



CSUPERB Announces 34 Grant Awards to CSU Faculty and Students at 17 Campuses

June 28, 2018

CSUPERB is pleased to announce the spring 2018 round of seed grant awards. Overall CSUPERB is making 34 awards totaling \$507,570 to CSU faculty at 17 CSU universities.

Awards were made as part of four competitive CSUPERB grant programs: New Investigator, Research Development, Entrepreneurial Joint Venture and Curriculum Development. CSUPERB received 149 proposals from faculty members at 22 different CSU campuses. Averaged across all programs, awards were made to 22.8% 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 One CSUPERB New Investigator Grants were approved for funding:

1. **Susan Cohen** (Biological Sciences, California State University, Los Angeles)
Award: \$15,000 for the proposal titled "Roles for the RNA-binding protein Rbp2 in the circadian clock mechanism of cyanobacteria"
2. **Alberto Cruz** (Computer and Electrical Engineering and Computer Science, California State University, Bakersfield)
Award: \$15,000 for the proposal titled "Grapevine Pierce's Disease Diagnosis with Deep Learning"
3. **Bree Grillo-Hill** (Biological Sciences, San José State University)
Award: \$15,000 for the proposal titled "A new paradigm for growth control by intracellular pH dynamics"
4. **Pascale Guiton** (Biological Sciences, California State University, East Bay)
Award: \$14,994 for the proposal titled "How does *Toxoplasma gondii* Mediate Its Initial Interactions with Human Intestinal Epithelial Cells?"
5. **Christopher Heylman** (Biomedical Engineering, Cal Poly, San Luis Obispo)
Award: \$15,000 for the proposal titled "Vascularized Human Tissues on a Chip for High Throughput Drug Screening"
6. **Lauren Housley** (Nutrition and Food Science, California State University, Chico)
Award: \$15,000 for the proposal titled "Identifying cytokine targets of sulforaphane in aggressive breast cancer"
7. **Jennifer Johnston** (Biological Sciences, San José State University)
Award: \$15,000 for the proposal titled "Utilization of the RhD Locus as a Safe Harbor for Hemophilia A Gene Therapy Applications"

8. **Jane Kim** (Biological Sciences, CSU San Marcos)
Award: \$15,000 for the proposal titled "Molecular Analysis of Disease-Causing Microsatellite DNA Repeats in Budding Yeast"
9. **Matthew Leineweber** (Biomedical, Chemical & Materials Engineering, San José State University)
Award: \$14,650 for the proposal titled "Simulating motor control strategies in individuals using above-knee prostheses"
10. **Kathryn McCulloch** (Chemistry & Biochemistry, Cal Poly, Pomona)
Award: \$14,058 for the proposal titled "Investigating the Structural Basis of Secondary Bile Acid Production"
11. **Hubert Muchalski** (Chemistry, California State University, Fresno)
Award: \$15,000 for the proposal titled "Metal-catalyzed synthesis of enol esters for controlled release of pheromonones"
12. **Daniel Nickerson** (Biology, California State University, San Bernardino)
Award: \$14,990 for the proposal titled "Obese yeast: a novel link between Rab5 signaling at endosomes and regulation of lipid homeostasis"
13. **Shawn O'Connor** (Exercise and Nutritional Sciences, San Diego State University)
Award: \$14,522 for the proposal titled "Development of a non-invasive, ultrasound-based muscle diagnostic sensor"
14. **Derek Pamukoff** (Kinesiology, California State University, Fullerton)
Award: \$14,945 for the proposal titled "Assessment of Cartilage Strain using Ultrasonography after Anterior Cruciate Ligament Reconstruction"
15. **Madalyn Radlauer** (Chemistry, San José State University)
Award: \$15,000 for the proposal titled "Catalysis Within Polymers: Synthetic Systems to take Enzyme-Inspired Chemistry to an Industrial Scale"
16. **Andrew Reams** (Biological Sciences, California State University, Sacramento)
Award: \$15,000 for the proposal titled "Identification of the regulatory mechanisms and genetic components of gene amplification formation using the genetically tractable bacteria *Acinetobacter baylyi*"
17. **Gonul Schara** (Chemistry, California State University, Stanislaus)
Award: \$15,000 for the proposal titled "Characterizing and engineering the toluene o-xylene monooxygenase for chlorobenzene degradation and green chemistry"
18. **Jay Vargas** (Criminal Justice and Criminalistics, California State University, Los Angeles)
Award: \$14,925 for the proposal titled "The Correlation of the Frequency, Amplitude, and Power of Nystagmus and Saccadic Eye Movements with Blood Alcohol Concentration"
19. **Clayton Visger** (Biological Sciences, California State University, Sacramento)
Award: \$14,987 for the proposal titled "Integrating synthetic RNA normalization with Ribo-seq to evaluate the genome-wide impact of polyploidy at the interface of the transcriptome and the translome in *Saccharomyces cerevisiae*"

20. **Daniel Whisler** (Mechanical and Aerospace Engineering, California State University, Long Beach)
Award: \$14,930 for the proposal titled “A novel single dynamic impact test and numerical technique for soft tissue modeling”
21. **Steven Wilkinson** (Chemistry and Biochemistry, Cal Poly, San Luis Obispo)
Award: \$15,000 for the proposal titled “A comparative analysis of osmolytes for stabilizing diagnostically important proteins”

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. **Rulon Clark** (Biology, San Diego State University)
Award: \$14,615 for the proposal titled “Biochemical warfare: coevolution of venom and venom resistance in rattlesnakes and mammals”
2. **Deborah Fraser** (Biological Sciences, California State University, Long Beach)
Award: \$15,000 for the proposal titled “Complement protein C1q modulation of the endothelial cell transcriptome”
3. **Ike Kang** (Animal Science, Cal Poly, San Luis Obispo)
Award: \$15,000 for the proposal titled “Improvement of Bacterial Reduction, Product Quality, and Processing Efficiency of Turkey using Sub-zero Saline Chilling Technology”
4. **John Love** (Chemistry and Biochemistry, San Diego State University)
Award: \$15,000 for the proposal titled “Using Protein Design to Engineer a Scaffold for Regio-Selective C-H Functionalization”
5. **Robert Nissen** (Biological Sciences, California State University, Los Angeles)
Award: \$15,000 for the proposal titled “Analysis of Dyrk1-Wdr68 complexes by gene knock-out in zebrafish”
6. **Usha Sinha** (Physics, San Diego State University)
Award: \$14,958 for the proposal titled “Extracellular Matrix Remodeling of Aging Skeletal Muscle in Human Subjects Monitored by Quantitative Magnetization Transfer Magnetic Resonance Imaging.”
7. **Elizabeth Skovran** (Biological Sciences, San José State University)
Award: \$15,000 for the proposal titled “Engineering methylotrophic bacteria to recover rare Earths from electronic waste”
8. **Jessica Vey** (Chemistry & Biochemistry, California State University, Northridge)
Award: \$15,000 for the proposal titled “Enabling rational design of the biodesulfurization process: biochemical characterization of DBT and DBT sulfone monooxygenases and DBT desulfinase (DszB)”
9. **Xiaofeng Xu** (Biology, San Diego State University)
Award: \$15,000 for the proposal titled “An Earth System Modeling Framework for Microbial Community Structure on Litter Decomposition”

C. Entrepreneurial Joint Venture Matching Grant Awards

The Joint Venture Grant Program aims to increase collaboration between CSU faculty and other partners or institutions external to the CSU. CSUPERB recognizes that these collaborations broaden opportunities to pilot innovative biotechnology projects across the CSU, promote multi-disciplinary partnerships and encourage product development and other outreach activities.

Three CSUPERB Joint Venture Grants were approved for funding:

1. **James Bagley** (Kinesiology, San Francisco State University)
Award: \$14,996 for the proposal titled "Virtual Reality Exer-gaming to Promote Physical Activity and Health"
2. **Cory Brooks** (Chemistry, California State University, Fresno)
Award: \$15,000 for the proposal titled "Characterization of a humanized MUC16 specific antibody for cancer immunotherapy"
3. **Carol Lauzon** (Biological Sciences, California State University, East Bay)
Award: \$15,000 for the proposal titled "Food-safe Pathogen Surrogates for Rapid Verification of Sanitation of *Listeria* spp. in Food Processing"

D. Curriculum Development Grant Awards

The Curriculum Grant Program aims to support innovative educational practices in biotechnology and support the adoption of emerging technology.

Two CSUPERB Curriculum Development Grants were approved for funding:

1. **James Hanson** (Civil and Environmental Engineering, Cal Poly, San Luis Obispo)
Award: \$15,000 for the proposal titled "Incorporating Contemporary Policy Issues in Science and Engineering Curricula"
2. **Roger Lo** (Chemical Engineering/Biomedical Engineering, California State University, Long Beach)
Award: \$15,000 for the proposal titled "DIY Instruments for Biological, Chemical, and Engineering Applications"

For more information about these grant programs, see 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). The database of CSUPERB grant awards can be searched at: <http://csuperb.org/grants/database/>.