogenesis**

**Chairman Alexander Ereskovsky**

- **William A Weis**, Stanford University school of medicine, CA, USA.  
*"Evolution of a Multi-Functional Adhesion Module Necessary for Complex Multicellularity"*
- **Bernard Degnan**, University of Queensland - Brisbane, AU.  
*"Origin of the animal regulatory genome: insights from non-coding sequences in the demosponge Amphimedon queenslandica"*
- **André Le Bivic**, IBDM- Aix Marseille University, Marseille, FR.  
*"Epithelial organization and the SpongEx project"*

12:45-14:00      *Lunch*



## THURSDAY, October 15<sup>th</sup> (continued)

14:00-15:45 **Session 4: Stem Cells and Regeneration**

Chairman Emmanuelle Renard

- **Noriko Funayama**, University of Kyoto, JP.  
*“What we can learn from sponges? – Origin of stem cells and a novel mechanism to construct 3-dimensional body”*
- **Brigitte Galliot**, University of Geneva, CH.  
*“Loss of neurogenesis in Hydra, a path to proto-neuronal ages?”*
- **Detlev Arendt**, European Molecular Biology Laboratory, Heidelberg, DE.  
*“The origin of neural cell types at the dawn of nervous system evolution”*

15:45-16:45 **Selected short presentations**

- Alexander Ereskovsky / Xavier Grau Bové / Núria Ros / Sebastian Najle (cf ANNEXE)

16h45- 18h45 **Poster session II** & *Coffee break*

18:45-19:45 **Selected short presentations**

- Arnau Sebé-Pedrós / Igor Pozdnyakov / Aldine Amiel (cf ANNEXE)

20:00 *Dinner*



## FRIDAY, October 16<sup>th</sup>

9:00-10:10      **Session 5:    Patterning**

**Chairman Andrea Pasini**

- **Evelyn Houliston** , LBDV-UMR 7009, Villefranche-sur-Mer, FR.  
*“Origins of developmental mechanisms in the eumetazoa: Lessons from the hydrozoan Clytia hemisphaerica”*
- **Maja Adamska**, Centre for Marine Molecular Biology, Bergen, NO.  
*“Surprisingly diverse Wnt and Tgf-beta pathways are involved in embryonic and postembryonic development and regeneration of calcisponges”*

10h10- 11h00    **Poster session III**    &    *Coffee break*

11:00 -12:00    **Selected short presentations**

- **Klaske Schippers / Quentin Schenkelaars / François Payre / Abdel Aouacheria**    (cf ANNEXE)

12:00            *Lunch*

14:00            *End of Workshop*

**Address:** The Belambra Club - Giens Peninsula - Hyères "The Coves"  
Route de l'Esterel 83400 Hyères-les-Palmiers

ANNEXE



## Selected abstracts for short presentations

### Session 1: Concepts, methods and limits for reconstructing evolution

- **Francis Warren**

*"The genome of the demosponge *Tethya wilhelma*"*

Warren Francis, Marcin Adamski, Michael Eitel, Dirk Erpenbeck, Sergio Vargas, Oliver Voigt, Gert Woerheide.

- **Nathan Whelan**

*"Model choice and metazoan phylogenomics: model complexity does not ensure accurate phylogenetic hypotheses"*

Nathan Whelan, Kenneth Halanaych

- **Richard Copley**

*"Initial analysis of the genome sequence of *Clytia hemisphaerica*"*

Copley Richard, Leclere Lucas, Dru Philippe, Momose Tsuyoshi, Houliston Evelyn

### Session 2/3/4: Origin of multicellularity and communication / Epithelial morphogenesis / Stem Cells and Regeneration

- **Alexander Ereskovsky**

*"Morphogenetic consequences of epithelia appearance: sponges as an example"*

Alexander Ereskovsky

- **Xavier Grau Bové**

*"Alternative splicing as a source of innovation at the origin of animals"*

Xavier Grau-Bové, Manuel Irimia, Iñaki Ruiz-Trillo

- **Núria Ros**

*"Evolution of bZIP transcription factors in eukaryotes"*

Núria Ros, Xavier Grau-Bové, Ally Yang, Matthew Weirauch, Timothy Hughes, Iñaki Ruiz-Trillo, Arnau Sebé-Pedrós

- **Sebastian Najle**

*"A flexible sterol metabolism in *Capsaspora owczarzaki* has features that resemble both fungi and animals."*

Sebastian Najle, Antonio Uttaro, Iñaki Ruiz-Trillo



- **Arnau Sebé-Pedrós**

*“The dynamic regulatory genome of *Capsaspora owczarzaki* and the origin of animal multicellularity”*

Arnau Sebé-Pedrós, Iñaki Ruiz-Trillo

- **Igor Pozdnyakov**

*“Kinetid of sponge choanocytes as a key to reconstruction of metazoan ancestor”*

Igor Pozdnyakov, Sergey Karpov, Andrey Vishnyakov, Alexander Ereskovsky

- **Aldine Amiel**

*“Identifying the limits of *Nematostella vectensis* regeneration to highlight the source of regenerative induction”*

Aldine Amiel, Solène Ferreira, Eric Roettinger

**Session 5: Patterning**

- **Klaske Schippers**

*“Using sponges as a model to examine the evolution of the Wnt/beta-catenin signaling pathway”*

Klaske Schippers, Scott Nichols

- **Quentin Schenkelaars**

*“ROCK inhibition abolishes the establishment of aquiferous system in *Ephydatia muelleri* (Porifera, Demospongiae)”*

Quentin Schenkelaars, Omar Quintero, Chelsea Hall, Laura Fierro-Constain, Emmanuelle Renard, Carole Borchiellini, April L. Hill

- **François Payre**

*“The small peptides Polished rice/mille-pattes play an evolutionarily conserved role in insect segmentation”*

Miriam Rosenberg, H el ene Chanut-Delalande, Claude Desplan, Fran ois Payre

- **Abdel Aouacheria**

*“On the evolution of the BCL-2-regulated apoptotic pathway: a timeline of 600 million years”*

Abdel Aouacheria

