

UC SANTA BARBARA

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Prominent Stem Cell Scientist to Relocate to UCSB from Britain

Pete Coffey, an internationally prominent researcher working on stem cell biology and the prevention of blindness, will begin work as a full-time researcher at UC Santa Barbara in November.

Coffey will direct UCSB's Center for the Study of Macular Degeneration, and will also work with the university's Center for Stem Cell Biology and Engineering. Both centers are part of UCSB's Neuroscience Research Institute (NRI). In addition, Coffey will be a member of the university's Department of Molecular, Cellular, and Developmental Biology. He has already been involved in UCSB's stem cell research as a visiting researcher.

The California Institute for Regenerative Medicine (CIRM) provided a grant to recruit Coffey, who is currently the director of the London Project to Cure Blindness, an initiative launched several years ago by the University College of London (UCL).

"I appreciate being part of a thriving community backed by CIRM, which now allows opportunities that until now were not possible," said Coffey. "To work with the UC Santa Barbara group -- the stem cell and macular degeneration centers -- is truly exciting."

Mike Witherell, UCSB's vice chancellor for research said: "Pete Coffey has been a leader of the global effort to develop a new stem cell therapy for macular

degeneration. He is a perfect fit with the strong team we already have on campus."

At UCL, Coffey is professor and head of Ocular Biology and Therapeutics at the Institute of Ophthalmology, and serves as UCL's chair of Cellular Therapies and Visual Science. His work has attracted considerable attention as he and collaborators gear up to carry out a clinical trial in London for age-related macular degeneration. He will continue his work with UCL.

"Pete Coffey is not only a boon to UCSB, but to the entire state of California," said Kenneth S. Kosik, co-director of UCSB's NRI. "His remarkable progress toward bringing stem cell science to the bedside validates much of the CIRM vision."

The long-term goal of Coffey's research is regeneration of the diseased eye. Age-related macular degeneration, diabetic retinopathy, and retinitis pigmentosa are leading causes of blindness for which there are no effective treatments in the majority of cases. Loss of vision is due to progressive degeneration of the photoreceptor cells, or loss of cells that support the photoreceptors, such as retinal pigment epithelial (RPE) cells or cells in the retinal vasculature.

One possible strategy for treatment of these blinding diseases is to replace cells that are lost via transplantation. Coffey's work explores this approach, with the object of first identifying and characterizing sources of cells, determining the optimal parameters for transplantation, and investigating molecular, cellular, and behavioral events that occur upon transplantation in animal models of retinal degeneration.

Coffey has joined forces with interdisciplinary teams in Britain and California to transition this work to the clinic, using RPE derived from human embryonic stem cells (hESC). This effort, known as the California Project to Cure Blindness, is funded by CIRM and Britain's Medical Research Council. Other research projects investigate treatments for conditions such as macular dystrophy and diabetic retinopathy.

Over the past 10 years, Coffey has co-authored 40 peer-reviewed publications that have provided foundational knowledge that will enable and guide further translation of cellular therapies to improve vision in patients.

Dennis Clegg, co-director of UCSB's Center for Stem Cell Biology and Engineering, noted that Coffey is tremendously effective in establishing novel research initiatives. He founded the London Project to Cure Blindness, and has major involvement in collaborations with pharmaceutical companies to translate his basic discoveries to

commercial application.

Coffey has received many honors and awards, including the prestigious Estelle Doheny Living Tribute Award in 2009, Retinitis Pigmentosa International's Vision Award in 2009, and the CIRM Leadership Award in 2010. CIRM reviewers characterized Dr. Coffey's work as "truly innovative, novel, ambitious and important . . . highly significant, with a potential to revolutionize the field." He is engaged in public service endeavors to explain stem cell research to the lay public, including talks to the British Parliament and the Vatican.

Coffey received his Ph.D. at Oxford University and was a member of the faculty at Oxford and later the University of Sheffield, as lecturer and senior lecturer, before joining the faculty at UCL.

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