

The Doctoral Program **ION CHANNELS AND TRANSPORTERS AS MOLECULAR DRUG TARGETS** („MolTag“)

is pleased to invite you to the following **ONLINE** lecture

"K_{2P} channel gating caught in the act: asymmetric pinching and dilation of a potassium channel selectivity filter"

by **Prof. Daniel L. MINOR, PhD**

[Cardiovascular Research Institute](#),

Departments of Biochemistry & Biophysics, and Cellular & Molecular Pharmacology, California Institute for Quantitative Biomedical Research; Kavli Institute for Fundamental Neuroscience, University of California, San Francisco

on: **Thursday, March 18, 2021, 17:15**

Host: **Ass.Prof.Dr. Anna Weinzinger**

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ABSTRACT: Bioelectricity made by ion channel proteins drives our thoughts, feelings, and actions. These complex macromolecular devices give the spark to life by controlling the passage of ions across cell membranes in nerves, muscles, and the brain. Our laboratory focuses on using functional, chemical, and structural approaches to uncover the molecular mechanisms by which diverse types of ion channels work and to develop new reagents that can manipulate ion channel function. **Our efforts in unravelling the structural transformations that govern ion channel function and in developing new means to control the ion channel function will be presented with particular focus on understanding the gating mechanisms of the K_{2P} class of potassium channels.**

Biosketch: I have a broad background in ion channel structural biology and functional characterization. My interest in the physical chemistry of biological phenomena began with my undergraduate study in biophysics and biochemistry at the Univ. of Pennsylvania. As a graduate student in the Dept. of Chemistry at MIT with Prof. Peter S. Kim, I focused on understanding the basic principles of protein folding and molecular interactions. While at MIT, I developed a keen interest in the proteins involved in electrical signaling. To pursue this interest, I worked as a postdoctoral fellow with Dr. Nigel Unwin at the LMB Cambridge and with Prof. Lily Y. Jan at UCSF where I was able to apply my background in structural biology to specific questions regarding ion channel structure and regulation. **As a PI, I have focused my laboratory's efforts on structural and mechanistic understanding of ion channels and in the development of new pharmacological tools for orphaned channel classes.** My lab is pursuing a research program that combines structural biology, ion channel functional studies, and chemical biology approaches to develop new channel pharmacologies. My laboratory has made many contributions to the structural understanding of the function of various classes of ion channels and development of new channel modulators using a multidisciplinary approach employing genetic selections, biophysical approaches. **For publications see: [here](#).**

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