UCLA CIRM Research Training Program II

Grant Award Details

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Grant Type: Research Training II

Grant Number: TG2-01169

Project Objective: The objective of this comprehensive training program is to provide training to predoc, postdocs and clinical fellows through mentored research and course activities.

Investigator:

Name:	Kenneth Dorshkind
Institution:	University of California, Los Angeles
Type:	PI

Award Value: $7,790,488

Status: Closed

Progress Reports

Reporting Period: Year 4

View Report

Reporting Period: Year 5

View Report

Reporting Period: Year 6

View Report

Grant Application Details

Application Title: CIRM Research Training Program II

Public Abstract:

Our Type I, Comprehensive Training Program will train basic scientists, engineers, and physicians to become leaders in stem cell research in academia and industry. The Stem Cell Research Center will coordinate the training of 5 pre-doctoral, 6 post-doctoral, and 5 clinical Scholars, each of whom will acquire (a) a thorough and critical background in stem cell biology, (b) an understanding of human disease and regenerative medicine, and (c) knowledge of how to translate basic research findings to the clinic. [REDACTED] provides state of the art research opportunities and mentoring for training Scholars in stem cell biology and regenerative medicine as evidenced by the past success of their publication of important papers in Nature, Blood, PNAS, Cancer Research, Cell Stem Cell, and Stem Cells. Scholars achieve the program goals through a coordinated approach integrating: 1) Coursework: A 10-week course on 'Stem Cell Biology and Regenerative Medicine' includes lectures and discussion of organogenesis, derivation and maintenance of human embryonic stem cells (hESC), induced pluripotent stem cells (iPSC), various tissue specific stem cells, clinical trials, and the social, legal, and ethical aspects of stem cell research; 2) Seminars/Symposia: Attendance at symposia, conferences, and seminars featuring leading stem cell scientists and required presentations of their own research in a bi-weekly Center hosted Stem Cell Club; and 3) Research: Scholars devote the majority of their time to stem cell laboratory research with faculty who are leaders in cell and molecular biology, bioengineering or clinician-scientists who are applying the latest advances in gene medicine, cell-based therapies, and organ transplantation to patient care. The training faculty, whose ranks were further enhanced in the last three years by the recruitment of 11 new stem cell biology faculty, are based in the College of Letters and Science and Schools of Engineering and Medicine, and collaborate in a multidisciplinary environment. Together, these training opportunities offer clinician Scholars, many of whom simultaneously pursue a PhD degree, basic research training and experience and biomedical scientists and bioengineers knowledge of human disease and the translation of basic research to the clinic. Our focus on bench to bedside translational research builds upon an existing infrastructure supporting multiple core laboratories for derivation and distribution of hESC and iPSC, thereby ensuring trainee access to research materials, and state of the art facilities such as a FDA compliant Good Manufacturing Practices (GMP) suite and CIRM sponsored Good Tissue Practice Shared Research Laboratories. The facilities, on a compact urban campus (<1 square mile), are augmented by a nearly completed building campaign that will add ~640,000ASF, of new campus based life sciences and engineering laboratories that includes a CIRM sponsored Major Facility Institute.

Statement of Benefit to California:

Our Type I Comprehensive Training Program will provide major benefits to California by: (1) increasing the number of scientists and clinicians with the qualifications to assume positions in California universities; (2) creating a high-level work force for California biotechnology and pharmaceutical companies; (3) providing the incentive for companies to re-locate to California in order to take advantage of the pool of scientists, engineers, and physicians trained in stem cell biology and regenerative medicine; and (3) developing novel therapeutic strategies with the potential to address the growing health care needs of the citizens of California. As a major biomedical research and education institution and the 7th largest employer in the State with associated economic activity generating more than $1.2 billion annually in local, state and federal taxes, the campus provides world-class infrastructure supporting a scientific enterprise generating greater than $900 million annually in extramural research funding. Each dollar of taxpayer investment in the campus generates almost $15 in economic activity, resulting in a $9.3 billion positive impact on the regional economy. Our integrated laboratory and classroom training program gives trainees an in-depth understanding of the scientific, clinical, and ethical aspects of stem cell biology and regenerative medicine that will drive laboratory advances to the bedside and the treatment of human disease. This in turn offers the potential to develop new approaches to treat intractable chronic conditions, thereby reducing health care costs.