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COLLOQUE

The Evolution of Developmental Mechanisms

Thursday, May 21, 2026

COLLÈGE
DE FRANCE
1530

Denis DUBOULE, chaire Évolution
du développement et des génomes

The Evolution of Developmental Mechanisms

Organization : Denis DUBOULE,
Chaire Évolution du développement et des génomes

[IN ENGLISH / EN ANGLAIS] - Amphithéâtre Guillaume Budé

Natural selection explains how certain forms are either preserved or eliminated, depending on their adaptations to their environments and natural conditions. But how are these different forms initially produced? What is the nature of natural variation? It is during their development that animals can deviate from their expected trajectories and thus produce new forms that may eventually become fixed due to their adaptive potential. It is therefore in the study of the mechanisms of embryonic development and their modifications that the answers to the question of animal variation lie. Over the past 30 years, with the advent of genome sequencing, the link between these mechanisms and our DNA has become clear, opening up a new field of study that seeks to identify the foundations of these evolutionary changes within our genetic material. This year's symposium takes stock of these advances by presenting several notable examples.

Open to all, subject to availability.

Les cours et séminaires sont gratuits,
en accès libre, sans inscription préalable.

PROGRAM

- 09h00 Denis Duboule
CIRB, Collège de France, Paris
Welcome and introduction
- 09h05 Eglantine Heude
Institut de génomique fonctionnelle de Lyon (IGFL) ENS
de Lyon/CNRS UMR5242, France
**Developmental and Evolutionary Origins
of the Tetrapod Neck**
- 09h50 Henrik Kaessmann
ZMBH - Center for Molecular Biology, Heidelberg University,
Heidelberg, Germany
The Origins and Molecular Evolution of Vertebrate Organs
- 10h35 Break
- 11h05 Francisca Martinez-Real
Centro Andaluz de Biología del Desarrollo (CABD), Sevilla, Spain
**Regulatory Mechanisms Underlying Forelimb Adaptation
in Moles**
- 11h50 Stefan Mundlos
Max Planck Institute for Molecular Genetics, Berlin, Germany
**Synthetic Genomics and Large Cargo Genome Engineering
for the Study of Evolutionary Traits'**
- 12h35 Lunch break
- 14h00 Joost Woltering
Department of Biology, University of Konstanz,
Konstanz, Germany
**Beyond Adaptation: How Genetic Architecture Shapes
the Fish Dermal Skeleton**
- 14h45 Patrícia Beldade
Department of Animal Biology, Faculty of Sciences,
University of Lisbon, Portugal
**The Evolution of the Environmental Regulation
of Development'**
- 15h30 Break
- 16h00 Patrick Lemaire
Montpellier Biology Research Center (CRBM-CNRS), Montpellier,
France
**Harnessing Inter-Individual Morphological and Molecular
Variations to Unravel Ascidian Developmental Logic**
- 16h45 Nathalie Feiner
Max Planck Institute for Evolutionary Biology, Plön, Germany
**Understanding the Evolution of Natural Syndromes Through
the Lens of Development**
- 17h30 Denis Duboule
Conclusions
- 18h00 End