

Molecular Biology & Cognitive Neuroscience



The University of Vienna invests heavily in the field of Molecular Biology and Cognitive Neuroscience. With five new professors, it pools a high number of experts in this area across faculty boundaries. These professorships were advertised in November 2018 and will be appointed in the coming one to two years. Funding is channelled through an increase in the university budget.

A significant increase in funding enables the University of Vienna to specifically invest in 73 new professorships and tenure track professorships in the coming years. It therefore sets interdisciplinary, interconnected and future-oriented priorities across faculties: Molecular Biology and Cognitive Neuroscience and other socially relevant areas such as Health and Microbiome, Data Science and Digital Humanities, Society and Communication as well as Materials and Quantum Science.

Molecular biology

How does life work? Research groups at the Centre for Molecular Biology as well as the Faculties of Chemistry (especially the discipline of biological chemistry), Life Sciences and Psychology are trying to find answers to this question. At the interface between biology and medicine, researchers focus on chromosome dynamics, RNA biology or cellular signal transduction. In the field of molecular biology, effective cooperation is ensured in the Max Perutz Labs, which are a joint venture between the University of Vienna and the Medical University of Vienna. The Max Perutz Labs are a joint centre for research and education which employs 500 people from 40 nations. 60 research groups are active in basic research and teaching in the field of molecular biology.

In early 2019, the University of Vienna established its own Centre for Microbiology and Environmental Systems Science to create an attractive organisational framework for two of its cross-faculty research specialisations, and microbiome research in particular. The erection of a separate biology centre located at the Vienna Biocenter in St. Marx is intended to ensure that life-science research and teaching continues to be future-oriented and internationally competitive, thus creating one of Europe's most comprehensive life science clusters in Vienna. Synergies exist, for example, in doctoral education, including a planned PhD programme together with the Medical University of Vienna.

Cognitive neuroscience

Already in 2017, the University of Vienna set a new priority in the field of neuroscience and cognitive science by advertising a high number of new professorships, such as in the field of neurobiology, neuroinformatics or neuropsychology but also in psychology and behavioural biology.

Vienna Cognitive Science Hub

Fundamentals of neuroscience and cognitive science form the basis for research on the function and structure of the brain – in relation to human consciousness, social behaviour in society, language and knowledge. The interaction of mind and brain is one of the most exciting questions science ever raised. The University of Vienna founded the Vienna Cognitive Science Hub research network to foster the integration of neuroscience into cognition research. This research network promotes the sustainable establishment of an internationally competitive common research specialisation in cognitive science and neuroscience at the University of Vienna, the Medical University of Vienna and the University of Veterinary Medicine, Vienna.

A tangible result of the cooperation between these three universities is the Messerli Research Institute, which has a focus on animal cognition and behaviour. Furthermore, scientists at the Konrad Lorenz Research Station in Grünau are also active in the field of behavioural and cognitive biology. A new professor who explores the neuroscientific basis of human-animal interactions supports the further development of cognitive neuroscience at the University of Vienna. This should also result in joint studies offered by the participating universities.

In teaching, an international and interdisciplinary master's programme in Cognitive Science is already established. The Middle European Interdisciplinary Master's Programme in Cognitive Science (Mei:CogSci) imparts knowledge and understanding of the basic concepts of its core disciplines as well as interdisciplinary specialisation in selected areas of cognitive science. The Medical University of Vienna also participates in this English-language master's programme.

The University of Vienna is also trying to expand high-profile research collaborations between business/industry partners and science. In the field of Molecular Biology and Cognitive Neuroscience, which is one of the University's strategic priorities. A Christian Doppler laboratory (CD) is available at the University of Vienna to conduct research on structural biology and biotechnology.

International cutting-edge research

Currently, more than ten ERC grants at the University of Vienna cover the topic of molecular biology.

**New
professor-
ships**

- Quantitative Modelling of Biological Networks
- Neuro-Mediality
- Molecular Drug Targeting
- Advanced Microscopy and Cellular Dynamics
- Molecular Biology (together with the Medical University of Vienna)