



LOMA LINDA UNIVERSITY
School of Medicine

SURF Mentors 2023*

Key:

= computer-based (dry lab) projects

+ = bench (wet lab) and dry lab projects both available; some projects include elements of both

= bench (wet lab) projects

= projects may involve animal work or research using animal tissues or cells

Anatomy

Kerby Oberg

Coordination of patterned limb development and regulation of limb dorsalization. +,

Biochemistry

Danilo Boskovic

Nanoparticle impacts on blood hemostatic responses, preservation of biomaterials in fossil samples, and epidemiologic investigations of the risks for intraventricular hemorrhage in the newborn. , +

Christopher Perry

Bioengineered materials (TiO₂ nanofibers loaded with gold nanoparticles) to modulate the cariogenic potential of dental biofilm.

Juli Unternahrer

Stem cells causing recurrence of ovarian cancer with a focus on the role of an embryonic program called epithelial-mesenchymal transition in making ovarian cancer cells more aggressive. , +

Biomedical Engineering Sciences

Reinhard Schulte

Developing novel cancer detectors based on ionizing a gas that contains a tissue-dependent mixture of volatile organic molecules and studying its ion drift time and time-dependent discharge pattern.

+

Cancer Science

Rameshwar Patil

Using Boron Neutron Capture Therapy (BNCT) to develop boron-10 rich nanodrugs capable of crossing the blood-brain barrier and target glioblastoma. +,

Microbiology and Molecular Genetics

Kylie Watts

Mechanisms of bacterial chemosensing and bacterial survival with a focus on oxygen sensing and subsequent protein phosphotransfer interactions within protein signaling networks. 🖥️+👤

Pharmacology

Erik Behringer

Fundamental and therapeutic mechanisms underlying optimal brain perfusion and cognition throughout the entire lifespan. 🖥️+👤, 🐭

Sean Wilson

The impact of gestational hypoxia on the development of pulmonary hypertension in the newborn using a variety of contemporary approaches. Also exploration of the impact of school and community based cycling programs on adolescent health and wellbeing. 🖥️, 👤, or 🖥️+👤

Physiology

Stella Goulopoulou

Molecular interactions between the placenta and the maternal cardiovascular system during pregnancy in health and disease. Also the role of circulating mitochondrial DNA in preeclampsia. 🖥️+👤, 🐭

Chris Wilson

Cardiac and respiratory control in developing animals, using breathing pattern and cardiac activity as indices of animal health. Understanding how inflammation alters cardiac and respiratory signals and how cardiorespiratory control is altered in preterm infants. 🖥️+👤, 🐭

**You may list an alternative LLU faculty member on your SURF application if that faculty member has agreed to mentor you in the event that your SURF application is successful.*