Special Seminar

Date: Friday June 1, 2018
Time: 11am – 12:00 pm
Location: Donnelly Centre, Red Seminar Room
160 College Street, 2nd Floor, Room 250

Dr. Dennis Clegg
Department of Molecular, Cellular and Developmental Biology
University of California, Santa Barbara

"Bioengineering a Cellular Therapy for Eye Disease"

One promising option for the treatment of ocular disease is to develop cellular therapies using RPE and neural retinal cells derived from pluripotent stem cells. One strategy for treating dry age related macular degeneration is to implant differentiated, polarized monolayers of hESC-RPE or iPS-RPE on an extracellular matrix-based scaffold, whereby cells are provided with a supportive substrate to stimulate cell survival, differentiation and function. We describe recent efforts to develop tissue constructs to replace ocular tissue and translate them to the clinic. A phase 1/2A clinical trial is currently underway to assess the safety of an implant consisting of a monolayer of H9 hESC-RPE on a synthetic scaffold.

Biography

Dr. Clegg earned his BS degree in biochemistry at UC Davis and his PhD in biochemistry at UC Berkeley, where he used emerging methods in recombinant DNA to study the sensory transduction systems of bacteria. As a Jane Coffin Childs Postdoctoral Scholar at UCSF, he studied neural development and regeneration. He has continued this avenue of research since joining the UCSB faculty, with studies of extracellular matrix and integrin function in the developing eye. His current emphasis is in stem cell research, with a focus on developing therapies for ocular disease. Dr. Clegg is the recipient of the UCSB Distinguished Teaching Award in the Physical Sciences, the Pacific Coast Business Times Champions in Health Care Award, the National Eye Institute Audacious Goals award, and served as Chair of the Department of Molecular, Cellular and Developmental Biology from 2004-2009. He has been a Frontiers of Vision Research Lecturer at the National Eye Institute, a Keynote Lecturer at the Stem Cells World Congress, and a TEDx speaker. He is founder and Co-Director of the UCSB Center for Stem Cell Biology and Engineering, and has served on advisory boards for the California Institute for Regenerative Medicine and the National Institutes of Health Center for Regenerative Medicine. He is a Co-Principal Investigator of The California Project to Cure Blindness, a multi-disciplinary effort to develop a stem cell therapy for Age-Related Macular Degeneration.

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Hosted by Dr. Molly Shoichet
Snacks and Refreshments will be served