UC DAVIS HEALTH | SCHOOL OF MEDICINE

Department of
Physiology and Membrane Biology

Special Seminar

Fan Yang, Ph.D.

Associate Professor
Department of Biophysics
Zhejiang University

"Molecular Mechanisms and Therapeutic interventions of Olmsted Syndrome caused by a Gain-of-Function Mutation in TRPV3 Ion Channel"

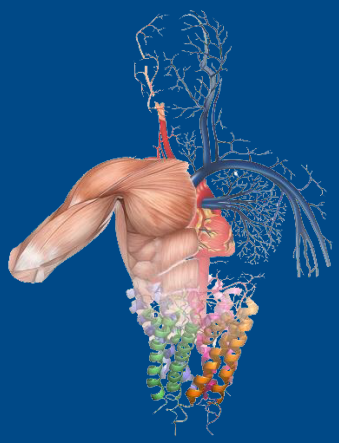
The Transient Receptor Potential (TRP) ion channels are polymodal receptors in the human body, so that their mutations often lead to various diseases. Specifically, mutations in TRPV3 channel cause diseases like the Olmsted Syndrome. Here we identified a novel gain-of-function point mutation in TRPV3 channel in a patient with Olmsted Syndrome. To investigate the molecular mechanisms of such a point mutation and discover therapeutic interventions of Olmsted Syndrome and TRPV3-related diseases, we employ a multidisciplinary suite of biophysical techniques including patch- clamp electrophysiology, single-particle cryo-electron microscopy and ultra-large computational drug screening. We have not only elucidated the structural basis of such a gain-of-function mutation in TRPV3, but also identified a selective TRPV3 inhibitor that effectively intervenes disease phenotypes in mouse models.

Tuesday, September 2, 2025
GBSF Auditorium and Zoom
2:10-3:10 p.m.

Zoom QR Code

September
2

Fan Yang, Ph.D.
Associate Professor
Department of Biophysics
Zhejiang University



Host: Jie Zheng

jzheng@ucdavis.edu