

SOMETHING BETTER THAN HOPE

Concept Proposal for SPARK* Training Program

* SUMMER PROGRAM TO ACCELERATE REGENERATIVE MEDICINE
KNOWLEDGE

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CIRM
CALIFORNIA / STEM CELL AGENCY

CIRM Investments: Five Funding Pillars



DISCOVERY



TRANSLATION



CLINICAL



INFRASTRUCTURE



EDUCATION

**SOMETHING
BETTER
THAN HOPE**

CIRM
CALIFORNIA / STEM CELL AGENCY

Background

- CIRM has offered funding opportunities to support training and workforce development in stem cell-based research through our Education (EDUC) programs
- CIRM is proposing to relaunch the SPARK awards (EDUC3), which supports summer internships for high school students
- Historically, CIRM has supported high school internships through two RFAs, the original “Creativity Awards” in 2011, and a revised program in 2015, the SPARK Awards
- Federal funding opportunities for high school level research training are limited and disparate
- Modifications to the SPARK Concept are proposed to bring the program into alignment with Proposition 14 objectives, and to better reflect present challenges and opportunities- to be detailed in this presentation

Background: CIRM Training from 2005-2020

Research Training



PRE/POSTDOCTORAL
and MD

18 awards
940 trained
\$117 M invested/9 years

Bridges



UNDERGRAD/MASTERS

16 awards
1611* trained
\$94M invested/12 years

SPARK



HIGH SCHOOL

9 awards
454 trained
\$4M invested/9 years

* Alumni and In Progress

Extending CIRM Training Pipeline for 2021 and Beyond

Research Training



PRE/POSTDOCTORAL
and MD

ICOC Approved
February 2021



Bridges



UNDERGRAD/MASTERS

ICOC Approved
February 2021



SPARK



HIGH SCHOOL

Proposal
May 2021

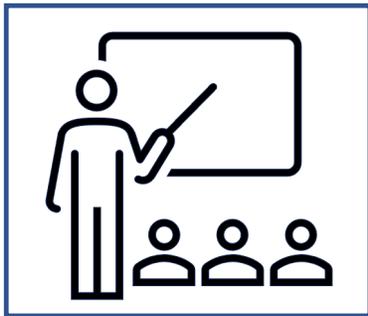
Proposed SPARK Training Program Concept

Objectives

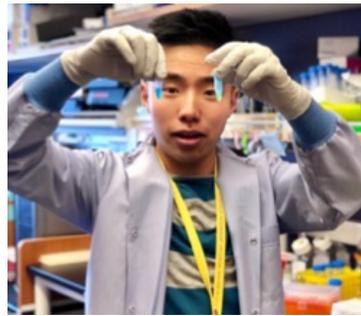
- To inspire, introduce and prepare California's high school students in the field of regenerative medicine as it relates to human diseases
- Provide summer training opportunities and broaden participation in stem cell, gene therapy and related research to high school students who represent the diversity of California's population and who might not otherwise have opportunities to take part in summer research internships due to socioeconomic constraints
- Foster a commitment among trainees to the goal of accelerating the delivery of stem cell-based and gene therapy treatments to patients with unmet needs

SPARK Training Program Structure and Core Activities

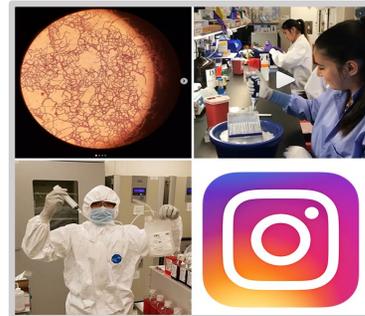
- A qualified Program Director based at the awardee Institution will be responsible for the management and coordination of all activities supported by the program as well as the recruitment of diverse and qualified students
- Hands on, mentored summer research at host laboratories at the awardee's institution (non-profit research universities or institutes) or at a partnering institution with a stem cell, gene therapy or regenerative medicine focus



**Preparatory
Courses/ Workshops**



Internship



**Outreach and
Engagement**



**Annual SPARK
Poster Day**

SPARK Concept: Updates and Improvements

Building off the Established SPARK Platform:

- Expand the allowable scope of research projects beyond stem cell science to include gene therapy and related regenerative medicine research in accordance with Proposition 14
- Allow institutions to partner with another organization to increase availability and diversity of host laboratories
- Provide formal requirements to maintain and strengthen focus on Diversity, Equity and Inclusion; prioritize applications that offer matching funds or verified in-kind support, and those that enhance the geographic distribution of training and socio-economic diversity
- Change budget structure and increase award amounts to reflect present economy, and to afford more flexibility for recruiting and appointing a diverse cohort that includes socio-economically disadvantaged students

SPARK Concept: Budget Updates and Rationale

| Budget Categories | 2011 RFA | 2015 RFA | 2021 RFA Proposal |
|--------------------------------|----------------|----------------|--|
| Trainee Stipends | \$2,500 | \$2,500 | \$4,500* |
| Mentor Stipends | \$1,000 | \$1,000 | \$0** |
| Research Related Funds | \$500 | \$500 | \$0** |
| Travel to annual conference | \$750 | \$750 | \$750 |
| Direct Costs to Trainee | \$4,750 | \$4,750 | \$5,250 |
| Program Administration | \$2,500 | \$2,500 | \$4,000 (allowable costs include mentor stipends & research related funds) |
| Indirect Costs | \$725 (10%) | \$725 (10%) | \$925 (10%) |
| Total Cost per Trainee | \$7,975 | \$7,975 | \$10,175 |

* Recalibrated to align with state minimum wage/8 weeks

** Allowances redirected to the Program Administrative budget to allow greater flexibility and more judicious use of funds to benefit program

SPARK Program: Summary of Budget

| | SPARK 2021 Concept |
|--|---------------------------|
| CIRM Investment (10 awards) | \$5.1M |
| Total Award Amount | \$509K |
| # of trainees | 500 |
| Appointment duration | 1 Summer/Year |
| Direct Student Costs (stipend & travel to annual conference) | \$5,250 |
| Program Admin/Overhead Costs | \$4,925 |
| Total Cost per Student per Year | \$10,175 |
| Total Award Increase since last CIRM RFA | 22%* since 2015 RFA |

* Reflects updates to trainee stipends to better serve goals of recruiting and supporting a diverse cohort.

Requested Action

CIRM requests the Board approve the proposed SPARK Training Program concept with an allocation of \$5.1M to support:

- Up to 10 SPARK awards, each with up to a 5-year duration
- 500 trainees
- \$509,000 per award