



July-23-2024

To the Applications Review Subcommittee of CIRM's ICOC Board:

We write in response to the reviews of our revised Facilities Proposal, INFRA6.1-15366: "Shared Research and Training Facility for Bio-Fabrication of Organs for Regenerative Medicine (Bio-FORM) in Underserved Areas." This letter requests that the ICOC's Applications Review Subcommittee either (1) elevate our proposal and approve it for funding, or (2) propose an agenda to the ICOC regarding the need for additional INFR6.1 funding. As a shared laboratory, the UCR Bio-FORM Core would bring critical resources and innovations to stem cell training and research in the Inland Empire, a medically underserved region of California that supports diverse students, researchers, and communities. Here, we discuss our reasons for these requests and outline how this decision would impact various dimensions of the region's education and research efforts for regenerative medicine.

- **Lab space and instrumentation:** The proposed Bio-FORM Core would update and expand our existing Stem Cell Core (built with CIRM funding in 2009) by tripling shared stem cell lab space and adding new technologies not currently available in the Inland Empire. The Bio-FORM facility is essential for equitable access to stem cell resources in the Inland Empire of Southern California. The Bio-FORM Core has been designed to balance training and research in stem cell biology with bioengineering, and to enable innovative research and training opportunities. Bio-FORM is a critical resource for a region with limited access to stem-cell-based models, facilities, and therapies, as demonstrated by the wide range of stakeholders represented in our 63 letters of support. Building on UCR's current Stem Cell Core, Bio-FORM would be the first stem-cell modeling facility for the underserved communities in the Inland Empire and its adjacent regions.
- **Scientific innovation and training:** Our scientific proposal was ranked in Tier 1 by the Grants Working Group and builds on our significant track record of interdisciplinary collaboration in stem cell research and training. The Bio-FORM Core would provide equitable access for Inland Empire institutions to an infrastructure with state-of-the-art technologies, tools, and resources, thereby enabling our continuing innovation and contributions to CIRM's mission. The innovative training program we designed would bring organoid culture, 3D printing, and nine stem cell mini-certificate courses to laboratories in the Inland Empire. Not funding the Bio-FORM Core Facility would severely limit the Inland Empire's capacity to innovate and would halt the progress in training and research that we have made during the last 15 years. That result would further exacerbate funding differentials and health disparities across geographic regions in California, an outcome that contradicts CIRM's missions and programs. In the past, our existing Stem Cell Core has enabled us to bring in federal funding that supported stem cell research at UCR. The Bio-FORM Core would likewise enable us to expand our research funding through novel extramural proposals and would augment and complement the work funded by CIRM. Without the Bio-FORM Core, we will lose the critical infrastructure to apply for such funding.
- **CIRM training programs:** The UCR Stem Cell Core houses the Inland Empire's only shared stem cell research and training infrastructure. UCR currently serves five CIRM-funded training programs that use the existing Core (UCR Scholars, UCR COMPASS, UCR SPARK, CSUSB Bridges, and CSUCI Bridges) and > 30 research labs that need the Core for basic and translational projects. Without INFR6.1 funding, students will not have access to the most up-to-date training, and we may not be able to update the existing Core and keep it operational, which would further negatively impact CIRM's training programs and missions in our underserved region. Funding would enable us to expand our training efforts significantly.
- **The Inland Empire Stem Cell Consortium (IESCC):** UCR is the founding member of the IESCC, which includes multiple universities in the Inland Empire (UCR, Loma Linda University, California University of Science and Medicine, Western University of Health Sciences, and California State University at San Bernardino). As the situation stands, lack of INFR6.1 funding would further isolate the region from stem cell education and research opportunities. This would add further obstacles for the region's institutions to overcome and negatively impact many students we have in our training pipeline. By contrast, funding would enable UCR to expand research opportunities or the types of training it offers for Inland Empire students and researchers.

- **The Inland Empire's Regenerative Medicine Ecosystem:** UCR is the hub of an ecosystem that *enables the education, research and outreach efforts of multiple institutions in the Inland Empire and its adjacent regions for diversity, equity and inclusion (DEI)*. UCR pursues DEI efforts that support students and trainees at a range of levels, from high school students to postdoctoral scholars. Not funding UCR's stem cell infrastructure 6.1 is tantamount to constraining the whole region's genuinely effective DEI efforts. Over the last decade, UCR's stem cell research initiatives have enabled our region to stay abreast of the discipline's most recent technologies and methods. Our ability to extend and advance our recent history's legacy is now at risk.

Summary: Lack of funding for the Bio-FORM Core will negatively impact CIRM's mission to accelerate "world class science to deliver transformative regenerative medicine treatments in an equitable manner." Therefore, we respectfully request that the Applications Review Subcommittee recommend funding for the UCR Shared Bio-FORM Core Facility, based on these key factors:

- Our scientific proposal had a Tier 1 ranking and our revised facilities proposal improved the design diagrams significantly with the details responsive to the initial review comments;
- The dire need for this infrastructure in the Inland Empire, where we have no other stem cell Core.


Without funding for the Bio-FORM Core, there will be negative impacts on:

- CIRM's long-standing mission to promote equitable access and progress in stem cell education, research, innovation, and therapies;
- CIRM-funded training programs, especially those that serve the Inland Empire's diverse students (many of whom are underrepresented) will be disadvantaged, for not having equitable access to the state-of-the-art facility and training courses;
- UCR's existing Stem Cell Core that would be difficult to maintain and modernize and would likely close, leaving the Inland Empire with no Shared Stem Cell Facility;
- The ability of Inland Empire's institutions to successfully compete for federal funds without the modern technology provided by the Bio-FORM Core;
- The future contributions of the Inland Empire region to the stem cell workforce and the DEI efforts.


By contrast, if CIRM does fund the INFRA6.1-15366 Bio-FORM project, the UCR team is capable of completing the facility construction, renovation, and operation of Core services, as demonstrated by the excellent construction of our current Stem Cell Core and our successful operation of this Core since its opening in 2009. UCR's facilities team has a strong track record with large infrastructure projects. With funding in hand, UCR would be able to expedite and complete the necessary renovation and construction for the Bio-FORM facility and sustain its long-term operation as demonstrated in our original Stem Cell Core.

If the Applications Review Subcommittee is not able to make the decision at this meeting, we sincerely and respectfully appeal to this committee to make an agenda item for a future ICOC board meeting to approve additional funding for UCR's INFR6.1. This would prevent further imbalances and would improve scientific access and development in our region and for the California populations we serve. Given the excellent scientific merit, our disposition to address any facility issue, the critical need of our region and communities for the Bio-FORM core, we respectfully ask a member of this committee to elevate our application and facilitate its funding.

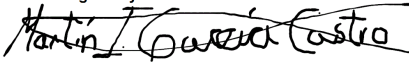
Sincerely,

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