



CSUPERB Announces 35 Grant Awards to CSU Faculty and Students at 16 Campuses

June 21, 2019

CSUPERB is pleased to announce the spring 2019 round of seed grant awards. Overall CSUPERB is making 35 awards totaling \$520,699 to CSU faculty at 16 CSU universities.

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

This year CSUPERB received 120 proposals from faculty members at 21 different CSU campuses. Averaged across all programs, awards were made to 29% 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-five CSUPERB New Investigator Grants were approved for funding:

1. **Farhana Abedin** (Electromechanical Engineering Technology, California State Polytechnic University, Pomona)
Award: \$15,000 for the proposal, "Multifunctional Nanofiber with Immobilized Antimicrobial Peptide for Microfiltration and Disinfection of Water"
2. **Robin Altman** (Biological Sciences, California State University, Sacramento)
Award: \$15,000 for the proposal, "Developing a co-culture cell model of the human blood-brain barrier to investigate blood-brain barrier dysfunction in Alzheimer's disease"
3. **Mojtaba Azadi Sohi** (Engineering, San Francisco State University)
Award: \$15,000 for the proposal, "Measuring the biomechanical properties of the genital tract at cellular scale to improve preimplantation embryo development"
4. **Anna Bezryadina** (Physics and Astronomy, California State University, Northridge)
Award: \$15,000 for the proposal, "Biological waveguides on the chip"
5. **Andrea Bonisoli Alquati** (Biological Sciences, California State Polytechnic University, Pomona)
Award: \$14,954 for the proposal, "Ionizing radiation and mutation rate: A test in barn swallows from Fukushima"

6. **Jason Burke** (Chemistry and Biochemistry, California State University, San Bernardino)
Award: \$14,954 for the proposal, "Biochemical Characterization of Cancer Missense Mutations in the Retinoblastoma Protein"
7. **David Bwambok** (Chemistry and Biochemistry, California State University, San Marcos)
Award: \$15,000 for the proposal, "Low-Cost and Noninvasive Diagnosis of Malaria in Saliva by Colorimetric Sensing on Paper"
8. **Kristen Gorman** (Biological Sciences, California State University, Chico)
Award: \$15,000 for the proposal, "Cellular characteristics of a scoliosis model"
9. **Bree Grillo-Hill** (Biological Sciences, San José State University)
Award: \$15,000 for the proposal, "Roles for intracellular pH dynamics in metastatic cancer models *in vivo*"
10. **Elena Grintsevich** (Chemistry and Biochemistry, California State University, Long Beach)
Award: \$15,000 for the proposal, "Uncovering a new pathway of cytoskeletal regulation relevant for neuronal development and function"
11. **Pascale Guiton** (Biological Sciences, California State University, East Bay)
Award: \$15,000 for the proposal, "How do Developmentally Regulated Glycolytic Enzymes Contribute to Toxoplasma Differentiation?"
12. **Crystal Han** (Mechanical Engineering, San José State University)
Award: \$15,000 for the proposal, "On-chip size-specific RNA purification technique for small input ribosome profiling"
13. **Ashley Heers** (Biological Sciences, California State University, Los Angeles)
Award: \$15,000 for the proposal, "Avian 'athletes': functional implications of skeletal development"
14. **Frank Huynh** (Biological Sciences, San José State University)
Award: \$15,000 for the proposal, "The role of sirtuin 4 in regulating mammary gland development"
15. **Jennifer Johnston** (Biological Sciences, San José State University)
Award: \$15,000 for the proposal, "Platelet-specific expression of FVIII for the treatment of Hemophilia A patients with Inhibitors"
16. **Soumyasanta Laha** (Electrical & Computer Engineering, California State University, Fresno)
Award: \$15,000 for the proposal, "Design of a noninvasive, wearable & continuous glucose monitoring working prototype using an integrated RF and photo-acoustic technique"

17. **Yize Li** (Physics and Engineering, California State University, Bakersfield)
Award: \$15,000 for the proposal, "Dielectric Force Microscopy in Support of Optimized Biosensor Performance"
18. **Frances Mercer** (Biological Sciences, California State Polytechnic University, Pomona)
Award: \$15,000 for the proposal, "Using the CRISPR/Cas9 genetic engineering system to investigate the role of antibody receptors in human immune-cell killing of the parasite *Trichomonas vaginalis*"
19. **Stevan Pecic** (Chemistry and Biochemistry, California State University, Fullerton)
Award: \$15,000 for the proposal, "Development of Oligonucleotide-Based Receptors for Detection of Low-Epitope Targets"
20. **Elizabeth Scordato** (Biological Sciences, California State Polytechnic University, Pomona)
Award: \$15,000 for the proposal, "Adaptation to anthropogenic environments: comparative genomics of commensal avian species"
21. **Julie Simons** (Sciences and Mathematics, California State University, Maritime Academy)
Award: \$12,200 for the proposal, "Sperm Motility near the Oocyte: Models and Experiments"
22. **Jamie Snyder** (Biological Sciences, California State Polytechnic University, Pomona)
Award: \$15,000 for the proposal, "Determining cellular proteins involved in viral-induced lysis of *Sulfolobus*"
23. **Hakan Toreyin** (Electrical and Computer Engineering, San Diego State University)
Award: \$14,975 for the proposal, "Leveraging Physical and Approximate Computing for Ubiquitous Wearable Health Monitoring Devices"
24. **Wenwu Xu** (Mechanical Engineering, San Diego State University)
Award: \$15,000 for the proposal, "Nano-SCALPEL: Nanoparticle Spinning Cutting, Ablation, Lysis in Plasma Environmental Liquid for blood clot removal"
25. **Arturo Zavala** (Psychology, California State University, Long Beach)
Award: \$15,000 for the proposal, "Preclinical examination of serotonin (5-HT)_{1B} receptors in reducing nicotine reward"

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.

Eight CSUPERB Research Development Grants were approved for funding:

1. **Isolde Francis** (Biology, California State University, Bakersfield)
Award: \$13,570 for the proposal, "Characterization of the virulence genes of the Rhodococcus isolates causing Pistachio Bushy Top Syndrome"
2. **Rachael French** (Biological Sciences, San José State University)
Award: \$15,000 for the proposal, "Development of a Drosophila model of ethanol-induced metabolic syndrome and developmental feeding dysfunction"
3. **Karine Gousset** (Biology, California State University, Fresno)
Award: \$15,000 for the proposal, "Identification of tunneling nanotube and filopodia specific biomarkers using Laser Capture Microdissection and Mass Spectrometry"
4. **Angela Horner** (Biology, California State University, San Bernardino)
Award: \$15,000 for the proposal, "Effects of lifelong training on tendon morphology and mechanics"
5. **Rachel Mackelprang** (Biology, California State University, Northridge)
Award: \$15,000 for the proposal, "The big thaw: microbes in the thawing permafrost and their contribution to the climate change equation"
6. **Thomas Minehan** (Chemistry and Biochemistry, California State University, Northridge)
Award: \$15,000 for the proposal, "Inhibiting Protein-DNA Interactions with Shape-Selective Major-Groove Binding Small Molecules"
7. **Anand Ramasubramanian** (Chemical and Materials Engineering, San José State University)
Award: \$15,000 for the proposal, "Micromechanics of nicotine-exacerbated extracellular matrix remodeling"
8. **Houng-Wei Tsai** (Biological Sciences, California State University, Long Beach)
Award: \$15,000 for the proposal, "Deciphering the Functions of RNA Binding Motif Protein 48 (RBM48) in Brain Sexual Differentiation"

C. 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.

Two CSUPERB Curriculum Development Grants were approved for funding:

1. **Jeremy Mallari** (Chemistry and Biochemistry, California State University, San Bernardino)
Award: \$15,000 for the proposal, "Integrating medicinal chemistry and metalloprotease inhibitor development into an undergraduate Organic Chemistry Laboratory course"

2. **Tricia Van Laar** (Biology, California State University, Fresno)

Award: \$15000 for the proposal, "A CURE for Introductory Biology Achievement Gaps?: Redesign of BIOL 1A Labs"

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 Susan Baxter (Executive Director, CSUPERB; sbaxter@sdsu.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/>.