



CSUPERB Announces 33 Grant Awards to CSU Faculty and Students at 15 Campuses

May 7, 2021

The California State University Program for Education and Research in Biotechnology (CSUPERB) is pleased to announce the Spring 2021 round of Seed Grant awards. Overall CSUPERB is making 33 awards totaling \$489,199 to CSU faculty at 15 CSU universities.

Awards were made as part of four system-wide, competitive CSUPERB seed grant programs: New Investigator, Research Development, Industry Partnership Initiative, and Curriculum Development.

This year CSUPERB received 90 proposals from faculty members at 20 different CSU campuses. Averaged across all programs, awards were made to 37% of the proposals received.

A. Faculty-Student Collaborative Research New Investigator Grant Awards

The New Investigator Grant Program aims to provide CSU faculty with the resources required to successfully compete for follow-on, externally-funded grants and to involve CSU students in their research programs.

Twenty-two CSUPERB New Investigator Grants were approved for funding:

1. **Siavash Ahrar** (Biomedical Engineering, California State University, Long Beach)
Award: \$14,993 for the proposal titled "Autonomous microfluidics"
2. **Leslie Amodeo** (Psychology, California State University, San Bernardino)
Award: \$15,000 for the proposal titled "Identifying EEG Biomarkers for Early Prescription Stimulant Exposure"
3. **Ivan Anastassov** (Biology, San Francisco State University)
Award: \$15,000 for the proposal titled "Developmental and structural determinants of rod connectivity in the elasmobranch retina"
4. **Margherita Capriotti** (Aerospace Engineering, San Diego State University)
Award: \$15,000 for the proposal titled "Engineering Guided Waves in Shear Wave Elastography for enhanced soft tissue diagnostics"
5. **Jason Ear** (Biological Sciences, California State Polytechnic University, Pomona)
Award: \$15,000 for the proposal titled "Investigating the role of Daple/CCDC88C gene fusion in leukemia"

6. **Negin Forouzes** (Computer Science, California State University, Los Angeles)
Award: \$14,997 for the proposal titled "Computational Study of Novel Coronavirus Mutant Binding to the Human ACE2 Receptor"
7. **Kati Geszvain** (Biological Sciences, California State University, Chico)
Award: \$9,600 for the proposal titled "Mn oxidizing bacteria as tools for bioremediation"
8. **Leslie Hamachi** (Chemistry and Biochemistry, California Polytechnic State University, San Luis Obispo)
Award: \$15,000 for the proposal titled "Mechanical Properties of Bacterial Cellulose/SiO₂ Composites"
9. **Crystal Han** (Mechanical Engineering, San José State University)
Award: \$15,000 for the proposal titled "DNA purification using counter-flow isotachopheresis for foodborne pathogen detection"
10. **Patrick Journey** (Biomedical Engineering, San José State University)
Award: \$15,000 for the proposal titled "Identifying the Molecular Mechanisms of Endothelialization of Next-Generation Vascular Grafts"
11. **Wendy Lee** (Computer Science, San José State University)
Award: \$15,000 for the proposal titled "Determining how Bisphenol A Impacts the Neurodevelopmental Transcriptome of *Drosophila*"
12. **Robert Luallen** (Biology, San Diego State University)
Award: \$15,000 for the proposal titled "Genetic mechanisms of gut colonization by microbiome bacteria"
13. **Jorge Monteiro** (Chemistry, Humboldt State University)
Award: \$14,994 for the proposal titled "Hybrid Systems for Photodynamic Therapy in the Dark"
14. **Marcos Ortega** (Chemistry and Biochemistry, California State University, Fullerton)
Award: \$15,000 for the proposal titled "A Novel Target to Inhibit Viral Assembly and Infection"
15. **Alexander Payumo** (Biological Sciences, San José State University)
Award: \$15,000 for the proposal titled "Neurohormonal interactions limiting mammalian heart regeneration"
16. **David Quintero** (Mechanical Engineering, San Francisco State University)
Award: \$14,983 for the proposal titled "Upper Extremity Cooperative Control for Stroke Robot Rehabilitation"
17. **Shannon Roback** (Health Science, California State University, Dominguez Hills)
Award: \$14,997 for the proposal titled "Formation of Pesticide-Derived Carcinogenic N-Nitrosamines in Irrigation Water"

18. **Parvin Shahrestani** (Biological Science, California State University, Fullerton)
Award: \$15,000 for the proposal titled “The impact of microbiota on evolution of a model organism”
19. **Sonia Singhal** (Biological Sciences, San José State University)
Award: \$15,000 for the proposal titled “Dynamics of genetic evolution during adaptation in incrementally changing environments”
20. **Mauro Tambasco** (Physics, San Diego State University)
Award: \$15,000 for the proposal titled “Centrifugal Ultrafiltration of Plasmid DNA to Assess Biological Radiation Damage”
21. **Cawa Tran** (Biological Sciences, California State University, Chico)
Award: \$15,000 for the proposal titled “Nitrogen fixation in the sea anemone *Aiptasia*, a model system for coral symbiosis”
22. **Alejandro Vélez Meléndez** (Biology, San Francisco State University)
Award: \$14,976 for the proposal titled “Hearing in the Cacophony: Assessing Evolutionary Responses to Urban Noise”

B. Faculty-Student Collaborative Research Development Grant Awards

The Research Development Grant program aims to provide CSU faculty with support to fill gaps in external funding for ongoing research projects or to pilot new, but as-yet unfunded, research directions for established investigators.

Six CSUPERB Research Development Grants were approved for funding:

1. **Deepali Bhandari** (Chemistry and Biochemistry, California State University, Long Beach)
Award: \$14,997 for the proposal titled “Role of Akt pathway in regulation of the unfolded protein response”
2. **Lionel Cheruzel** (Chemistry, San José State University)
Award: \$15,000 for the proposal titled “A collaborative approach towards the development of novel anti-cancer agents.”
3. **Daniel Curtis** (Chemistry and Biochemistry, California State University, Fullerton)
Award: \$15,000 for the proposal titled “Quantification of potentially harmful compounds in electronic cigarette aerosol for varying particle size”
4. **Matthew Escobar** (Biological Sciences, California State University San Marcos)
Award: \$14,669 for the proposal titled “Defining the connections between soil microbiomes and crop nutritional content”
5. **Juanita Jellyman** (Biological Sciences, California State Polytechnic University, Pomona)

Award: \$15,000 for the proposal titled “Maternal High-Fat Diet Programs Endocrine Physiology in the Offspring”

6. **Stefan Paula** (Chemistry, California State University, Sacramento)
Award: \$15,000 for the proposal titled “Inhibitors of a Plasmodium calcium ATPase, a potential target for novel antimalarials”

C. Industry Partnership Initiative Grant Awards

The Industry Partnership Initiative grant program supports collaborations with industry partners that broaden the opportunities for innovative biotechnology projects, promote multi-disciplinary partnerships, encourage product development and other translational activities, and enrich California’s communities and life sciences industry.

Two CSUPERB Industry Partnership Initiative Grants were approved for funding:

1. **Joseph Chen** (Biology, San Francisco State University)
Award: \$15,000 for the proposal titled “Developing a new portfolio of biopolymers”
2. **David Stachura** (Biological Sciences, California State University, Chico)
Award: \$15,000 for the proposal titled “Development of mesenchymal stem cell (MSC) factor-derived wound healing cream”

D. Curriculum Development Grant Awards

The Curriculum Development grant program supports the development or revision of innovative lower-level or introductory biotechnology-related courses, laboratories, and first-year experiences.

Three CSUPERB Curriculum Development Grants were approved for funding:

1. **Ana Almeida** (Biological Sciences, California State University, East Bay)
Award: \$14,994 for the proposal titled “Promoting inclusive excellence for first- and second-year Biology majors through anti-racist scientific reasoning: A pilot study”
2. **Jenny Cappuccio** (Chemistry, Humboldt State University)
Award: \$15,000 for the proposal titled “Threading Biotechnology Through the Curriculum”
3. **David Raymond** (Mechanical Engineering, California State University, Los Angeles)
Award: \$14,999 for the proposal titled “An Introduction to Biomedical Engineering with Hands-On Design Projects”

For more information about these grant programs, see the program portfolio at the CSUPERB website (<https://www2.calstate.edu/impact-of-the-csu/research/csuperb/Pages/grants-and-awards-programs.aspx>) or contact Bianca Mothé (Interim Executive Director, CSUPERB; bmothe@csusm.edu). All CSUPERB grants and awards can be searched at the program’s database: <http://csuperb.org/grants/database/>. Program impacts, including student outcomes and annual reports, can be found at the program dashboard: <https://csuperb.org/grants/csuperb-data-dashboard/>.