UC DAVIS HEALTH | SCHOOL OF MEDICINE

Department of
Cell Biology and Human Anatomy

iBIO: Integrated Biomedical Sciences Seminar Series

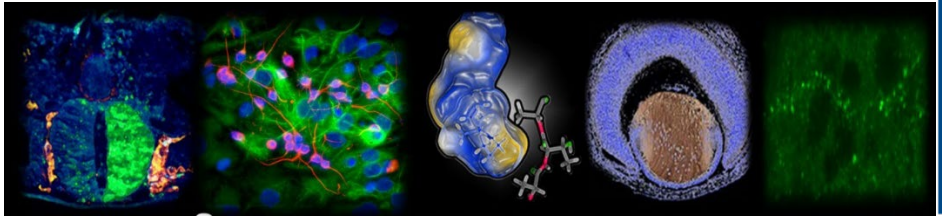
Audrey Bernstein, Ph.D.

Associate Professor
Department of Ophthalmology & Visual Sciences,
Biochemistry & Molecular Biology, Cell & Development Biology
Upstate Medical University (SUNY)

"How Changes in Intracellular Proteostasis lead to Pathological Scarring"

"Our work is focused on ocular scarring and glaucoma. We have elucidated novel molecular pathways that lead to prolonged surface expression of integrins, fibrotic TGF signaling, and scarring in the cornea. Tissue wounding induces an increase in the deubiquitinase (DUB), USP10. Current work is focused on the role of USP10 and other DUBs in wound healing. We found that USP10 removes ubiquitin from internalized αv-integrins saving them from degradation and promoting integrin recycling. The increase in USP10 DUB activity shifts the balance of integrin degradation/recycling to yield a net accumulation of integrin on the cell surface and this in turn leads to pathological cell adhesion, activation of TGFβ signaling, and myofibroblast differentiation. *In vivo* silencing of USP10 promotes regenerative healing."

Tuesday, October 18, 2022
GBSF Auditorium & Zoom
10 a.m.



October
18

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Host: Marie Burns

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