

CSUPERB Announces 37 Grant Awards to CSU Faculty and Students at 18 Campuses

July 8, 2016

CSUPERB is pleased to announce the spring 2016 round of major grant awards. Overall CSUPERB is making 37 awards totaling \$584,500 to CSU faculty at 18 CSU universities.

Awards were made as part of three competitive CSUPERB grant programs: New Investigator, Research Development and Entrepreneurial Joint Venture. CSUPERB reviewed 132 proposals from faculty members at 22 different CSU campuses. Averaged across all programs, awards were made to 29% of the proposals received. Individual awards are listed below.

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. **James Becker** (Kinesiology, CSU Long Beach)
Award: \$15,000 for the proposal titled "Bone Loading During Pilates Jumping Exercises"
2. **Catherine Brennan** (Biological Science, CSU Fullerton)
Award: \$15,000 for the proposal titled "Using Psidin to Probe the Intersection of Phagocytosis and Autophagy"
3. **Robyn Crook** (Biology, San Francisco State University)
Award: \$15,000 for the proposal titled "Linking nociceptive circuit plasticity to complex defensive behavior"
4. **Marlin Halim** (Chemistry and Biochemistry, CSU East Bay)
Award: \$15,000 for the proposal titled "Aptamer-based sensors for rapid quantification of toxic metabolites of galactose found in patients suffering from Duarte Galactosemia"
5. **Benjamin Hawkins** (Biomedical, Chemical, and Materials Engineering, San José State University)
Award: \$15,000 for the proposal titled "Size-Independent Dielectrophoretic Cell Separation for Identification of Altered Cell Phenotype"
6. **Erika Holland** (Biological Sciences, CSU Long Beach)
Award: \$15,000 for the proposal titled "Environmental pollutants alter Ca²⁺ mediated gene transcription"
7. **Veronica Jimenez Ortiz** (Biological Science, CSU Fullerton)
Award: \$15,000 for the proposal titled "Role of mechanosensitive channels in the human parasite *Trypanosoma cruzi*"

8. **Nathaniel Jue** (Science & Environmental Policy, CSU, Monterey Bay)
Award: \$15,000 for the proposal titled "Patterns of Gene Expression Associated with the Evolution of Hermaphroditism in Fishes"
9. **Nathan Lanning** (Biological Sciences, CSU Los Angeles)
Award: \$15,000 for the proposal titled "Leigh Syndrome cell model development and therapeutic potential of Adenylate Kinase 4"
10. **Yize Li** (Physics and Engineering, CSU Bakersfield)
Award: \$15,000 for the proposal titled "Semiconductor Nanomembrane Enabled Implantable Glucose Sensor"
11. **Mariano Loza-Coll** (Biology, CSU Northridge)
Award: \$14,600 for the proposal titled "In vivo analysis of stem cell responsiveness under stress"
12. **Jeremy Mallari** (Chemistry and Biochemistry, CSU San Bernardino)
Award: \$14,900 for the proposal titled "Developing Chemical Tools to Probe Malarial Protease Biology"
13. **Nathaniel Martinez** (Biological Sciences, Cal Poly, San Luis Obispo)
Award: \$15,000 for the proposal titled "Point-of-Care Diagnostic Device for the Quantitative Analysis of Human Estradiol"
14. **Kimberly Mulligan** (Biological Sciences, CSU Sacramento)
Award: \$15,000 for the proposal titled "Developing Drosophila melanogaster as a Model for the Identification of Environmental Chemicals that Confer Risk to Autism"
15. **Alexandra Orchard** (Chemistry & Biochemistry, CSU Fullerton)
Award: \$15,000 for the proposal titled "Design and Synthesis of Potential Inhibitors of the E6 Protein in high-Risk HPVs"
16. **Jasper Oshun** (Geology, Humboldt State University)
Award: \$15,000 for the proposal titled "Isotope Effects in ecto-mycorrhizal mining of rock moisture for Douglas-firs"
17. **Derek Pamukoff** (Kinesiology, CSU Fullerton)
Award: \$15,000 for the proposal titled "Diagnostic Ultrasound: A non-invasive technology to assess knee joint health"
18. **Byron Purse** (Chemistry & Biochemistry, San Diego State University)
Award: \$15,000 for the proposal titled "Fluorescently Labeled Riboswitch Constructs for Ligand and Drug Discovery"
19. **Rori Rohlfs** (Biology, San Francisco State University)
Award: \$15,000 for the proposal titled "Identifying the role of alternative splicing in adaptive evolution"
20. **Liat Rosenfeld** (Biology, San Francisco State University)
Award: \$15,000 for the proposal titled "Microfluidic-based artificial placenta for preterm babies"

21. **Cristian Ruiz Rueda** (Biomedical, Chemical & Materials Engineering, San José State University)
Award: \$15,000 for the proposal titled “Novel Approaches to Find Inhibitors of Multiple Antibiotic Efflux Pumps”
22. **Christal Sohl** (Chemistry and Biochemistry, San Diego State University)
Award: \$15,000 for the proposal titled “Navigating genotoxicity: mechanistic studies with pol epsilon in carcinogenic environments”
23. **David Stachura** (Biological Sciences, CSU Chico)
Award: \$15,000 for the proposal titled “Molecular Control of the Vertebrate Hematopoietic Niche”
24. **Fangyuan Tian** (Chemistry and Biochemistry, CSU Long Beach)
Award: \$15,000 for the proposal titled “Using Metal Organic Framework Film as a Drug-Eluting Stent Coating”
25. **Xiaorong Zhang** (School of Engineering, San Francisco State University)
Award: \$15,000 for the proposal titled “Toward the Next-Generation Neural Controlled Artificial Arms”

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.

Seven CSUPERB Research Development Grants were approved for funding:

1. **Bengt Allen** (Biological Sciences, CSU Long Beach)
Award: \$15,000 for the proposal titled “Proteomic Response of Limpets to Food and Heat Stress: Physiological Consequences of Alternative Thermal Defense Strategies”
2. **Taro Amagata** (Chemistry and Biochemistry, San Francisco State University)
Award: \$15,000 for the proposal titled “Discovery of novel solid tumor selective cytotoxins produced by marine-derived actinomycetes”
3. **Math Cuajungco** (Biological Science, CSU Fullerton)
Award: \$15,000 for the proposal titled “Defining the topology and zinc transport function of transmembrane (TMEM)-163 protein”
4. **Kimberly D’Anna-Hernandez** (Psychology, CSU San Marcos)
Award: \$15,000 for the proposal titled “The postnatal role of hypocretin in depressive-like behavior in mice”
5. **Hope Johnson** (Biological Science, CSU Fullerton)
Award: \$15,000 for the proposal titled “Genetic Tools to Investigate Bacterial Manganese Oxidation”
6. **Krish Krishnan** (Chemistry, CSU Fresno)
Award: \$15,000 for the proposal titled “Protein expression and structural characterization of Lunasin: an anti-cancer peptide”

7. **Hwan Youn** (Biology, CSU Fresno)

Award: \$15,000 for the proposal titled “Studying diverse cyclic nucleotide-sensing mechanisms displayed by a protein family”

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 recognized that such collaborations broaden the 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. **Kathleen McGuire** (Biology, San Diego State University)

Award: \$25,000 for the proposal titled “Can minicells be used as a probiotic approach against colon cancer?”

2. **Christos Stathopoulos** (Biological Sciences, Cal Poly, Pomona)

Award: \$25,000 for the proposal titled “What makes E. coli a probiotic: Searching for fitness factors in probiotic E. coli Nissle 1917”

3. **Howard Xu** (Biological Sciences, CSU Los Angeles)

Award: \$25,000 for the proposal titled “Mining discovered natural products for high-value antibacterial inhibitor-target pairs”

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. **Sami Khuri** (Computer Science, San José State University)

Award: \$15,000 for the proposal titled “Programming for Life Sciences: Preparing the Future Workforce”

2. **Mark Wilson** (Biology, Humboldt State University)

Award: \$15,000 for the proposal titled “ALL EARS: Active Learning Laboratory Early Authentic Research Study”

For more information about these grant programs, see the CSUPERB website (<http://www.calstate.edu/csUPERB/grants/>) or contact Susan Baxter, Executive Director, CSUPERB (sbaxter@mail.sdsu.edu). The database of CSUPERB grant awards can be searched at: <http://csuperb.org/grants/database/>.