OASIS - Internal Funding Awards

AGRICULTURE TECHNOLOGY & FOOD SECURITY

A Novel Multifunctional Crop Performance Stimulant for Sustainable Controlled Environment Agriculture
Principal Investigator: Thomas Eulgem (botany and plant sciences)

Genetic Manipulation of Calcium-binding EF-hand Proteins to Improve Thermotolerance in Select Sorghum Varieties
Principal Investigator: Dawn Nagel (botany and plant sciences)

Leveraging a Novel Symbiosis to Expand Nitrogen Fixation in Crops
Principal Investigator: Joel Sachs (evolution, ecology, and organismal biology)

Power-Free and Pipette Free CRISPR Detection Device for Leaf Spot Diseases
Principal Investigator: Ke Du (chemical & environmental engineering)

Quantifying the Impacts of Feedstock Fermentation on Black Soldier Fly Frass Fertilizer Qualities and Greenhouse Gas Emissions
Principal Investigator: Kerry Mauck (entomology)
Co-Principal Investigators: Marco Gebiola (entomology) and Francesca Hopkins (environmental sciences)

COMMUNITY HEALTH & HEATH DISPARITY

Climate Anxiety and its Impact on Mental Health and Brain Development among Preadolescent Latina Girls in the Inland Empire
Principal Investigator: Kalina Michalska (psychology)
Co-Principal Investigator: Jade Sasser (gender & sexuality studies)

Curriculum Reforms, Adult Health and Mortality
Principal Investigator: Ozkan Eren (economics)
Co-Principal Investigators: Bahadir Dursun (public administration & policy, American University) and Erdal Tekin (economics, Newcastle University)

HUMAN DEVELOPMENT

Resilience of Human Social Systems in Marginal and Changing Environments Examined through Archaeological Skeletal Remains
Principal Investigator: Elizabeth Berger (anthropology)
Co-Principal Investigator: Sara Becker (anthropology)

Advancing Gender Equity through Dialogue Systems Tailored for Inland Empire Education Agencies
Principal Investigator: Yue Dong (compUter science and engineering)

NATURAL RESOURCE MANAGEMENT

Climate and Air Quality Impacts Associated with Methane Shortwave Absorption
Principal Investigator: Robert Allen (earth and planetary sciences)

Development of a Biosensor for Facile, Rapid, On-site Detection of GenX in Water
Principal Investigator: Ying-Hsuan Lin (chemical & environmental engineering)

Equitable Wildfire Preparedness: Influence of Homeowner Wealth on Wildfire-Resilient Landscaping
Principal Investigator: Erin Conlisk (Center for Conservation Biology)
Co-Principal Investigator: Helen Regan (biology)

Improving Thermal Treatment Technologies for the Sustainable Remediation of Per- and Polyfluoroalkyl Substances (PFAS)-Contaminated Waste and Environmental Matrices
Principal Investigator: Ashok Mulchandani (environmental sciences)

Scaling Climate Solutions from Tree Neighborhoods to Whole Forests with Real-time Tree Health Data
Principal Investigator: Marko Spasojevic (evolution, ecology, and organismal biology)
Co-Principal Investigator: Louis Santiago (botany and plant sciences)

RENEWABLE ENERGY & FUELS

Engineering an Environmental Sensing Network of a Filamentous Fungus for Plant Cell Wall Deconstruction
Principal Investigator: Katherine Borkovich (microbiology and plant pathology)

Incorporation of Extremophile Genes for Improved Yeast Biofuel Production
Principal Investigator: Joshua Morgan (bioengineering)
Co-Principal Investigator: Ian Wheeldon (chemical & environmental engineering)

Stakeholder Collaboration on Land and Transmission Availability for Solar and Storage in Inland California's Energy Transition (SOLSTICE)
Principal Investigator: Alfredo Martinez (CE-CERT)
Co-Principal Investigators: Ronald Loveridge (political science) and Fred Schwartz (CE-CERT)

Predictive Simulations and Experiments for High-Throughput Screening of Promising Hydrogen-Storage Materials
Principal Investigator: Bryan Wong (chemistry)
Co-Principal Investigator: Charles Cai (chemical & environmental engineering)

SUSTAINABLE TRANSPORTATION & INFRASTRUCTURE

CooperScene: Cooperative Autonomous Driving Dataset
Principal Investigator: Hang Qiu (electrical and computer engineering)
Co-Principal Investigator: Amit Roy-Chowdury (electrical and computer engineering)

Robust Learning for Sustainable Vehicular Edge Computing Networks
Principal Investigator: Shaolei Ren (electrical and computer engineering)