

## PALBINS: Draft agenda

### 13<sup>th</sup> September:

**Location:** Auditorium of the **Grande Galerie de l'Evolution**, 36 rue Geoffroy Saint Hilaire

13:00 – Welcome and registration

13:30 – MNHN Introduction

13:50 – Michelle Price (Consortium of European Taxonomic Facilities, Brussels): CETAF and Palaeo-bioinspiration

14:10 – Guillaume Lecointre (Muséum national d'Histoire naturelle, Paris): Story-tellings

**Principles of Palaeo-bioinspiration**

14:35 – Michael Habib (University of California, Los Angeles): Palaeo-bioinspiration: Drawing on the fossil record to advance innovation

15:00 – Tea/Coffee

15:30 – Thomas Speck (University of Freiburg): Fossil plants as inspiration for biomimetic materials systems in technology and architecture

15:55 – Eberhard Frey (State Museum of Natural History Karlsruhe): Biomimesis, Bionics, technical biology and Paleontology: revisiting the neglected function of comparison

16:20 – Discussion: Principles of Palaeo-bioinspiration (moderated by Eberhard Frey)

16:50 - Sylvain Charbonnier (Muséum national d'Histoire naturelle, Paris): "Mondes disparus»: Introduction to the MNHN's forthcoming exhibition

17:30 - Close

### 14<sup>th</sup> September:

**Location:** Auditorium of the **Institut de Paléontologie Humaine**, 1 rue René Panhard

9:00 – Welcome and Coffee

**Palaeo-bioinspiration applications**

**Palaeo-bioinspiration applications 1: Construction and protection**

9:30 - Chris Broeckhoven (University of Antwerp): Learning from the past, looking to the future: glyptodonts as bioinspiration for meteoroid shielding

9:55 - Valentina Perricone (University of California, Irvine)/Natasha Heil (Ecole Nationale Supérieure d'Architecture de Paris La Villette): Back to the future architecture: a new shell structure design inspired by glyptodont body armour

**10:20 – Ardian Jusufi (Swiss Federal Labs for Materials Science and Technology/University of Zurich):** PaleoRobotic reconstruction of a mammalian knight: When evolution leads to armor and tail weaponry

**10:45 - Tea/Coffee**

**11:15 - Gilles Cuny (Université Claude Bernard-Lyon I):** Fish enameloid: a model for multi-function material?

**11:40 - Alexandra Houssaye (Muséum national d'Histoire naturelle, Paris):** Bone structure-function relationships for palaeo-bioinspiration

**12:05 - Nathan Pili (University of Manchester):** When is a bone not a bone?

**12:30 – Lunch**

**Palaeo-bioinspiration applications 2: Hydrodynamics and Aeromechanics**

**14:00 - Héctor Botella Sevilla (University of Valencia):** Palaeozoic armoured jawless fishes as inspiration in the design of biomimetic Micro-Underwater Vehicles

**14:25 - Marc Desmulliez (Heriot-Watt University, Edinburgh):** Measurement of drag coefficients of 3D printed inflated ammonite shells

**14:50 - Michael Habib (University of California, Los Angeles):** Winged Wonders: Pterosaur anatomy yields unique insights for mechanical design

**15:15 – Romain Garrouste (Muséum national d'Histoire naturelle, Paris):** Can the dragonflies of the past, including the giants of the Palaeozoic, inspire us? Lessons in extant biophysics applied to insect fossils

**15:40 - Coffee/tea**

**Palaeo-bioinspiration applications 3: Sensing and thermo-dynamics**

**16:10 - Tom Challands (University of Edinburgh):** Palaeobioinspiration from fossil fish sensory systems

**16:35 - Séverine Toussaint (Humboldt University of Berlin):** An innovative force sensor technology mimicking distal pads' functional morphology to study the evolution of locomotion in arboreal mammals

**17:00 - François Clarac (Muséum national d'Histoire naturelle, Paris):** The crocodilian bone ornamentation: a heat transfer device

**17:25 - Discussion: Palaeo-bioinspiration applications** (moderated by Thomas Speck/Alexandra Houssaye)

**18:00 - Close**

**19:00 – Cocktail** (Galerie de Paléontologie et d'Anatomie compare, 2 rue Buffon)

## **15<sup>th</sup> September:**

**Location:** Auditorium of the **Grande Galerie de l'Evolution**, 36 rue Geoffroy Saint Hilaire

**9:00 – Welcome and Coffee**

**9:30 - Palaeo-bioinspiration: Challenges and future directions** (moderated by Chris Broeckhoven and Mike Habib)

**11:30 – Discussion/next steps for PALBINS community**

**12:00 – Closing ceremony**

**12:30 – Lunch**

**14:00 – Tour of the MNHN** (Meeting point: outside the Grande Galerie de l'Evolution, 36 rue Geoffroy Saint Hilaire)