
City of Hope Research Training Program in Stem Cell Biology

Grant Award Details

City of Hope Research Training Program in Stem Cell Biology

Grant Type: Research Training II

Grant Number: TG2-01150

Project Objective: The objective is to maintain a training program for postdoctoral and predoctoral students that provides experience in stem cell research.

Investigator:

Name:	Michael Barish
Institution:	City of Hope, Beckman Research Institute
Type:	PI

Award Value: \$2,197,782

Status: Closed

Progress Reports

Reporting Period: Year 4

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Reporting Period: Year 5

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Reporting Period: Year 6 and NCE

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Grant Application Details

Application Title: Research Training Program in Stem Cell Biology

Public Abstract:

The mission of the Research Training Program in Stem Cell Biology is to train CIRM Scholars scientists at the predoctoral and postdoctoral levels in the fundamental biology of stem cells and strategies for translating this knowledge towards treatment of diseases. By developing effective scientists and leaders in the stem cell field, this training will enhance stem cell-based biomedical research efforts in academia and industry, and promote the development of novel therapies for previously intractable diseases. Our institution is in a particularly advantageous position to undertake this training because of our tradition of programs in which research efforts cross-fertilize with experimental medicine and clinical practice. As an institution with emerging stem cell research programs, we are proposing a Type III training program for two predoctoral and four postdoctoral CIRM Scholars. To prepare CIRM Scholars to be productive researchers in collaborative and disease-oriented research environments in academia or in industry, we propose a program of course work and independent research. The didactic curriculum will be administered under the auspices of the Graduate School of Biological Sciences, which offers a Ph.D. program building on strengths in fundamental biology and emphasizing basic and translational research into chronic diseases including cancer and diabetes. Courses in fundamental stem cell biology and in ethical issues in stem cell research, a hands-on practicum on working with stem and pluripotent cells, and a multi-campus course on stem cell research linking together area institutions, will be augmented with professional forums including a training grant-supported seminar series, a stem cell journal club and a dedicated session at the annual retreat. Research training will occur within a unique environment with long-standing interests in stem cell-related therapies and investigations into underlying fundamental mechanisms. These include therapeutic programs in hematopoietic stem cell transplantation, pancreatic islet cell transplantation, and cell-based eradication of brain tumor cells, along with research into leukemia development, cancer stem cells and tumorigenesis, islet cell-directed embryonic stem cell differentiation, and neural progenitor cell targeting of glioma cells. Trainees will be mentored by a cohort of dedicated faculty, and will receive support to present the results of their work at national and international stem cell meetings. All trainees will also be able to draw on the career development resources of the school including classes in scientific writing, strategic grant preparation, and effective delivery of oral presentations, along with career counseling services.

Statement of Benefit to California:

Stem cell-based therapies provide a new approach to treating intractable and chronic diseases. Realization of this potential will require training scientists to study the fundamental properties of stem cells along with strategies for translating experimental findings into clinical practice. Our proposal details assembly of research training program in stem cell biology whose goal will be to educate the most promising predoctoral and postdoctoral students in stem cell biology, and give them research training so that they can become independent investigators in academia or industry. Our hope is that exposing trainees to the unique aspects of institution will enable them to eventually develop novel stem cell-based approaches against diseases that have not been targeted by other therapeutic methods. Any progress towards reducing the impact of these diseases will be of immense benefit to the State of California and its citizens

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