

# Elite Graduate Program Biomedical Neuroscience



Apl. Prof. Dr. Helmuth Adelsberger



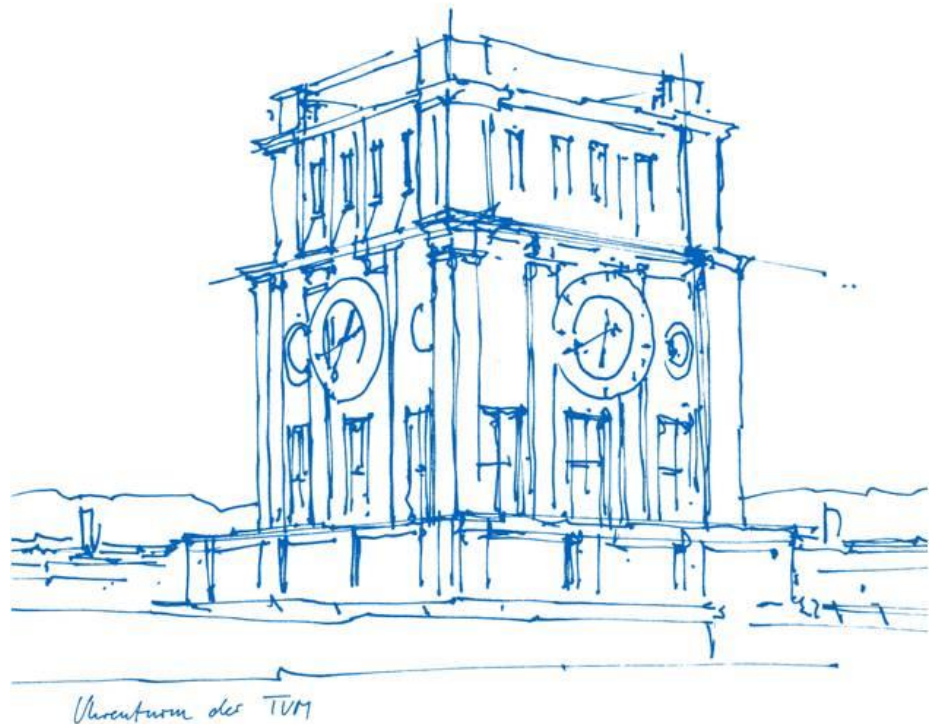
Dr. rer. nat. Silke Herzer

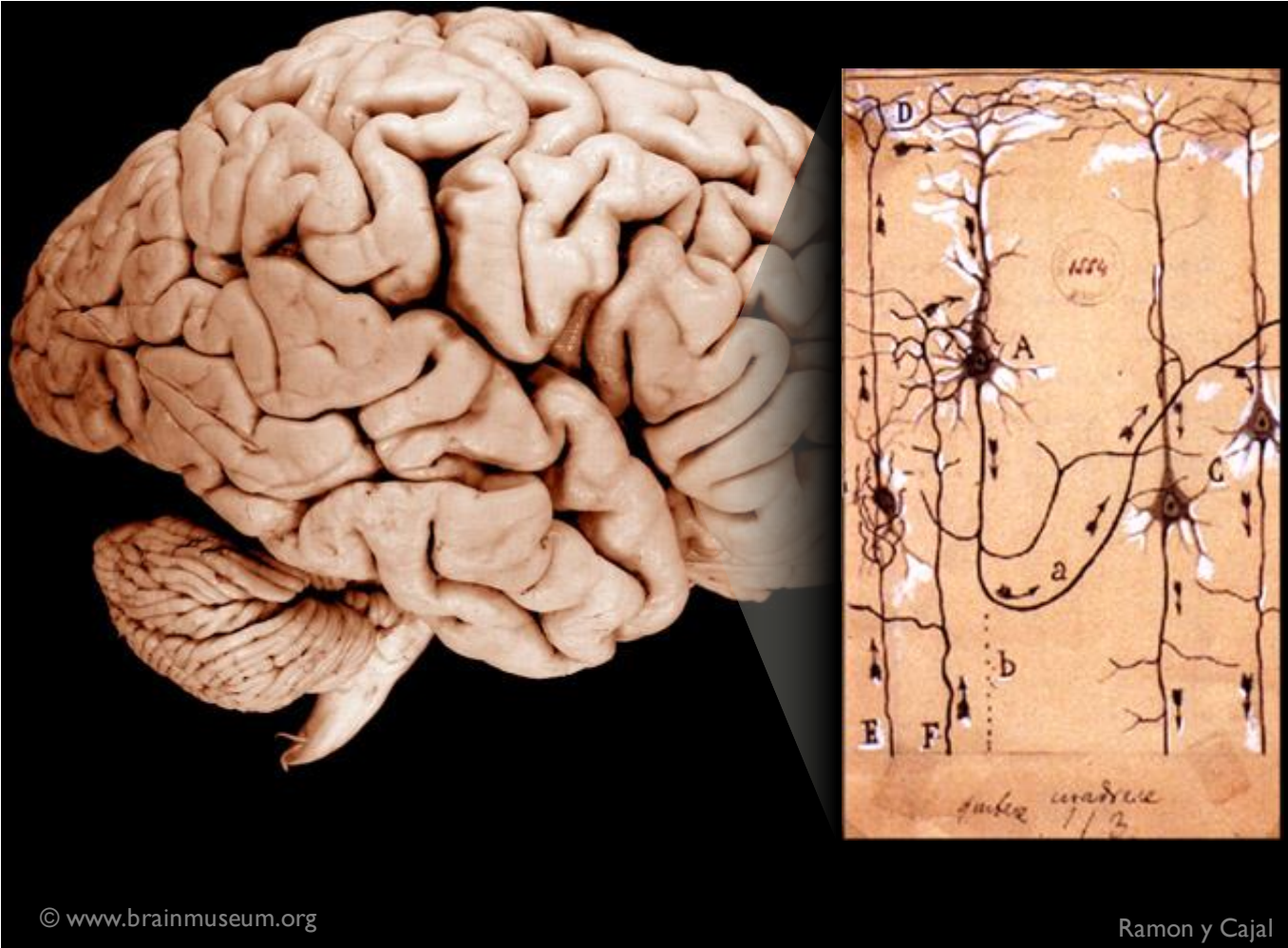


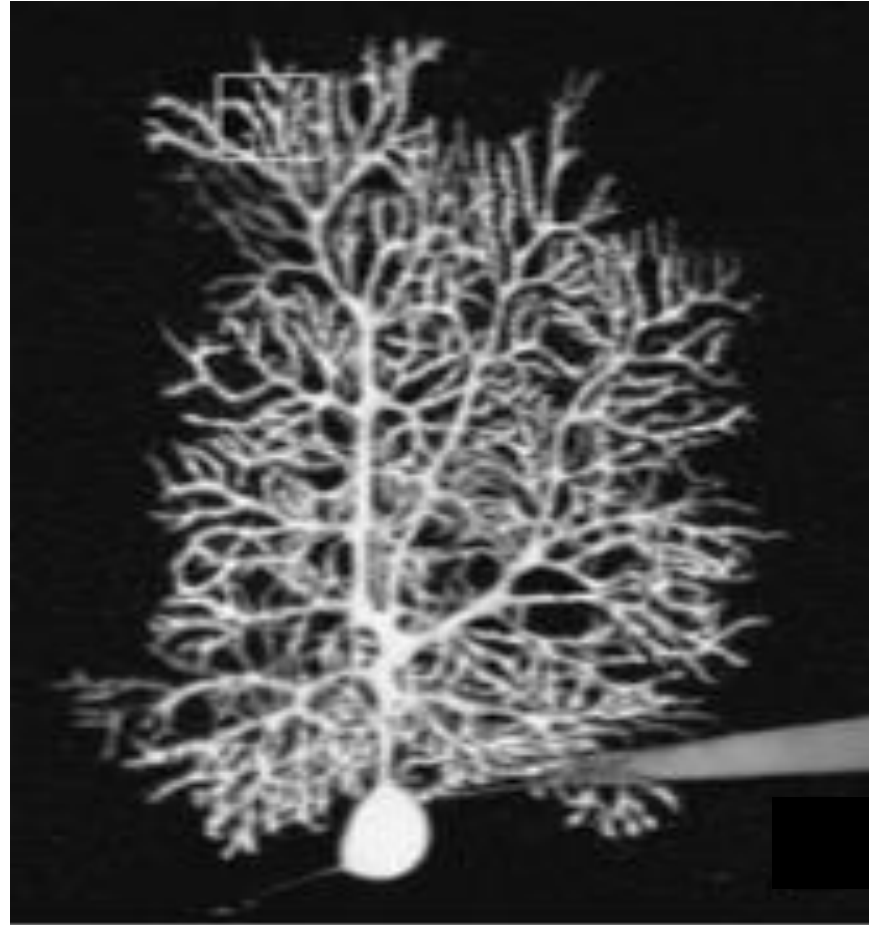
Würmseer, Diana Lee, M.Ed.

**Technical University of Munich**  
**TUM School of Medicine and Health**

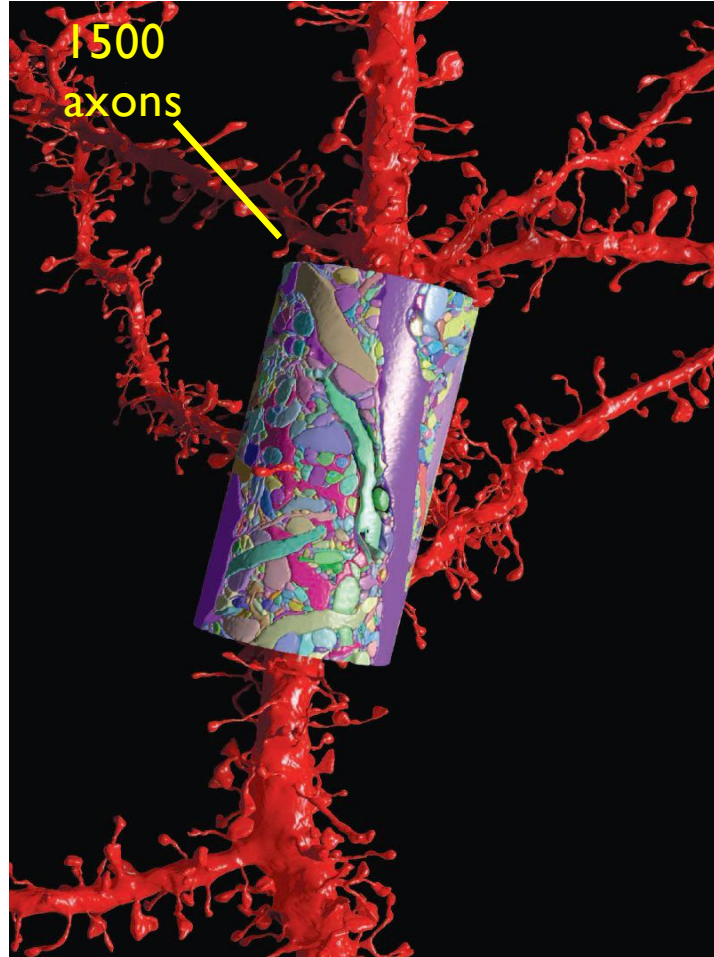
Munich, 24. March 2025

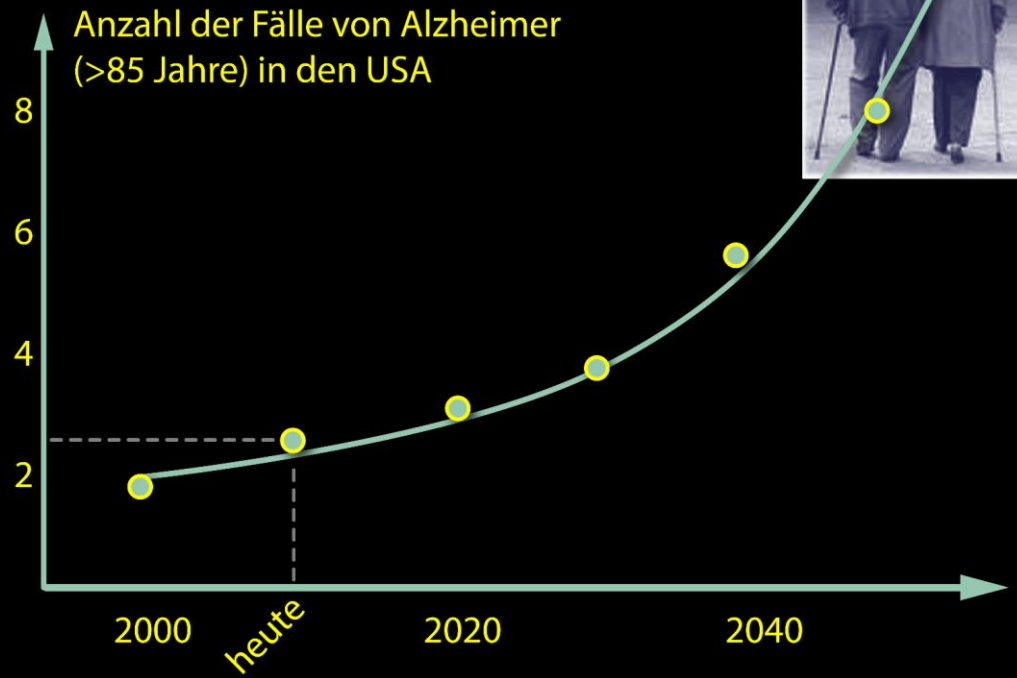






86 billion neurons





<p><b>1st semester</b></p>	<ul style="list-style-type: none"> <li>• <b>Molecular Neuroscience</b></li> <li>• <b>Cellular Neuroscience</b></li> <li>• <b>Neuroanatomy and Neuropathology</b></li> <li>• <b>Mol. biology and -omics approaches</b></li> <li>• <b>Microscopy of nervous system structure</b></li> <li>• <b>Scientific practice</b></li> <li>• <b>Life &amp; Science</b></li> <li>• <b>Data acquisition, analysis and presentation (Lab visit)</b></li> </ul>
<p><b>2nd semester</b></p>	<ul style="list-style-type: none"> <li>• <b>Nervous system and circuit development</b></li> <li>• <b>Systems neurology and neuroscience</b></li> <li>• <b>Nervous system disorders and treatment</b></li> <li>• <b>Computational analysis and modelling</b></li> <li>• <b>Neuroimaging and electrophysiology</b></li> <li>• <b>Scientific practice</b></li> <li>• <b>Life &amp; Science</b></li> <li>• <b>Data acquisition, analysis and presentation (Lab visit)</b></li> </ul>
<p><b>3rd semester</b></p>	<ul style="list-style-type: none"> <li>• <b>Qualifying colloquium</b></li> <li>• <b>Lab rotation (I-II)</b></li> <li>• <b>Data acquisition, analysis and presentation (Lab visit)</b></li> </ul>
<p><b>4th semester</b></p>	<ul style="list-style-type: none"> <li>• <b>Master's Thesis and Master's colloquium</b></li> </ul>



To **enjoy** the program and to **succeed**,  
**your interests and qualities** should meet the following:

- Strong affinity to basic and translational neuroscience
- High motivation to acquire experimental skills
- Enjoy working in interdisciplinary teams and projects

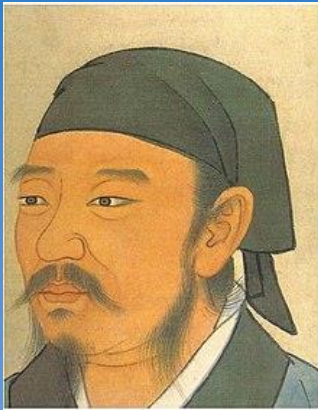


# Involvement

***Tell me and I forget.***

***Teach me and I remember.***

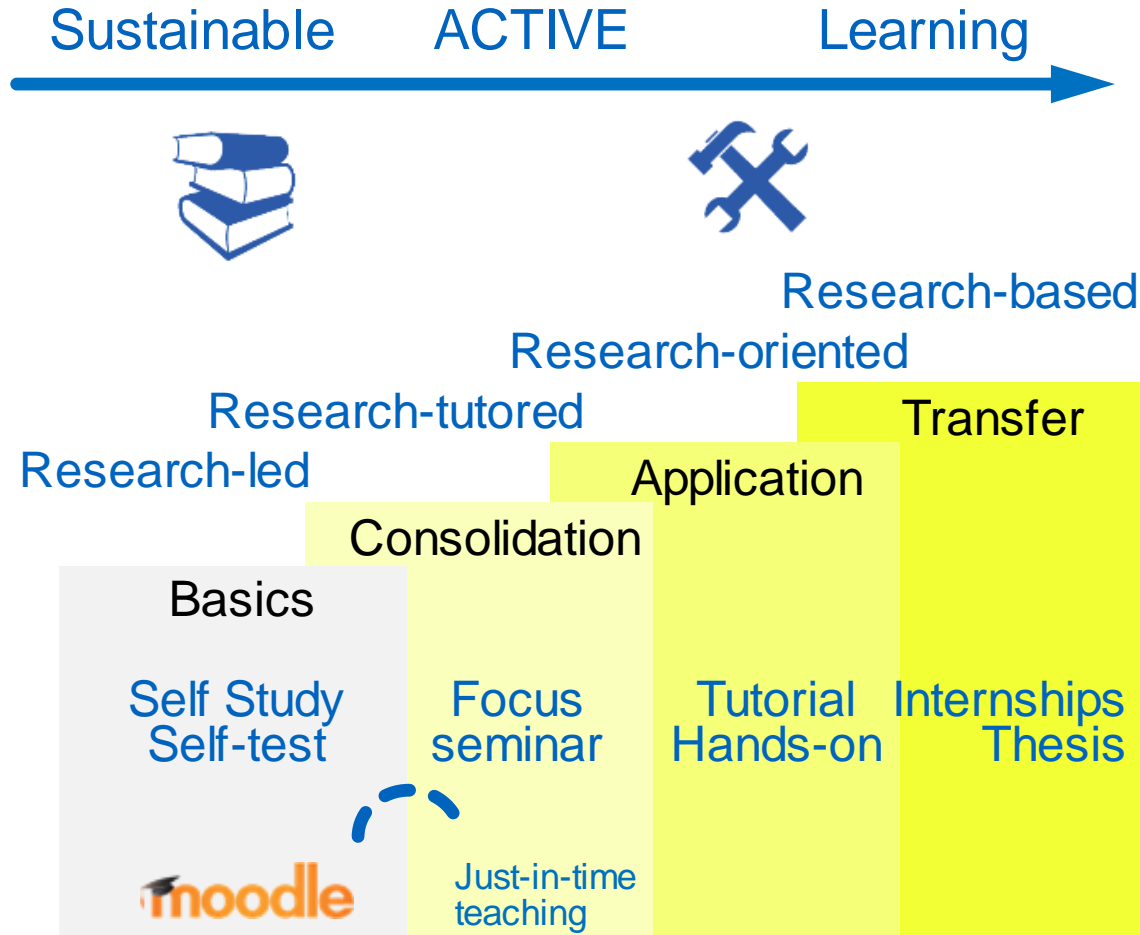
***Involve me and I learn.***



Xunzi (298 - 220 BC)





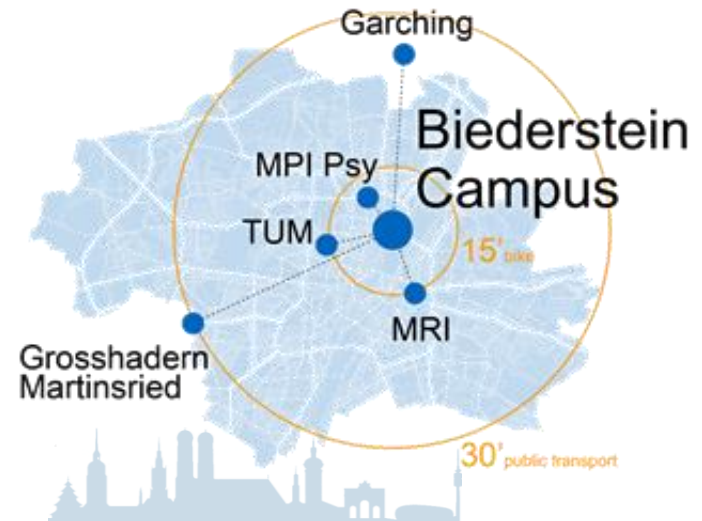


Modified from Healey, 2005

## A typical week for a Biomedical Neuroscience student

	Monday	Tuesday	Wednesday	Thursday	Friday
morning	<b>Topic</b> Self Study  	<b>Topic 1</b> Focus seminar  	<b>Various</b>  Application Transfer  	<b>Topic 2</b> Self Study  	<b>Topic 2</b> Focus seminar  
afternoon	Hands-on  	Hands-on  		Hands-on  	Hands-on  
evening				Transferable Skills & Professional Competence	

## Location & exchange



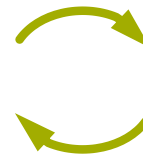
## Internationalization



### Edmond & Lily Safra Center for Brain Sciences

- Institutionalized international partner
- Student and faculty exchange, based on complementary expertise

**ELSC**  
Computational  
neuroscience



**M.Sc. Biomedical  
Neuroscience**  
Disease-related  
neuroscience

Imperial College London

# Application

- Final application **deadline** is **May 31<sup>st</sup>, 2025**
- Minimum Requirement: Bachelor's degree in the field of natural sciences such as e.g. Biology, Biochemistry, Molecular Medicine, Physics or equivalent or a medical examination in medicine
- Proof of English Language Proficiency (certified copy)
  - “Test of English as a Foreign Language“ (TOEFL) min. 88 Points,
  - „International English Language Testing System“ (IELTS) min. 6,5 Points,
  - Cambridge English Certificate: Advanced (CAE)
- **Online application** in TUMonline
  - <https://www.tum.de/studium/bewerbung/infoportal-bewerbung/onlinebewerbung>
  - Support: TUM Student Service Center ([studium@tum.de](mailto:studium@tum.de))

# Aptitude Assessment: Stage 1

- **Subject-specific qualifications:**

Subjects completed within the Bachelor's degree:

Mathematics, Physics, Statistics, Inorganic chemistry, Physical chemistry, Physical organic chemistry, Biochemistry, Molecular biology, Physiology, Immunology

→ Max. score is 10 points (1 point each for every above-mentioned, passed subject mentioned in the transcript of records).

- **Final grade of (Bachelor) diploma:** GPA of Bachelor degree

→ Max. score is 10 points (1,9 = 1 point; 1,8 = 2 points... 1,0 = 10 points).

- **Letter of Motivation:** Max. score is 10 points.

→ Applicants having reached **20 points and above** will receive an invitation to a **personal interview**.



## Aptitude Assessment: Stage 2 (personal interviews)

- Evaluation of the **applicant's special motivation and commitment** for studying Biomedical Neuroscience as outlined in the applicant's Letter of Motivation (for stage 1).
- **Academic qualification:** Basic theoretical and problem-based/applied questions from the field of natural science fundamentals will be asked to assess the applicant's academic abilities.
- **Presentation of** the scientific hypothesis, methodology, and achieved outcomes of the applicant's final (Bachelor) thesis (no PPT presentation).
- ➔ Each above-mentioned criterion of stage 2 will be scored with a max. of 15 points. The total score will consist of the sum of all scores from Stage 2 plus the sum of all scores from Stage 1.
- ➔ Applicants who receive a score of more than 30 points for both assessment stages will be accepted to the Biomedical Neuroscience Master Program.

# What makes us special:

## → Funded by the Elite Network Bavaria

Excursions

Summer Schools

Special hands-on-courses (e.g. „Brain Course“)

Support for German language course with 800,-€



Bavarian State Ministry of  
Science and the Arts



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## Biomedical Neuroscience

The study program “Biomedical Neuroscience” offers a research-oriented education in the field of neuroscience as well as in neuropsychiatric diseases. Teaching of theoretical knowledge and practical skills is performed using innovative teaching methods. A personalized mentoring program ensures intensive supervision of the students. Through exchange programs, for example with the Hebrew University in Jerusalem the students can gain international experience.

# What makes us special:

➔ Follow us on <https://www.linkedin.com/company/101569976/admin/feed/posts/>

