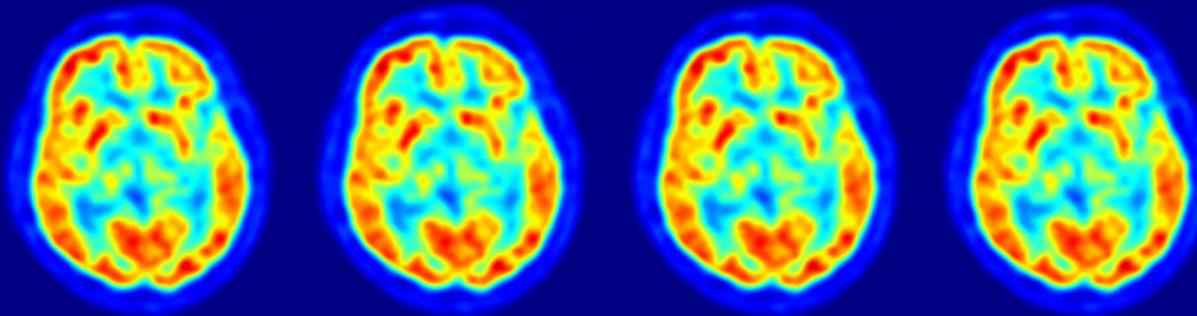


Welcome to the Molecular Frontiers Symposium and Youth Forum

The Brain: Achievements and challenges

Date: 20–21 May 2014

Venue: The Beijer Hall, The Royal Swedish Academy of Sciences, Lilla
Frescativägen 4A, Stockholm, Sweden



Symposium chairs:

Bengt Nordén, *Chair, Molecular Frontiers Foundation* & Lorie Karnath, *Chair Strategic Advisory Board, Molecular Frontiers Foundation*

Organization:

Dina Petranovic, CEO Global, Molecular Frontiers Foundation

The symposium is free of charge and open to the public but registration is required for all participants. For registration and more information please visit:

<http://kva.se/MolecularFrontiers2014>

Tuesday 20 May 2014

09.00 Opening address

Barbara Cannon

President of the Royal Swedish Academy of Sciences

Welcome address

Bengt Nordén

Chairman of the Molecular Frontiers Foundation

09.15 Seventy years of brain research – Looking back and ahead

Arvid Carlsson

Nobel Prize Laureate in Physiology or Medicine 2000, University of Gothenburg, Sweden

10.00 How brain cells communicate and theories for short term memory

Andrew Ewing

Chalmers University of Technology & University of Gothenburg, Sweden

10.45 Coffee break

11.00 The Human Brain Project - the medicine of tomorrow

Richard Frackowiak

Université de Lausanne, Switzerland

11.45 Lunch**13.30 Visualizing the activity and anatomy of brain circuits: optogenetic sensors and tissue clearing approaches**

Viviana Gradinaru

*California Institute of Technology, CA, USA***14.15 Brain blood flow and synchrony markers of neural health enhanced by strategic reasoning protocol**

Sandra Bond Chapman

*The University of Texas at Dallas School of Behavioral and Brain Sciences, TX, USA***15.00 Coffee break****15.15 From yeast cells to patient neurons: A powerful discovery platform for combatting neurodegenerative diseases**

Susan Lindquist

*Whitehead Institute for Biomedical Research, Cambridge, MA, USA***16.00 Discussion in plenum****Moderator:** Astrid Gräslund, *Chair of the Academy's class for chemistry & Lorie Karnath, Chair Strategic Advisory Board, Molecular Frontiers Foundation***17.00 Presentation of Moleclues**Per Thorén, *COO, Molecular Frontiers & Elizabeth Ball, Chair Educational Advisory Board, Molecular Frontiers***17.30 Presentation of Molecular Frontiers Inquiry Prizes (MFIP)**

Andreas Mershin

Massachusetts Institute of Technology, MA, USA

Wednesday 21 May 2014

09.00 The neuroscience of fear memory erasure

Merel Kindt

*University of Amsterdam, The Netherlands***09.45 Consciousness as a tool for understanding**

Martin Ingvar

*Karolinska Institutet, Stockholm, Sweden***10.30 Coffee break****11.00 New tools to study and engineer brain circuits**

Ed Boyden

*Massachusetts Institute of Technology, MA, USA***11.45 Advances in chemistry and its implications for studying and treating brain disease**

Robert Langer

*Massachusetts Institute of Technology, MA, USA***12.30 Lunch**

13.45 Molecular inference of wisdom

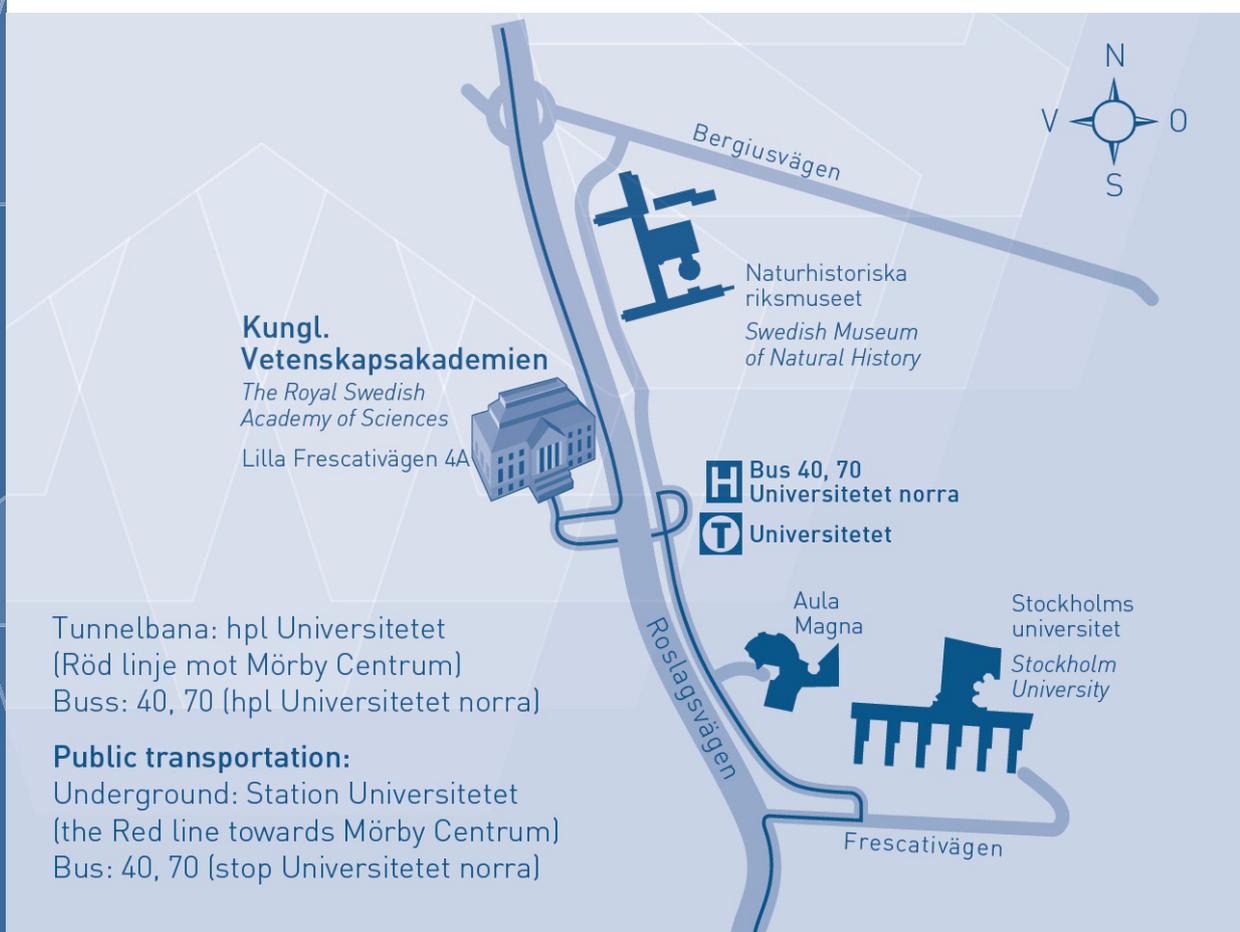
G. Terry Sharrer, *Curator of Health Sciences (ret.) Smithsonian Institutions, Washington DC., USA*

14.30 Panel discussion with all speakers

Moderator: Lorie Karnath, *Chair Strategic Advisory Board, Molecular Frontiers Foundation & Astrid Gräslund, Chair of the Academy's class for chemistry*

15.45 Conclusions and symposium closure

Bengt Nordén
Chair, Molecular Frontiers Foundation

16.00 End of symposium

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