Awards Received July 1, 2014 - June 30, 2015

COLLEGE OF SCIENCES
Dr. Stanley Maloy, Dean

Office of the Dean

Dr. Catherine Atkins
University of California at San Diego: "Institutional Research and Academic Career Development Award," $998

Dr. Catherine Atkins and Dr. Stanley Maloy

Dr. Jose Castillo
National Science Foundation: "Broadening Opportunities for Interdisciplinary Computational Science and Engineering Research and Training (ICSERT)," $523,094

Dr. Jose Castillo, Dr. Paul Paolini, and Dr. Catherine Atkins
National Institute of General Medical Sciences: "SDSU Bridges to the Baccalaureate Program," $199,661

Dr. Giulietta Fargion

National Aeronautics and Space Administration: "Program Support Office for Calibration and Validation of Ocean Color Satellite Missions," $102,682

Dr. Stanley Maloy
Lakeside Union School District: "IDEAS 2.0," $30,024

Dr. Matthew Rahn and Dr. Eric G. Frost

Dr. Nancy Taylor
National Science Foundation: "Exploring STEM Careers Initiative," $387,396

Dr. Faramarz Valafar
National Institute of Allergy and Infectious Diseases: "Evolutionary and Functional Significance of Novel Mutations in MDR-XDR TB," $704,061

Astronomy

Dr. Robert Quimby

Dr. William Welsh and Dr. Jerome Orosz
National Aeronautics and Space Administration: A Search for Black Holes in the Kepler Field," $131,606; "Discovery and Characterization of Kepler Circumbinary Planets," $110,907

Biology

Dr. Sanford Bernstein
National Heart Lung and Blood Institute: "Structural and Biochemical Mechanisms of Myosin-induced Dilated Cardiomyopathy - "Fellowship A.Trujillo," $30,300
Awards Received July 1, 2014 - June 30, 2015


Dr. Andrew Bohonak  
Total: $144,808  
U.S. Navy: "Genetic Characterization of San Diego Fairy Shrimp Populations in Marine Corps Air Station Miramar Basins, San Diego, California," $144,808

Dr. Kevin Burns  
Upgrade Professional Solutions Corporation: "Analysis of Desert Tortoise Translocation and Common Raven Data," $9,374  
Total: $9,374

Dr. Rulon Clark  
Santa Monica Mountains Fund: "Integrating Genetics and Population Viability Assessments to Forecast the Effects of Climate Change on the Island Night Lizard, Xantusia Riversiana," $5,400  
Total: $5,800

Xavier Glaudas: "Genetic Markers and Parentage Analysis for the Puff Adder, Bitis Arietans," $4,000

Stephen Rice and Andy Gottscho processing a lizard along a coastal prickly pear bluff.  
Photo: Tara Luckau  
PI: Dr. Rulon Clark

Dr. Ted Cranford  
Total: $133,501  
Awards Received July 1, 2014 - June 30, 2015

Dr. Douglas Deutschman
California Department of Fish and Wildlife: "Harbison's Dun Skipper Management Study: Developing Efficient Monitoring to Inform Management," $8,392

The Nature Conservancy: "Monitoring Composition Integrity and Functions of Coastal Sage Scrub (CSS) on The Nature Conservancy (TNC) Easement Lands in Orange County," $39,816

The San Diego Foundation: "Arthropod Ecosystem Services as Indicators Ecosystem Health and Resiliency for Conservation Management and Climate Change Planning," $48,077

Graduate student Hannah baiting a bucket trap with a rat to attract arthropods involved with decomposition. Photo: Kalee Koeslag

PI: Dr. Douglas Deutschman

Dr. Douglas Deutschman, Dr. Clark Rulon, and Dr. Jeremy D. Long
U.S. Department of the Interior National Park Service: "Partnership to Provide Student Internships in Field Sciences," $15,980

Dr. Kelly Doran
American Heart Association: "Contribution of Bacterial Infection to Cerebral Vascular Diseases - B. Kim," $25,000

National Institute of Neurological Disorders and Stroke: "Blood-Brain Barrier Failure in Bacterial Meningitis," $336,001

Dr. Ralph Feuer
California Institute for Regenerative Medicine: "SDSU/CIRM Stem Cell Internship Program," $623,701

Dr. Christopher Glembotski
American Heart Association: "Essential Role of Endoplasmic Reticulum Signaling in Cardiac Progenitor Cell Differentiation-Fellowship, B. Bailey," $44,000

National Heart Lung and Blood Institute: "Roles for Sarco/Endoplasmic Reticulum (SR/ER) Protein Quantity and Quality Control in Cardiac Hypertrophy," $375,000

Dr. Natalie A. Gude
American Heart Association: "Resolving Myocardial Regeneration by Tracking Commitment of c-Kit Stem Cells," $70,000

Dr. Marshal C. Hedin
National Science Foundation: "Speciation via Niche Conservatism in Relict Harvestmen Fellowship - Cabrero," $24,000

Dr. Donald Hunsaker
Dr. Bruce Ito  
CT Research: "Cardiac Functional Effects of Epicardial Stimulation," $66,692 
Walter J. and Betty C. Zable Foundation: "Cardiac Contractility Modulation (CCM) Research," $20,000

Dr. Marina Kalyuzhnaya  
Alliance for Sustainable Energy LLC: "Development of a Methane-to-Muconic Acid Bioprocess," $129,817 
LanzaTech: "Process Intensification of Biological Natural Gas Conversion through Innovative Bioreactor Designs," $5,999 
Awards Received July 1, 2014 - June 30, 2015

Dr. Rebecca Lewison                    Total: $221,266
California Department of Fish and Wildlife: "Recovery and Conservation of Multiple Listed Species in San Diego County through Eradication of Feral Pigs," $77,401
Southern California Coastal Water Research Project: "Contaminant Transfer Through San Diego Bay Food Webs," $25,000

Dr. Phyllis-Jean Linton                   Total: $448,500
Cedars-Sinai Medical Center: "Mitochondrial Quality Control in Cardioprotection: Overcoming Co-Morbidities," $448,500

Dr. David Lipson          Total: $40,091
National Science Foundation: "Collaborative: The Influence of Plant Functional Traits on Ecosystem Responses to Altered Rainfall," $40,091

Dr. Jeremy D. Long          Total: $28,000
National Science Foundation: "What You Can't See CAN Hurt You: Interspecific Indirect Genetic Effects, Omnivores, and Salt Marshes Fellowship - Rinehart," $24,000
Santa Monica Mountains Fund: "The Consequences of Climate Change on Intertidal Seaweed Communities at Cabrillo (CABR)," $4,000

Dr. Stanley Maloy          Total: $55,315
University of Illinois: "Genetically Specific Therapy Against Pathogenic Bacteria," $55,315

Dr. Estralita Martin          Total: $45,250
CSU Sacramento University Enterprises Inc.: "CSU Louis Stokes Alliance for Minority Participation (LSAMP) Phase IV," $15,000; "CSU Louis Stokes Alliance for Minority Participation (LSAMP) Senior Alliance (2013-2018)," $30,250

Dr. Kathleen McGuire          Total: $130,448
Vaxxion: "Efficacy, Immune Mechanism(s), and Pharmacokinetic/Biodistribution Properties of Vaxxion's Investigational Minicell Product Intended for Use in Bladder Cancer," $18,024
University of Michigan: "Inflammatory Differentiation of Colorectal Cancer Among African Americans," $112,424
Dr. Girish C. Melkani
American Heart Association Western States Affiliate: "Tau-Induced Cardiomyopathy in a Drosophila Heart Model," $70,000

Dr. Walter Oechel
National Aeronautics Space Administration Jet Propulsion Laboratory: "The Carbon in Arctic Reservoirs Vulnerability Experiment (CARVE)," $232,000
University of Southern California: "Regional Mapping of Soil Conditions in Northern Alaska Permafrost Landscape Using AirMOSS and Land Model Data Assimilation, and Associated Impacts on Terrestrial Carbon Fluxes," $57,388

Dr. Paul Paolini
California Metabolic Research Foundation: "Neonatal Mammalian Cardiocyte as a Model for Studying Diabetes," $14,432

Dr. Tod Reeder
National Science Foundation: "Dissertation Research: Comparative Phylogeography and Speciation of Phrynosomatid Lizards of the Baja California Peninsula - A. Gottscho," $19,435

Dr. Forest Rohwer
Canadian Institute for Advanced Research: "CIFAR Global Scholar Fellowship in Integrated Microbial Biodiversity - J. Janouskovec," $37,500; "Integrated Microbial Biodiversity Fellowship," $24,000
Cystic Fibrosis Research Inc.: "Identification of Fermentative and Bioactive Lipid Biomarkers of Cystic Fibrosis Disease – Fellowship for R. Quinn," $40,000; "Identifying Metagenomic Signals Characteristics of Cystic Fibrosis Exacerbation Onset - Y.W. Lim," $17,731
National Institute of Allergy and Infectious Diseases: "Developing Hydra as a Model Organism for Viral Symbioses - J. Grasis," $62,666

Dr. Mark Sussman
American Heart Association Western States Affiliate: "Astrin Inhibits mTORC1 and Provides Cardio Protection - N. Nguyen," $42,000
Leducq Foundation: "Transatlantic Networks of Excellence Program: Cellular and Molecular Targets to Promote Therapeutic Cardiac Regeneration," $129,694

Dr. Mark Sussman and Dr. Christopher Glembotski
National Heart, Lung and Blood Institute: "Restoring Myocardial Healing," $1,708,124
Awards Received July 1, 2014 - June 30, 2015

**Dr. Ricardo Zayas**

National Science Foundation: "CAREER: Functional Analysis of Ubiquitin-mediated Pathways Controlling Stem Cell Fate and Tissue Regeneration," $140,000

Undergraduate student Katrina Cable selecting and amputating planarians
Photo: Debbie Brighton
PI: Dr. Ricardo Zayas

**Dr. Robert Zeller**

National Institute on Deafness and Other Communication Disorders: "MicroRNA Function in Ascidian Sensory Neurons," $394,625

**Mr. Thomas Zink**

Apex Contracting and Consulting: "Infrared (IR) Site Vegetation Management for Naval Auxiliary Landing Field San Clemente Island," $5,765

Judith Ann Wheatley: "Grassland Enhancement through Seed Collection and Greenhouse Propagation of Native Plants and Seeds for Wheatley Ranch, Santa Ysabel, CA," $9,989


U.S. Navy: "NTMPS Afloat (NAFL) San Clemente Island Botany Management Program," $69,894

Photo: Korie Merrill
PI: Mr. Thomas A. Zink
2014-2015 SDSU Awards Listing

Chemistry & Biochemistry

Dr. Bernt Mikael Bergdahl 
MyChem LLC: "Consulting Agreement," $8,402

Dr. Douglas Grotjahn and Dr. Andrew L. Cooksy 
National Science Foundation: "Bifunctional Organometallic Catalysis with Phospines and N-Heterocyclic," $510,000

Dr. John Love 
U.S. Department of Defense: "The De Novo Design of Protein-Protein Interfaces," $6,000

Dr. Diane Smith 
Luminit LLC: "Corrosion Resistant Enhanced Surface Technology (CREST)," $24,990

Dr. William Stumph 
California Metabolic Research Foundation: "Arne N. Wick Predoctoral Research Fellowship - E. Rogers," $37,418; "Enzyme Regulation, Lipid and Carbohydrate Metabolism," $34,000

Dr. William Tong and Dr. Sanford Bernstein 
National Institute of General Medical Sciences: "SDSU Minority Biomedical Research IMSD Support Program," $522,435

Computer Science

Dr. Robert Edwards 
National Science Foundation: "Experimental and Computational Determination of Microbial Genotypes and Phenotypes," $250,000

Dr. Marie Roch 
Scripps Institution of Oceanography: "Marine Mammal Passive Acoustic Monitoring and Data Analysis at the Southern California Range Complex (SOCAL), Northwest Training Range Complex (NWTRC) and Gulf of Alaska (GOA) Naval Training Areas," $110,000

U.S. Department of Defense Office of Naval Research: "Unsupervised Learning (Clustering) of Odontocete Echolocation Clicks," $24,228


Dr. Wang Wei 
Awards Received July 1, 2014 - June 30, 2015

Geological Science

Dr. Eric G. Frost
California Seismic Safety Commission: "Education and Outreach Web Site Development," $5,000

Dr. Barry Hanan
National Science Foundation: "Collaborative Research: An Isotopic and Trace Element Study of Links Between Source Heterogeneity and Mantle Melting Beneath the Southeast Indian Ridge," $30,000

Dr. David Kimbrough
Exxon Mobil Research and Engineering Company: "Exxon Mobil Exploration Global Science Recruiting - E. White," $5,000

Dr. Shuo Ma

Dr. Kim Olsen
U.S. Department of State: "Regional Wave Propagation Including Small-Scale Heterogeneities and Frequency Dependent Qs and Qp," $36,950

U.S. Department of the Interior United States Geological Survey: "Neglecting Off-Fault Plasticity: Are We Overestimating Long-Period Ground Motions for Large Earthquake Scenarios?," $57,482; "Rupture Direction, Hanging Wall, Basin, and Distance Effects on Ground Motions from Large Normal-Faulting Earthquakes," $46,018


Snapshot of 0-2.5 Hz waves showing how the waves follow banded propagation paths, guided through the lower velocity regions (blue) and mostly circumvent concentrations of higher-velocity material (red) at different scales.

Photo: K. Olsen

PI: Kim Olsen
Dr. Thomas Rockwell                   Total: $116,766

Dr. Thomas Rockwell and Dr. Gary Girty       Total: $20,000
University of Southern California: “Investigating the Fault Zone Architecture of the San Jacinto Fault Zone Using an Ultra-Portable Coring Borehole Drill Rig,” $20,000

Dr. Stephen Schellenberg                   Total: $161,634
National Science Foundation: “Investing in the Future of Paleoclimate Research: U.S. Graduate Student Fellowships for the Urbino Summer Schools in Paleoclimatology,” $161,634

Dr. Zheqiang Shi                           Total: $16,500
University of Southern California: “A Collaborative Project: Rupture Dynamics, Validation of the Numerical Simulation Method,” $16,500

Dr. Zheqiang Shi and Dr. Steven Day         Total: $73,050

Dr. Eric M. Thompson                      Total: $22,710

Math & Statistics

Dr. Juanjuan Fan                           Total: $21,017
Kaiser Permanente Medical Center: “Constructing Risk Calculators Using Random Forest,” $21,017
Awards Received July 1, 2014 - June 30, 2015

Dr. Jerome Gilles  

Dr. Joanne Lobato  
Art of Problem Solving: "Research Assistantship D. Quarfoot," $26,460
National Science Foundation: "A Controlled Trial of Active Versus Passive Learning Strategies: An Exploration of Online Precalculus Course Design - Fellowship M. Voigt," $24,000

Dr. Antonio Palacios  
U.S. Department of Defense Army Research Office: "Exploiting Symmetry to Study Coherent Self-Sustaining Dynamics in High Dimensional Nonlinear Systems," $50,000

Dr. Chris Rasmussen  
Mathematical Association of America: "Progressing Through Calculus," $513,798

Dr. Bo-Wen Shen  
National Aeronautics and Space Administration: "Integration of the NASA Coupled Advanced Multi-Scale Modeling and Concurrent Visualization Systems (CAMVis) and Multiscale Analysis Package (CAMVis-MAP) For Tropical Cyclone Climate Study," $274,580

Dr. Samuel Shen  
National Aeronautics and Space Administration Jet Propulsion Laboratory: "Optimal Assessment of the Deep Ocean Warming Based on Sparse In-Situ Data," $9,999
National Science Foundation: "Ea SM-3: Collaborative Research: Surface-induced Forcing and Decadal Variability and Change of the East Asian Climate, Surface Hydrology & Agriculture - A Modeling and Data Approach," $125,255

Dr. William Zahner  
National Science Foundation: "Research and Evaluation: Boston University's Noyce Scholarship Programs," $99,563

Dr. Fred Goldberg  
California State University Office of the Chancellor: "CSU-Chevron Revising Physics and Everyday Thinking (PET) Curriculum Suite," $350,000
**Dr. Calvin Johnson**  
U.S. Department of Energy: "Nuclear Structure and Transitions: Computational Studies and Resources," $95,000

**Dr. Fridolin Weber**  
National Science Foundation: "Astrophysical Studies of Quark Deconfinement," $185,099

Fridolin Weber (right) with graduate students Edson Otoniel, Omair Zubairi, Richard Mellinger, and undergraduate student Alexis Romero  
Photo: Micah Schuster

**Psychology**

**Dr. Susan Brasser**  
National Institute on Alcohol Abuse and Alcoholism: "Insular Cortical Processing in Alcohol Addiction," $215,625

Graduate student Jerrold Penprase assessing cannula placement in the interoceptive insula  
Photo: Brasser lab  
PI: Dr. Susan Brasser

**Dr. Jeff Conte and Dr. Scott Roesch**  
Army Research Institute for Behavioral & Social Sciences: "Investigation of Person-centric Relationships Using the Five Factor Model of Personality and Latent Profile Analysis," $46,000  

**Total: $109,619**
Awards Received July 1, 2014 - June 30, 2015

**Dr. Thereasa Cronan and Dr. Claire Murphy**
National Institute on Aging: "SDSU Advancing Diversity in Aging Research (ADAR) Undergraduate Education Program," $358,744

**Dr. Amy M. Drahota**
National Institute of Mental Health: "Developing the Autism Model of Implementation for Autism Spectrum Disorders (ASD) Community Providers," $185,332

**Dr. Inna Fishman**
National Institute of Mental Health: "Multimodal Imaging of Social Brain Networks in ASD," $186,874
University of California at San Diego: "Neural Generators of Emotional Mimicry (and Lack Thereof) in Autism," $37,375

**Dr. Margaret Friend**
National Institute of Child Health and Human Development: "Investigating Lexical Structure in Monolingual and Bilingual Spanish-Speaking Children in the U.S. (De Anda)," $34,183; "The Path to Language and Literacy: A Cross-Linguistic Longitudinal Approach," $423,165

**Dr. Linda Gallo**
Scripps Translational Science Institute: "Scripps Translational Science Institute," $31,773

**Dr. Paul Gilbert**
National Institute on Aging: "Mnemonic Processing Deficits in Older Adults at Risk for Alzheimer's Disease," $208,097

**Dr. Phillip J. Holcomb and Dr. Katherine Midgley**

**Dr. Alan Litrownik**
University of Maryland: "Drug Use Trajectories and the Transition to Adulthood Among Maltreated Youth," $117,038

**Dr. Vanessa Malcarne**
California Tobacco Related Disease Research Program: "Predictors of Tobacco Use in Hispanic Americans," $32,274
Rheumatology Research Foundation: "Social Anxiety in Patients with Limited and Diffuse Systemic Sclerosis," $4,000
University of California at San Diego: "Coping with Cancer: A Program for the Deaf Community in American Sign Language," $43,284

**Dr. Vanessa Malcarne and Dr. Scott Roesch**
University of California at San Diego: "Clinical Trials Education for Hispanics," $64,121
Awards Received July 1, 2014 - June 30, 2015

**Dr. Ksenija Marinkovic**

National Institute on Alcohol Abuse and Alcoholism: "Spatiotemporal Brain Imaging of Alcohol Effects on Inhibitory Control," $533,153

![Dr. Ksenija Marinkovic and students presented their work at the Human Brain Mapping Conference](Photo: Brain Development Imaging Lab)

**Dr. Sarah Mattson**

Indiana University: "A Multisite Neurobehavioral Assessment of Fetal Alcohol Spectrum Disorder," $21,590

National Institute on Alcohol Abuse and Alcoholism: "A Multisite Neurobehavioral Assessment of Fetal Alcohol Spectrum Disorders," $572,076; "Mechanisms of Reading-Related Dysfunction in Fetal Alcohol Spectrum Disorders-L. Glass," $34,316

**Dr. Eileen Moore**


**Dr. Ralph-Axel Mueller**

National Institute of Mental Health: "FMRI and EEG Approaches to the Resting State in Autism Spectrum Disorders (ASD)," $190,411; "Integrity and Dynamic Processing Efficiency of Networks in Autism Spectrum Disorders (ASD)," $1,404,711; "The Autistic Brain Over 45: The Anatomic, Functional, and Cognitive Phenotype," $771,520

![Doctoral student Aarti Nair with healthy child volunteer preparing for an MRI scan](Photo: Brain Development Imaging Lab)

**Dr. Claire Murphy**

National Institute on Aging: "Chemosensory Perception and Psychophysics in the Aged," $141,997

**Total: $533,153**

**Total: $627,982**

**Total: $189,158**

**Total: $2,366,642**

**Total: $141,997**
Awards Received July 1, 2014 - June 30, 2015

**Dr. Joseph Price**
- San Diego County Superintendent of Schools: "Foster Youth Services Program Evaluation," $20,000
- San Diego Social Advocates for Youth: "Project KEEP Extension," $17,475
- University of California at San Diego: "System of Care Evaluation (SOCE), Mental Health Services Act (MHSA) Funding," $100,226

Total: $300,095

**Dr. Laura Proctor**
- National Institute on Drug Abuse: "Mixed Method Study to Explain Heterogeneity in Drug Use After Early Foster Care," $99,298

Total: $99,298

**Dr. Edward Riley**
- National Institute on Alcohol Abuse and Alcoholism: Administrative Core of the Collaborative Initiative on Fetal Alcohol Spectrum Disorders (CIFASD), $750,306; Alcohol Research in the Science/Practitioner Model, $150,534; International Society for Biomedical Research on Alcoholism (ISBRA) Asia-Pacific Society for Alcohol and Addiction Research (APSAAR) Administrative Supplement, $30,000; Spatial Working Memory in Children with Fetal Alcohol Spectrum Disorder (FASD): A Multimodal Imaging Approach- M. AlejandroInfante, $34,316
- National Science Foundation: "Neuropsychological and Neuroanatomical Underpinnings of Inhibitory Control in Fetal Alcohol Spectrum Disorders -R. Migliorini," $70,000

Total: $1,035,156

**Dr. Edward Riley and Dr. Sarah Mattson**

Total: $118,167

**Dr. Edward Riley and Dr. Jennifer Thomas**
- National Institute on Alcohol Abuse and Alcoholism: "17th and 18th International Society for Biomedical Research on Alcoholism (ISBRA) Congresses," $14,550

Total: $14,550

**Dr. Scott Roesch**
- University of California at Los Angeles: "Sustainment of Multiple Evidence-based Practice (EBP's) Fiscally Mandated in Children's Mental Health (MH) Services," $23,893
- University of California at San Diego: "Effectiveness and Implementation of a Mental Health Intervention for Autism Spectrum Disorder (ASD)," $109,215; Interagency Collaborative Teams to Scale-Up Evidence Based Practice," $14,457

Total: $147,565

**Dr. Rachel H. Schlage**
- University of California at San Diego: "Training Community Providers to Implement an Evidence-based Early Intervention Program," $61,877

Total: $61,877

**Dr. Jennifer Thomas**
- National Institute on Alcohol Abuse and Alcoholism: "Choline Intervention in Children with Fetal Alcohol Spectrum Disorders," $31,753; "Fetal Alcohol Effects and Choline Intervention," $326,283; Fetal Alcohol Spectrum Disorders Study Group Annual Meeting," $20,650

Total: $378,686

**Dr. Vanessa Robin Weersing**
- National Institute of Mental Health: "2/2-Family Cognitive Behavioral Prevention of Depression in Youth and Parents," $339,580

Total: $339,580
Awards Received July 1, 2014 - June 30, 2015

Dr. Vanessa Robin Weersing and Dr. Nader Amir
Kaiser Foundation Research Institute: "Effectiveness Trial of Cognitive Bias Modifications (CBM) for Adolescent Anxiety," $224,087

Dr. Kristen J. Wells
NEA Foundation for the Improvement of Education: "Acquiring Additional Skills for Training Psychologists," $2,000

Dr. Kristin Wells (right) consults with Patient Navigator Dr. Claudia Carrizosa
Photo: Debbie Brighton
PI: Dr. Kristen J. Wells