



A postdoctoral position will be available in the lab of Tino Pleiner in the Department of Molecular and Cellular Physiology at Stanford Medicine, that will launch in June 2023.

[The Pleiner lab](#) pursues fundamental research in molecular and cellular biology with a strong emphasis on mechanistic insight. Our lab is particularly fascinated by how human cells make and quality control multi-pass membrane proteins like transporters, receptors and ion channels that are essential for cellular physiology. We combine mechanistic cell biology, (structural) biochemistry and protein engineering to dissect the pathways and molecular machines that mature the roughly 5,000 human membrane proteins to a fully functional state. We are also developing alpaca-derived nanobodies as tools to acutely perturb such dynamic intracellular pathways directly at the protein level and assess immediate functional consequences to the nascent (membrane) proteome.

A related area of focus will be to generate highly specific reagents that can fine-tune the cellular stress responses that adjust cellular protein folding and degradation capacity. Such reagents will be powerful tools to either correct or increase the dysregulation of protein homeostasis in neurodegeneration/ageing or cancer, respectively.

Major techniques in the lab include: mammalian cell culture, flow cytometry, FACS, CRISPR knock-outs/ knock-downs/knock-ins, genome-wide perturbation screens, phage & ribosome display, protein purification from mammalian and *E. coli* cells, *in vitro* translation and membrane insertion assays. Many of these techniques are highly sought-after in biotech industry as well.

Our lab will be an inclusive space that fosters learning & curiosity, promotes team work and values mentorship to drive an innovative research program that pushes the boundaries of molecular biology.

The successful candidate will have access to close mentorship and will witness first-hand how to set up a new lab. The lab has fantastic resources and is surrounded by an unparalleled, world-class, collaborative scientific environment. Outside from the lab, life in the sunny Bay area offers spectacular culinary, cultural, and outdoor recreational opportunities.

The expected base pay range for this position is \$68,250 - \$71,500. The pay offered to the selected candidate will be determined based on factors including (but not limited to) the qualifications of the selected candidate, budget availability, and internal equity.



Relevant publications:

Pleiner, T. *, Hazu, M. *, Tomaleri, G.P. *, Nguyen, V.N., Januszyk, K. and Voorhees, R.M. (2022) A selectivity filter in the EMC limits protein mislocalization to the ER. *bioRxiv*, doi: 10.1101/2022.11.29.518402

Pleiner, T., Hazu, M., Tomaleri, G.P., Januszyk, K., Oania, R.S., Sweredoski, M.J., Moradian, A., Guna, A. and Voorhees, R.M. (2021) WNK1 is an assembly factor for the human ER membrane protein complex. *Mol Cell*, 81, 2693-2704.e12.

Pleiner, T. *, Tomaleri, G.P. *, Januszyk, K. *, Inglis, A.J., Hazu, M. and Voorhees, R.M. (2020) Structural basis for membrane insertion by the human ER membrane protein complex. *Science*, 369, 433-436.

Pleiner, T., Bates, M. and Görlich, D. (2018) A toolbox of anti-mouse and anti-rabbit IgG secondary nanobodies. *J Cell Biol*, 217, 1143-1154.

Qualifications

Applications are encouraged from talented and motivated individuals who have a Ph.D. or are nearing completion of their Ph.D. with experience in cell biology, biochemistry or protein engineering. Top candidates will have a strong track record of research productivity, excellent communication skills, enthusiasm for basic research and a willingness to work as a leading part of a team with other lab members. Candidates should send a cover letter, a detailed curriculum vitae, as well as the names and contact details for three references to pleiner@stanford.edu

The start date is flexible and depends on the candidate. Preference is for candidates who can start in 2023/early 2024.