"The origin of metazoans"

October 14th-16th, 2015

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

WEDNESDAY, October 14th

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?”

  “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 naive 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,** Penn State University, PA, USA.
    “The evolution of ion channel signaling in early metazoans”

  - **Ifaiki 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 15th (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 16th

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 Aouacheri (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 Halanych

- **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, Hélène Chanut-Delalande, Claude Desplan, François Payre

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