The California State University Program for Education and Research in Biotechnology (CSUPERB) aims to increase the overall number of externally funded biotechnology research investigators across the California State University (CSU) system. In addition, CSUPERB recognizes the importance of research experiences in biotechnology student success. Research is a form of engaged learning, but also offers students the opportunity to acquire abilities on which to build a life science career. The Faculty-Student Collaborative Research Development (RD) Grant program aims to provide CSU faculty with continuing resources to fill gaps in external funding for ongoing research projects or to pilot new, but as-yet unfunded, research directions for established investigators. The RD grants will also support continued involvement of CSU students in faculty scholarship and research programs.

2022 Proposal Review Criteria:
• Project plans and budgets must be tied to data collection necessary to address issues raised by peer reviewers, funding agencies or organizations for subsequent submission or re-submission of external-to-the-CSU research grant applications.
• Research projects must be original and/or innovative.
• Research projects must be feasible within the time and budget proposed.
• Research projects must involve CSU students in a significant way.
• If applicable, proposals should include letters of support from co-PIs or key collaborators detailing their role and commitment to the research project.
• In keeping with calls for plain writing to improve science and technical communication, CSUPERB review panels will consider the effectiveness of the non-technical abstract in their assessment of proposals (see paper by Rakedzon and coworkers, http://bit.ly/2uMqkpt).

Eligibility Criteria:
The proposed research project must be biotechnology related. CSUPERB defines biotechnology as a fusion of biology and technology. BIO (https://www.bio.org/what-biotechnology) lists biotechnology examples, applications and sectors; CSUPERB explicitly adds to these lists health IT and medical device research and development. CSUPERB welcomes and encourages applications from CSU faculty in all disciplines related to the current practice of biotechnology, including but not limited to life sciences, physical sciences, clinical sciences, math, computer science, agricultural science, engineering, and/or business.

Investigators & Key Collaborators:
The Research Development Grant program is open to tenured/tenure-track (T/TT) CSU faculty who have received external support for their CSU-based research projects or for research projects while they were tenured/tenure-track at a non-CSU academic institution. Faculty who have received external
support consisting only of campus equipment or campus education grants are not eligible and should apply instead to the New Investigator grant program. Other CSU staff may be listed as co-Principal Investigators (PIs) or key collaborators. CSUPERB will consider only one proposal per PI at a time to this program. Investigators applying to this program are welcome to apply to other CSUPERB grants and awards programs.

Development Nature of the Proposal:
The aim of the Research Development Grant program is to support established CSU PIs who face a gap in external funding for ongoing research programs or who face difficulty getting funding for a new research direction. In either case, applicants are eligible for this program only after they have been unsuccessful winning external grant support for the project. Research Development Grants should provide PIs the additional time and support needed to strengthen a competitive renewal or resubmission.

As a result, applicants must describe or provide evidence of attempt(s) to obtain external-to-the-CSU funding for the research project described in the CSUPERB Research Grant proposal. Evidence would consist of reviews or other evaluations from external-to-the-CSU entities, government agencies or other research funding organizations. When proposal reviews are available, they must be appended to the Research Development proposal. Applicants can redact scores; CSUPERB review panels seek only the review comments. Special Note: Proposals received by CSUPERB that do not describe prior attempt(s) to obtain external-to-the-CSU funding for the research project before submitting to the RD program will be administratively withdrawn from consideration by the peer review committee.

Existing support from collaborators or other CSU sources (e.g. intramural grants, release time, shared and donated equipment, and other seed program funds) should be clearly identified and described. PIs can include letters of support demonstrating institutional or collaborator support to bolster the feasibility of the research project.

CSU faculty without previous external grant support should consider applying instead to the New Investigator Grant program.

Budget:
CSUPERB will accept Research Development grant proposals with budgets up to $15,000. Duration of the award will be 18 months from the project start date (approximately December 1, 2022 for Round 2 grants). Exact project start dates are contingent upon award conditions, including IRB or IACUC approvals on campus.

CSUPERB grants are issued as a result of an internal competition within the CSU and are not subject to Facilities and Administrative (F&A), or indirect, costs. F&A costs are not allowed as a grant-funded expense in proposals submitted in response to RFPs from programs, like CSUPERB, that receive the majority of their support from legislatively appropriated funds, CSU lottery funds or student fees (including State University fees). The F&A foregone at the campus/auxiliary's federally negotiated off-campus rate may be shown as cost match on the proposal. This amount may be used by the auxiliary or enterprise fund as an offset to the university's cost allocation plan, in accordance with EO 753/1000.

Budget Restrictions:
• Faculty salary budgets up to $5000 per individual are allowed, including fringe, except for “additional employment” during faculty normally employed periods. It can be used for “additional employment” during summer, spring and winter breaks when not employed by the campus as well as for “release time” during the normally employed periods. Proposals should indicate how much time each faculty/key personnel will spend on the project and when s/he will be working on the project.
• Student salaries proposed and paid should comply with amounts determined by campus human resources departments. CSUPERB will not approve any salary or rate in excess of campus
limitations. Applicants must ensure funds paid to students are not in conflict with these limitations or any others set by graduate or undergraduate programs with which the student may be involved. CSUPERB funds cannot be used to supplement pay for effort if the student is already receiving payroll from another source. Employment of foreign nationals is limited to individuals who meet the conditions set by applicant's campus human resources department policies regarding eligibility to receive compensation in the United States. Proposals should identify students by name when possible, the student's status (undergraduate or graduate student), the hourly salary rate, the number of hours each student will dedicate to the project, and whether they will be working during the summer and/or academic year.

- Travel to professional meetings is not allowed with CSUPERB Seed Grant funds. Apply to CSUPERB's Travel Grants Program to cover those expenses.

COVID-19:
CSUPERB is anticipating a return to normal campus research operations in 2022, but should that not be the case, CSUPERB COVID-19 grant guidance can be found at: https://www2.calstate.edu/impact-of-the-csu/research/csuperb/Pages/COVID-19-Impact.aspx.

Proposal Submission:
The complete proposal package, including signed cover sheet, must be submitted electronically on the 2022 Research Development Grant – Round 2 proposal template using CSUPERB's CSYou system before the deadline on Monday, August 1, 2022, before 5:00 p.m. pacific time (use “Apply” link at www.calstate.edu/csuperb). Faculty applicants login to the CSYou system using their campus ID/username and password. Only Microsoft Word or Adobe PDF file formats are compatible with the system.

Proposals must adhere to style and length guidelines stated in the proposal template. Failure to follow these guidelines may result in proposal rejection during administrative review. Both the 2022 Proposal Template and the Research Development Grant submission link can be found on the CSUPERB website.

Proposals that are complete and meet eligibility requirements will be evaluated for merit by a review panel comprised of CSU faculty. The proposal review meeting will be held in November 2022. The CSUPERB program office makes final funding decisions. Funding decisions are based on recommendations made by the review panels, available funds, and CSUPERB strategic priorities. As part of the proposal review process, all PIs will receive written reviews. CSUPERB will not make awards to faculty members who have outstanding, past-due final reports for grants made under this or other CSUPERB grant programs.

CSUPERB Statement of Principles on Professional Behavior, Policies and Procedures:
CSUPERB values diverse perspectives where all individuals can flourish. CSUPERB is dedicated to providing an environment that fosters intellectual curiosity and creativity, free and lively debate conducted with mutual respect for individuals, and freedom from intolerance. These values are applicable to any aspect of CSUPERB's work, including meetings, symposia, and funded activities. Specifically, members of our community value:

- Critical scholarly discourse for the purpose of understanding, advancing scientific ideas, and educating the next generation of science and engineering practitioners;
- Education and research environments where all people are treated equally, regardless of race, gender, ethnicity, sexual orientation and free of bias, hostility, and harassment of any kind;
- Conversations and discussions where community members can share ideas in a collegial atmosphere that is inclusive and values everyone’s input and opportunity to participate;
- Advocacy for equality and inclusivity in science;
- The use of inclusive examples, graphics, and stories in presentations and proposals;
- Access for all community members, including traditionally underrepresented groups, to fully participate in and become leaders in science;
• The support and promotion of the education and careers of all scientists, engineers, and bio-entrepreneurs;
• Leadership in our fields to strengthen scientific mentorship and create an atmosphere of collaboration;
• Commitment to our own education and participation in activities related to recognizing and eliminating implicit bias.

Policies
1) All participants in CSUPERB events and activities are expected to follow the requirements of Title V, Title IX, and California State University (CSU) Executive Orders and adhere to the CSUPERB Principles of Professional Behavior and values. Non-CSU participants who do not follow these expectations may be asked to leave a CSUPERB event or activity and/or prohibited from participation in future CSUPERB events or activities. Individuals can report incidents immediately to the CSUPERB designee to facilitate this process.

2) Individuals found in violation of Title V or IX or CSU Executive Orders 1096 or 1097 are not eligible to receive CSUPERB funding or participate in CSUPERB program activities for a period of 5 years from the final substantiation of the violation or the end of any current grant award, whichever is later. Faculty who are found to be in violation before funds are transferred for an award, will be ineligible to receive funds for the award.

3) After a five year ineligibility period, individuals found in violation of relevant policy for a second time lose eligibility for all future CSUPERB funding or participation in CSUPERB related activities permanently. Relevant CSU Executive Orders include:
   a. Executive Order 1095 Revised (Systemwide Sex Discrimination, Sexual Harassment, Sexual Misconduct, Dating and Domestic Violence, and Stalking Policy);
   b. Executive Order 1096 Revised (Systemwide Policy Prohibiting Discrimination, Harassment, Retaliation, Sexual Misconduct, Dating and Domestic Violence, and Stalking against Employees and Third Parties and Systemwide Procedure for Addressing Such Complaints by Employees and Third Parties); and
   c. Executive Order 1097 Revised (Systemwide Policy Prohibiting Discrimination, Harassment and Retaliation, Sexual Misconduct, Dating and Domestic Violence, and Stalking against Students and Systemwide Procedure for Addressing Such Complaints by Students) may be found at the following website address: http://www.calstate.edu/eo/.

Certifications
1) CSUPERB will include the Statement of Principles on Professional Behavior (section III above) in event registration processes. Event participants will be asked to acknowledge the principles.

2) Applications for CSUPERB funding, award opportunities, or event registrations will include the following certifications:
   a. Applicants will indicate whether they have been found in violation of Title V, Title IX, or CSU Executive Orders 1096 or 1097 in the last 5 years.
   b. Applicants will allow the campus to disclose to the CSUPERB program office any substantiated violations of Title V, IX, or CSU Executive Orders 1096 or 1097.

Reporting Procedures:
1) Incidents that involve CSU faculty, staff, or students only
   a. Individuals who believe there has been a violation of Title V, IX, or Executive Orders 1096 or 1097 at a CSUPERB event or activity should report the event following CSU policy and procedures on their home campus.
   b. Prior to transfer of grant or awards to campus, CSUPERB will ask for campus confirmation that the awardee has not been found in violation of Title V, Title IX, or Executive Orders 1096 or 1097 in the prior 5 years. The campus information provided will include only the
existence of a final, substantiated violation and the date of the violation. The information will be kept confidential in the CSUPERB program office.

2) Incidents that involve non-CSU individuals
   a. Suspected violations of Title V, Title IX, or Executive Orders 1096 or 1097 by participants not affiliated with the CSU should be reported to CSUPERB administration immediately. Participants may also e-mail CSUPERB administration to report at a later date, if so desired.

**Post-Award Reporting Requirements:**
Successful PIs are required to submit a final report to CSUPERB within 90 days of the project end date. Detailed instructions and the link to the CSUPERB Seed Grant Reporting System are available (https://www2.calstate.edu/impact-of-the-csu/research/csuperb/Pages/grants-administration.aspx) in the “Final Grant Reporting” section of the CSUPERB website. Final reports document the need for and help justify continuation of the program. CSUPERB may also contact PIs and co-PIs for longer-term impact reporting.

Successful PIs are strongly encouraged to present the results of their CSUPERB-funded project at the January 2024 Annual CSU Biotechnology Symposium.

**Program Contacts:**
Applicants are encouraged to contact CSUPERB via email instead of telephone.

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