

33rd KARGER WORKSHOP IN EVOLUTIONARY NEUROSCIENCE

Title: Conservation, divergence and convergence in amygdala evolution

Honoring Prof. Luis Puelles, University of Murcia, Spain

In memorian of Dr. Laura L. Bruce, Creighton University, Omaha, Nebraska, USA

Organizers: Loreta Medina and Ester Desfilis, University of Lleida and Lleida's Institute of Biomedical Research-Dr. Pifarré Foundation (IRBLleida), Spain

Schedule (US Central Standard Time-Chicago): All virtual, via Accelevents

8:45h Opening (Loreta Medina and Ester Desfilis).

9:00h (Thomas Mueller, Kansas State University, KS, USA;
Despite Morphological Divergences—Molecular Studies in Zebrafish Reveal Strikingly Conserved Missing Links between Amygdalae of Ray-Finned Fish and Mammals

9:30h Nerea Moreno, Universidad Complutense de Madrid, Spain;
Evolutionary analysis of the pallial region of anurans, including the pallial amygdala

10:00h Maria Antonietta Tosches, Columbia University, NY, USA;
Evolution of the pallial amygdala: a cell type perspective

10:30h. Break

11:00h Helen Barbas, Boston University, MA, USA;
Relationship of cortex with amygdala in primates: all roads lead to development and evolution

11:30h Loreta Medina and Ester Desfilis, University of Lleida and Lleida's Institute of Biomedical Research-Dr. Pifarré Foundation (IRBLleida), Spain;

Evolution and development of amygdala subdivisions: pallial, subpallial and beyond

12:00h. Lunch

14:00h Prof. Luis Puelles, University of Murcia, Spain;
Evolution of the amygdala

14:30h Mario F. Wullimann, Ludwig-Maximilians-Universität Munich, Germany;
Neural pathways of olfactory kin imprinting and kin recognition in zebrafish

15:00h Bradley Colquitt, University of California at San Francisco, CA, USA;
Cellular evolution of birdsong control circuits

15:30h Lauren A. O'Connell, Stanford University, CA, USA;
Amygdala control of social behavior in amniotes

16:00h Concluding remarks and closing (Loreta Medina and Ester Desfilis).

Summary

The amygdala is a complex brain structure that is critical for regulating emotions, social behavior and cognition in mammals, but whose identification in non-mammalian species and across evolution has been highly controversial. In this workshop, across-species aspects of amygdala expression will be covered from various viewpoints, considering distinct developmental and evolutionary mechanisms involved in conservation, divergence and convergence. This Workshop is also held **in honor to Prof.**

Luis Puelles, an internationally highly recognized researcher, who officially retired a year ago, but continues to publish at the highest levels of excellence on forebrain development and evolution, His latest publications challenge some of the earlier views on amygdala organization, function and evolution. The Workshop also commemorates **Dr. Laura L. Bruce**, who greatly contributed to telencephalic evolution by challenging the predominant view on cortex versus amygdala in the brain of non-mammals.