CIRM Training Program in Systems Biology of Stem Cells

Grant Award Details

CIRM Training Program in Systems Biology of Stem Cells

Grant Type: Research Training Grant

Grant Number: EDUC4-12759

Investigator:

Name:	Camilla Forsberg
Institution:	University of California, Santa Cruz
Type:	PI

Award Value: $4,913,271

Status: Pre-Active

Grant Application Details

Application Title: CIRM Training Program in Systems Biology of Stem Cells

Public Abstract:

Statement of Benefit to California:

The State of California has made a commitment to support stem cell research and training to advance discoveries that will lead to diagnostics, therapies, and cures for human injury and disease. This proposed training program will propel the State towards reaching this goal by training Ph.D. students and postdoctoral researchers into future leaders in the fields of basic and translational stem cell research. Basic (or discovery) research uncovers the molecular and cellular mechanisms that instruct stem cells to remain as stem cells or to differentiate into the myriad types of cells of the human body. Knowledge of how stem cells function at this level is critical to utilizing stem cells for medical breakthroughs. While in this program, trainees will not only be gaining an education, but also making important contributions to the stem cell research project they have mapped out with their mentor.

Trainees will receive interdisciplinary training in stem cell research that draws on expertise in developmental biology, cancer, genomics, neurobiology, and bioengineering. Trainees will also receive career skill training and build professional networks through program liaisons with California-based biomedical companies, and research- and teaching-focused partner universities. Thus, many of these newly trained stem cell scientists are expected to stay in California to build their own careers in academia or industry. Retention of highly skilled stem cell researchers will benefit the California economy and patients for years to come.

A first-hand awareness about the needs of California's patients will be gained by trainees engaging with patient advocates, by shadowing opportunities with Regenerative Medicine companies, by collaborations with translational and clinical teams, and by working side-by-side with trainees focused on the social justice aspects of stem cell research. Trainees will disseminate their research findings to the lay public through a variety of community-level outreach efforts, thereby establishing a cohort of capable stem cell ambassadors.

All training and activities will take place in an environment where diversity, equity and inclusion are highly valued and reinforced by multiple mechanisms. Trainees will be recruited from a variety of academic and cultural backgrounds and urged to appreciate the complex societal, ethical and legal implications of stem cell discoveries and the importance of equitably distributing the therapeutic fruits of this research. Thus, stem cell research will be performed both by and for the diverse California population.

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