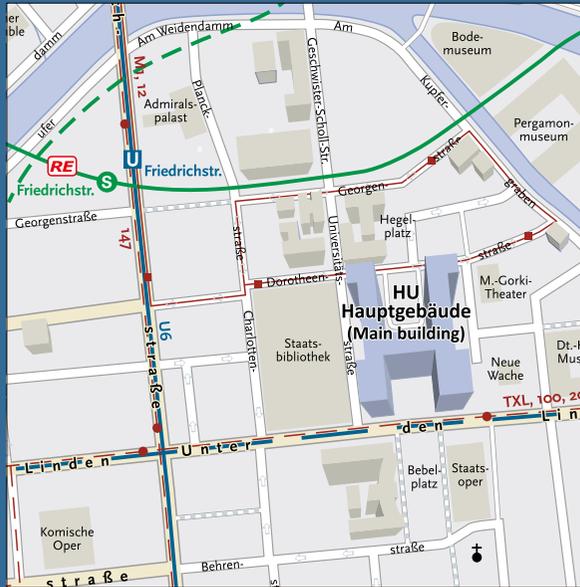


How to get there



Venue

Senate Hall
Main building Humboldt-Universität zu Berlin
Unter den Linden 6
10099 Berlin

The main building of Humboldt-Universität zu Berlin is situated in the heart of the center of Berlin. You can reach it within a ten minute walk from train station Friedrichstraße. You can also take the tram M1 or 12 and get off at "Am Kupfergraben" or the busses 100, 200 or TXL and get off at "Staatsoper".

Founded in 1652, the Leopoldina brings together some 1,500 outstanding scientists from about 30 countries. It is dedicated to the advancement of science for the benefit of humankind and to shaping a better future. In its role as the German National Academy of Sciences, the Leopoldina represents the German scientific community in international committees. It offers unbiased scientific opinions on political and societal questions, publishing independent studies of national and international significance. The Leopoldina promotes scientific and public debate, supports young scientists, confers awards for scientific achievements, conducts research projects, and campaigns for the human rights of persecuted scientists.



Eric R. Kandel *Nobel Laureate*

The Role of Functional Prion-Like Proteins in the Persistence of Memory: A Perspective

Leopoldina Lecture

Friday, 27 May 2016 | 6:30 pm

Senate Hall
Main building Humboldt-Universität zu Berlin
Unter den Linden 6
10099 Berlin

Contact:

Yvonne Borchert
German National Academy of Sciences Leopoldina
Phone: +49 (0)30 203 8997 - 416
E-Mail: yvonne.borchert@leopoldina.org



The Role of Functional Prion-Like Proteins in the Persistence of Memory: A Perspective

Prions are proteinaceous infectious agents that were discovered in the 1980s by Stanley Prusiner while studying Creutzfeldt-Jakob disease. Soon prion proteins were found to contribute to other neurodegenerative disorders in people, including Kuru, Transmissible Spongiform Encephalopathies, as well as Bovine spongiform encephalopathy in cows. There is now a growing consensus that similar prion-like, self-templating mechanisms underlie a variety of neurodegenerative disorders including Amyotrophic Lateral Sclerosis, Alzheimer's disease, Parkinson's disease, and Huntington's disease.

However, not all prions appear to be disease producing. In 2003 Kausik Si and Eric Kandel discovered a prion-like protein in the nervous system of the marine snail *Aplysia*, whose aggregated and self-perpetuating form contributes to the maintenance of long-term changes in synaptic efficacy.

Kandel and colleagues established that a neuron-specific isoform of cytoplasmic polyadenylation element binding protein (CPEB) has prion characteristics, and its switch to a prion-like state at the stimulated synapses maintains long-term synaptic changes associated with memory storage. Recently, this work has progressed in two directions:

- 1) CPEB-3 was found as a homolog of ApCPEB in the mammalian brain. It has prion-like properties and is activated by Neuralized, an ubiquitin hydrolase.
- 2) A second example of prions in the mammalian brain is a completely new candidate – TIA (T-cell intracellular antigen). TIA has classic prion properties in yeast and serves as part of the cellular response to systemic stress. TIA serves as a sex-specific protective factor in PTSD and does so in female mice only.

In his talk Kandel will consider the emerging biology of functional prions and their various roles in brain and behavior.

Programme

Friday 27 May 2016 | 6:30 pm

Senate Hall, Humboldt-Universität zu Berlin

Welcoming address

Jörg Hacker ML

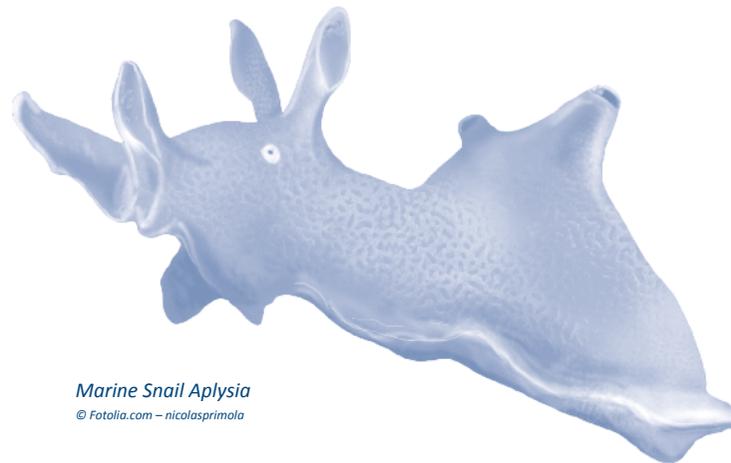
President of the German National Academy of Sciences Leopoldina

Lecture

Eric R. Kandel ML

Director of the Kavli Institute for Brain Science at Columbia University

Reception

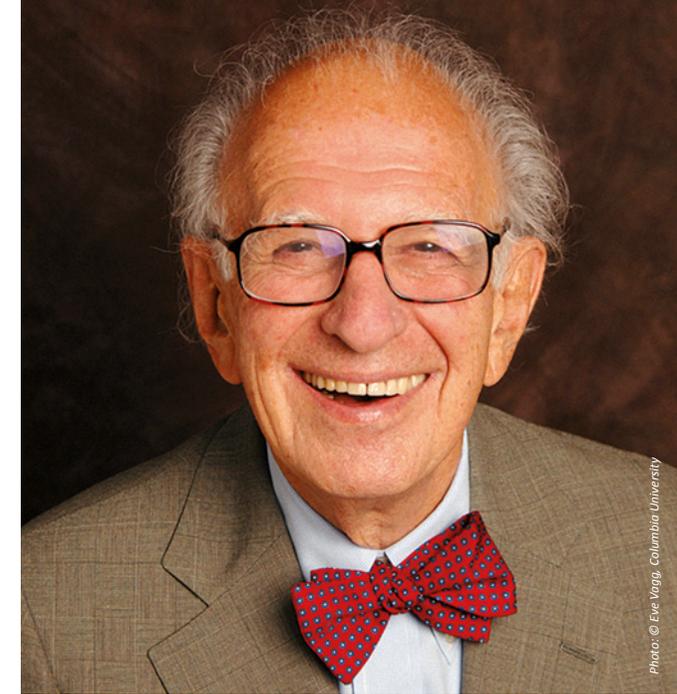


Marine Snail Aplysia
© Fotolia.com – nicolasprimola

Registration

We would kindly like to ask you to register for the lecture via:
www.leopoldina.org/de/prions

ML – Member of the Leopoldina



Eric R. Kandel

Nobel laureate and neuroscientist Eric Kandel is the Director of the Kavli Institute for Brain Science at Columbia University, Senior Investigator at the Howard Hughes Medical Institute and Co-Director of the Mortimer B. Zuckerman Mind Brain Behavior Institute. He has been awarded more than 20 honorary doctorates and he is member of many national academies of science, including the ones of the U.S., France, UK and Austria. Since 1989 he is member of the German National Academy of Sciences Leopoldina. In the year 2000 Kandel won the Nobel Prize for Physiology or Medicine, sharing it with Arvid Carlsson and Paul Greengard. The Nobel committee honoured “their discoveries concerning signal transduction in the nervous system”. Memory and learning have been key research interests to Eric Kandel for his entire academic life.

The expertise of the Leopoldina arises from their members – some 1,500 distinguished international scientists of which currently 32 are also Nobel laureates. Most recent laureates are Thomas Südhof, Stefan Hell and Satoshi Omura.