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ICOC Meeting

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Accelerating world class science to deliver transformative regenerative medicine treatments in an equitable manner to a diverse California and world

2006-2020 (Proposition 71)

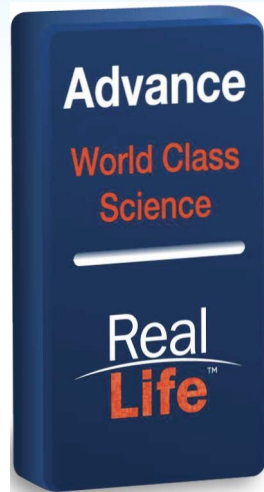
- **Five Pillars of Investment**

2021 and Beyond (Proposition 14)

- Through CIRM's New Strategic Plan we will **enhance, organize and interconnect** CIRM's proven funding model to achieve the overarching goals.



Education and Training are Core to CIRM's Mission



Trainees contribute valuable research and insights that **drive scientific progress and innovation**



Trainees apply and adapt learned skills to **meet challenges of tomorrow** and **make regenerative medicine solutions a reality**



Diverse and inclusive **workforce to bring valuable and needed perspectives**

Accelerating Stem Cell Research and Discoveries while Providing Opportunity for All



- Create multiple on-ramps to develop the next generation of leaders, scientists, clinicians & future workforce
- Incorporate training opportunities within CIRM scientific & infrastructure pillars:
 - Basic research
 - Translational & clinical research
 - Manufacturing sciences
 - Data science
 - Science communication
 - Community engagement

Building a **Diverse** and **Highly Skilled** Workforce

Extending and Updating Successful EDUC Programs

SPARK/EDUC3



HIGH SCHOOL

530 trained/10 summers



Bridges/EDUC2



UNDERGRAD/MASTERS

1600 trained/12 years



Research Training/EDUC4



PRE/POSTDOCTORAL
and MD

940 trained/9 years



Introducing the COMPASS* Training Program: A New CIRM Concept (EDUC5)

Objectives

- Prepare a **diverse cadre of undergraduate students** for careers in regenerative medicine
- Create **novel recruitment and support mechanisms that identify and foster untapped talent** within populations that **are historically under-represented** in the biomedical sciences
- **Combine hands-on research opportunities** with strategic and structured **mentorship** experiences to enhance transition of students to successful careers.
- **Foster greater awareness and appreciation of diversity, equity and inclusion** in trainees, mentors, and other program participants.

- Most undergraduate research training programs, including those targeting students from underserved communities, target **individuals with predefined academic credentials** as well as a **stated commitment towards graduate school, medical school or faculty positions in academia**
- EDUC5 will support the development and implementation of novel strategies to recognize and **foster untapped talent** that can lead to **new and valuable perspectives that are specific to the challenges of regenerative medicine**, and that will **create new paths to a spectrum of careers that are not always apparent to students in the academic, undergraduate environment**.
- EDUC5 will be complementary to but not competing with CIRM's Bridges program, a subset of which serve a different, but equally important population of undergraduate trainees; similarly, the program is unlikely to compete for the same pools of students that would be most likely to receive support through the major NIH Training Programs such as MARC and RISE

Outreach and Recruitment

Innovative Strategies

Adaptive Outreach

DEI Plan

Trainee Experience

2-3 years support

Foundational Courses

Research Internships

Strategic Mentoring

Mentorship Program

Mentor Training

Cohort Activities

Shared Practices

DEI Sensitivity

1. Trainee Targeting: Adaptive Outreach and Recruitment Strategies

- A dedicated personnel role will oversee the DEI/recruitment strategy (Diversity and Outreach Coordinator)
- Programs will assess disparities in their own STEM programs and develop novel and specific recruitment strategies to address and overcome these through:
 - Increased and strategic outreach to underrepresented groups at university and community colleges (for example socioeconomically disadvantaged, first in college)
 - Creating new mechanisms to address disparities and lower barriers to participation
 - Building, fostering and maintaining an inclusive and supportive environment
 - Regular Self Assessment (progress and analysis) and adjusting outreach strategies as needed

- Targeted students will be **appointed to the program for 2-3 years**, per program design
- All **appointed students receive**:
 - **Foundational coursework** in stem cell/regenerative medicine, principles of translational research, and Good Research Habits as well as specialized options (eg. computational biology, data analysis, etc.)
 - **Soft skills** development (presentation, scientific writing)
 - **Individualized, formal mentorship plans and career counseling**
 - **Paid, hands-on research internship(s) in academic or biotech laboratories** for one or more summer terms (or equivalent)
 - **Patient Engagement and Community Outreach Activities**
 - **Capstone project/conference** at culmination of training/scholarship experience

3. Developing and Implementing a **Mentorship Program**

- A **dedicated personnel role** (Mentorship Facilitator) will identify and train a small team of individual(s) that will:
 - Serve as **role models** for students
 - **Bring cultural awareness, knowledge and perspectives** representing the targeted student groups that may not be present in the resident faculty of the academic institution
- Provide **Individual development plans** for students and **mentoring agreements** between students and research mentors
- **Provide formal mentor training** for research advisors
- Implement **cohort-wide activities to guide personal and professional growth of trainees** such as life skills workshops, resume/interview workshops, and networking events
- Provide **career counseling and introduction to diverse opportunities** for applying regenerative medicine skillsets in the workforce
- **Share mentorship approaches and best practices** with other organizations

- **California public universities, colleges or private, non-profit academic institutions** that have an **accredited bachelor's degree program** in biology, bioengineering, biomedical sciences, or other **STEM disciplines relevant to regenerative medicine**.
- Institutions intending to host research internships internally must include participating faculty with federal or CIRM supported research programs in regenerative medicine-related disciplines.
- Applicant institutions lacking this necessary research infrastructure **may partner with an external organization, such as a research university or institute or appropriate biotechnology/pharmaceutical company**, to provide appropriate internship opportunities
- Applicants who have **other STEM** focused undergraduate training programs **must** articulate the distinction between programs **and** demonstrate their capacity to accommodate a new program

- **Program Director**, who will oversee all activities supported by the program (Trainee Recruitment, Placement, Mentoring, and Retention)
- **Mentorship Facilitator**, who will design and execute a Mentorship Program to ensure all trainees receive customized, appropriate and meaningful mentorship throughout their appointment, and who will disseminate mentorship approaches and practices with other training programs and institutions
- **Diversity and Outreach Coordinator**, who will strategize and evaluate efforts to recruit diverse and qualified students from under-represented and disadvantaged populations and bring value to CIRM's mission

	EDUC5 Concept
CIRM Investment (20 awards)	\$58.22M
Maximum Award Amount	\$2.91M
# of trainees per award	Up to 25 students
Appointment duration	2 or 3 years
Direct Student Costs (stipends, course fees, research related fund & travel to annual conference)	\$30,800
Program Admin/Accessibility Fund/Overhead Costs	\$27,420
Total Cost per Student per Year	\$58,220/year of appointment

CIRM requests the Board approve the proposed EDUC5 COMPASS Training Program concept with an allocation of **\$58.22M** to support:

- Up to **20 EDUC5 awards**, each with up to **5-year duration**
- **\$2.9M** per award

