

Seminar Series



Dr. Kent Leach

Professor of Biomedical
Engineering and Orthopaedic
Surgery

University of California, Davis

Zoom link:

<https://bit.ly/2TmAzOQ>

Password:

994791

Biomaterials Approaches to Amplify Cell-Based Therapies for Musculoskeletal Repair

October 21 • 12:05–1:20 p.m.

ABSTRACT

Advances in early detection of disease and increases in lifespan necessitate new strategies to repair or replace damaged organs and tissues. Dr. Kent Leach and his team's research is directed toward incorporating cues from the native environment and natural extracellular matrix (ECM) into the design of cell culture platforms and musculoskeletal tissue-engineered constructs. By applying fundamental principles in cell and molecular biology, biomaterials, and biotransport phenomena, Dr. Leach and his lab are developing materials-based strategies to direct the behavior of transplanted or host cells within bone defects and interrogate the behavior of various cell populations in more physiologically relevant conditions. In this talk, Dr. Leach will present examples of their recent work in designing biomaterials from cells and natural and synthetic polymers to instruct cell fate and enhance tissue formation and function with applications in muscle regeneration and bone repair.

BIO

Dr. Kent Leach is the Lawrence J. Ellison Endowed Chair of Musculoskeletal Biology in the Department of Orthopaedic Surgery and Professor of Biomedical Engineering at the University of California, Davis. His research interests are focused on developing cell-instructive biomaterials for tissue engineering, applying transport principles for growth of engineered tissues and modeling cancer, and translation from the bench to the clinic. He is the editor-in-chief of the *Journal of Biomedical Materials Research Part A*, the official journal of the Society For Biomaterials (SFB). He was inducted into the College of Fellows of the American Institute for Medical and Biological Engineering in 2017 and as a fellow of the Biomedical Engineering Society (BMES) in 2018. He has received multiple teaching and mentorship awards at UC Davis, and he holds various leadership roles in his scientific communities, including membership on the Tissue Engineering and Regenerative Medicine International Society America's Council, Board of Directors of BMES, and Member-at-Large of the International Society of Fracture Repair within the Orthopaedic Research Society (ORS).