

Under the Auspices of
Société des Sciences Médicales de Luxembourg

EVOLUTIONARY ROOTS OF HUMAN BRAIN DISEASES

February 22-24, 2024
Hôtel Légère Muensbach
Luxembourg

 **CHL**
Centre Hospitalier
de Luxembourg
Department of Neurology



Scientific Committee

Nico J Diederich, MD

Consultant in Neurology at the Centre Hospitalier de Luxembourg and Adjunct Professor of Neurology at the University of Cologne (Germany)

Martin Brüne, MD

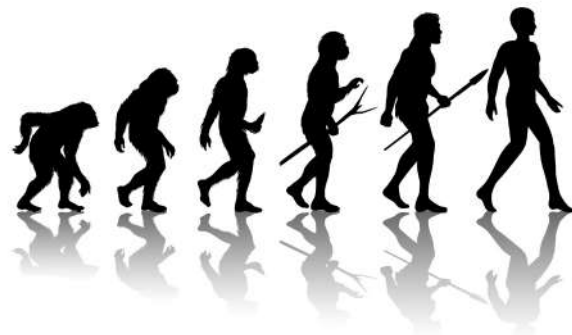
Professor of Psychiatry and Head of the Division of Social Neuropsychiatry and Evolutionary Medicine at the LWL University-Hospital, Ruhr-University Bochum (Germany)

Katrin Amunts, MD

Professor Director of the C. and O. Vogt-Institute for Brain Research, Heinrich-Heine University Duesseldorf, and of the Institute of Neuroscience and Medicine Research Center Juelich (Germany)

Christopher G Goetz, MD, FAAN

Professor of Neurological Sciences and Pharmacology at Rush Medical College, Chicago (USA)



Chair:
Katrin Amunts

SESSION 1
Thursday, 22/02/2024

14H00	Welcome address Guy Berchem Centre Hospitalier de Luxembourg and Luxembourg Institute of Health
14H10	Introduction to the congress Nico J Diederich
14H20	Human telencephalization Katrin Amunts <i>Keynote</i>
14H50	General aspects in the evolution of glia cells Corrado Cali Department of Neuroanatomy, University of Turin (Italy)
15H10	Metabolic evidence supporting the evolution of glial cells Pierre Magistretti Emeritus Professor, École Polytechnique Fédérale de Lausanne and King Abdullah University of Science and Technology (Switzerland and Saudi Arabia)
15H30	The overstrain on mitochondria Anne Grünewald Luxembourg Centre for Systems Biomedicine, Esch-Belval (Luxembourg)
16H00	Break
16H20	Intrinsic templates for neurodegeneration Toshiki Uchihara Program Director, University of Hawaii postgraduate medical education program at Okinawa Chubu Hospital, Okinawa (Japan)
16H50	Goal-directed and habitual behaviours Ledia F. Hernandez Network Center for Biomedical Research, Carlos III Health Institute, Madrid (Spain)
17H20	Adaptive archaic introgression Olga Dolgova Centre Nacional d'Anàlisi Genòmica; Centre de Regulació Genòmica, Barcelona (Spain)
17H50	Round table Lead: Michael T Heneka Director, Luxembourg Centre for Systems Biomedicine, Esch-Belval (Luxembourg)
18H15	Cocktail Party and Networking
19H15	

SESSION 2

Friday, 23/02/2024

Chair:

Nico J Diederich

- 09H00**
Differences in brain gene expression between humans and primates
Geneviève Konopka
Department of Neuroscience, University of Texas, Dallas (USA)
- 09H30**
Alzheimer's Disease, the parietal lobes, and the evolution of the human genus
Emiliano Bruner *Keynote*
Centro Nacional de Investigación sobre la Evolución Humana, Burgos (Spain)
- 10H10**
Parkinson's disease - overstrain of basal ganglia and brainstem nuclei
Christopher G Goetz
- 10H40**
Brain diseases associated with unstable repeats
Peng Jin
Department of Human Genetics, Emory University, Atlanta (USA)
- 11H00**
Pause
- 11H30**
The Properties of Cortico-motoneuronal Connections and their Evolutionary Significance for Amyotrophic Lateral Sclerosis
Roger Lemon
Department of Clinical and Movement Neurosciences, UCL Queen Square Institute of Neurology, London (United Kingdom)
- 12H00**
Round table
Lead: Rejko Krüger
Centre Hospitalier de Luxembourg; Luxembourg Institute of Health (Luxembourg); Centre for Systems Biomedicine, Esch-Belval (Luxembourg)
- 12H30**
Lunch
- 14H00**

Chair:

Martin Brüne

SESSION 3

Friday, 23/02/2024

- 14H00**
REM sleep behaviour disorder: nocturnal replay of "fight and flee"?
Nico J Diederich
- 14H30**
Mood disorders: An evolutionary psychoneuroimmunological approach
Markus J Rantala
Department of Biology, University of Turku, Turku (Finland)
- 15H00**
ADHD: lost benefit of excessive novelty
Annie Swanepoel
Learning Disability team, North East NHS Foundation, London (United Kingdom)
- 15H30**
Pause
- 15H50**
Substance abuse: An evolutionary perspective of reward and motivation principles
Roger Sullivan
Department of Anthropology, California State University, Sacramento (USA)
- 16H20**
Schizophrenia: Embracing the Spectrum
John S Allen *Keynote*
Department of Anthropology, Indiana University, Bloomington, Indiana (USA)
- 16H50**
Round table
Lead: Alfonso Troisi
Department of Systems Medicine, University of Rome Tor Vergata, Rome (Italy)
- 17H20**

SESSION 4

Saturday, 24/02/2024

Chair:

Christopher G Goetz

Registration

- 09H00**
Conditions of comparative brain connectomics
Kathleen S Rockland
Department of Anatomy and Neurobiology, Boston University School of Medicine, Boston (USA)
- 09H30**
Are evolutionary concepts helpful in designing preventive strategies for brain diseases?
Gilberto Levy
Independent Researcher, Rio de Janeiro (Brazil)
- 10H00**
Evolutionary aspects of neuropsychopharmacology
Martin Brüne *Keynote*
- 10H40**
Pause
- 11H00**
Ongoing human evolution?
Nicole Bender
Institute of Evolutionary Medicine, University of Zürich (Switzerland)
- 11H30**
Ongoing cultural evolution outpaces ongoing biological evolution
Jean-Pierre Changeux
Emeritus professor, Department of Neuroscience, Pasteur Institute and Collège de France, Paris (France)
- 12H00**
Round table discussion
Lead: Axel Karenberg
Institute for the History of Medicine and Medical Ethics, University of Cologne (Germany)
- 12H30**
Wrap-up
Sten Grillner
Distinguished Professor, Karolinska Institute Stockholm (Sweden)
- 12H50**

There are no registration fees, but **limited space available.**

Please register on
www.chl.lu/fr/congress-registration-evolutionary-roots-human-brain-diseases



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Department of Neurology



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Société Luxembourgeoise
de Psychiatrie, Pédopsychiatrie et
Psychothérapie