Gifts, Grants, and Contracts for December 2008

The following gifts, grants and contracts received by all campuses during the period December 1, 2008 through December 31, 2008 total $40,950,961.

This report is also available for viewing at: http://www.hawaii.edu/ors/Board_Reports.htm

Research

DA-Dept of Agriculture

Center for Tropical and Subtropical Aquaculture (CTSA)  $24,000
Improving the Hatchery Output of the Hawaiian Pink Snapper, Pristipomoides filamentosus to Meet Stock Enhancement and Open Ocean Expectations
Clyde S Tamaru  Hawaii Institute of Marine Biology
Conduct a series of laboratory scale experiments designed to assess the feeding behavior of opakapaka larvae that will be presented a variety of live food organisms at varying densities. The approach is to define an optimal feeding strategy for hatchery production of opakapaka.

Department of Agriculture  $110,309
Survival of Escherichia coli on Soil Particle Surface in Opa'ula Watershed of Oahu, Hawaii
Tao Yan  Department of Civil and Environmental Engineering
The project seeks to understand how changes in soil properties and conditions by agricultural practices affect the survival of E. coli in soils. The soil parameters to be investigated include pH, organic carbon, N and P availability, and protozoan activities. Both field samplings and lab experiments will be performed.

DHHS-Dept of Health and Human Services

National Heart, Lung, and Blood Institute/NIH/DHHS  $903,615
Role of Oxidative Stress and Inflammation in Cardiovascular Risk
Cecilia M Shikuma  Department of Medicine
This project will study the increased CV risk in the HIV population on HAART and statins which may have efficacy in reducing inflammation.

National Institutes of Health/DHHS  $183,952
Institute for Biogenesis Research: COBRE
William S Ward  Dept Anatomy, Biochemistry, Physiology and Reproductive Biol
Develop the existing Institute for Biogenesis Research into a multi-disciplinary research center for reproductive biology research.

DOD-Department of Defense

Air Force Office of Scientific Research  $224,946
Low Light Adaptive Contraction in Support of the Space Situational Awareness Mission
Mark R Chun  Institute for Astronomy
Conduct research to address fundamental issues outlined in the solicitation to improve Air Force faint object capabilities.

Air Force Office of Scientific Research  $586,663
Coherence-based Modeling of Cultural Change and Political Violence
Sunki Chai  Department of Sociology
Building simulation environment that will allow policy-makers to analyze long-term effects of various policy interventions on configurations of culture (ideologies, values, and beliefs) in different parts of the world, and also predict the effect of cultural change, in interaction with economic and political structural conditions, upon violent collective action.
Gifts, Grants, and Contracts for December 2008

Research

DOD-Department of Defense

Department of Defense $5,795,000
Managing Partner of Pacific Disaster Center
James R Gaines Vice President for Research
This Cooperative Agreement provides for the transfer of Federal funds for the evolvement of the Pacific Disaster Center into a public-private partnership benefiting from shared responsibilities and assistance from the Department of Defense and the Managing Partner (Recipient) with its internal management, administration, and development of concepts as proposed by the Recipient.

Department of the Air Force $8,543
Operations and Management of the Maui Supercomputing Center
David K Lassner Information Technology Services
Cost reimbursement award term contract for research, development, operations and management of the Maui Supercomputing Center.

Department of the Air Force $2,660,741
Operations and Management of the Maui Supercomputing Center
David K Lassner Information Technology Services
Cost reimbursement award term contract for research, development, operations and management of the Maui Supercomputing Center.

Department of the Air Force $9,175,940
Operations and Management of the Maui High Performance Computing Center
David K Lassner Information Technology Services
Cost reimbursement award term contract for research, development, operations and management of the Maui Supercomputing Center.

Department of the Air Force $2,093,054
Operations and Management of the Maui High Performance Computing Center
David K Lassner Information Technology Services
Cost reimbursement award term contract for research, development, operations and management of the Maui Supercomputing Center.

Department of the Air Force $62,662
Operations and Management of the Maui Supercomputing Center
David K Lassner Information Technology Services
Cost reimbursement award term contract for research, development, operations and management of the Maui Supercomputing Center.

Department of the Air Force $432,962
Operations and Management of the Maui Supercomputing Center
David K Lassner Information Technology Services
Cost reimbursement award term contract for research, development, operations and management of the Maui Supercomputing Center.

Department of the Navy $50,216
Sea-salt Aerosol in Hawaii and the Influence of Large Organized Structures (LOS) or Rolls on Fluxes and Visibility
Antony D Clarke Department of Oceanography
Gifts, Grants, and Contracts for December 2008

Research

DOD-Department of Defense

Investigate the marine aerosol properties including their evolution in the boundary layer and coastal regions in Hawaii.

Department of the Navy
Low Cost High Performance Phased Array Antennas with Beam Steering Capabilities Using an Integrated CTS and Ferroelectric Materials Technologies
Magdy F. Iskander Hawaii Center for Advanced Communications
The proposed project involves the design, fabrication, and testing of an innovative low cost phased antenna arrays with beam steering capabilities for use in UAV to UAV and UAV to surface communications. The requested funds will be used to support graduate students working on the project.

Department of the Navy
Acoustic Seaglider: Planning for the Philippine Sea Experiment 2010 - 2011
Bruce M Howe Department of Ocean and Resources Engineering
Planning for the use of acoustic Seagliders as mobile tomography receivers in the Philippine Sea Experiment will be undertaken.

Office of Naval Research
Remote Monitoring of Dolphins and Whales in the High Naval Activity Areas in Hawaiian Waters
Whitlow W L Au Hawaii Institute of Marine Biology
Use remote ecological acoustic recorders (EARs) to determine the presence of dolphins and whale in high naval activity area of the main Hawaiian Islands.

Office of Naval Research
Long-Range Lightning Detection over the Western Pacific Ocean
Steven Businger Department of Meteorology
The goals of this proposal are: (i) to expand PacNet long-range lightning detection coverage to the Western Pacific Ocean, (ii) to calibrate the extended network (Cummins 2006), (iii) establish relationships between lightning rates and rainfall rates, (iv) investigate the morphology of lightning in storms systems, and (v) assimilate the data into numerical models.

Office of Naval Research
Multiple Approaches for Testing Novel Coatings in the Laboratory and in Pearl Harbor, Hawaii. Investigations at the Microbial and Macrofouler Levels
Michael G Hadfield Pacific Biosciences Research Center
Testing of fouling organisms on experimental marine coatings.

DOE-Dept of Energy

Department of Energy
Research on Distributed Electricity Systems Resources
Terrance Surles Hawaii Natural Energy Institute
Managing distribution system resources for improved service quality and reliability, transmission congestion relief, and grid support functions.
Gifts, Grants, and Contracts for December 2008

Research

DOE-Dept of Energy

Department of Energy $2,568,000

Hawaii Distributed Energy Resource Technologies for Energy Security - Phase 3

Richard E Rocheleau Hawaii Natural Energy Institute

This phase of the project will assess the electric and transportation infrastructure for the islands of Oahu and Kauai, identify sites for electric microgrid studies, test and evaluate distributed generation and storage technologies, and address policy issues to accelerate implementation of renewable technologies.

DOI-Dept of Interior

U.S. Geological Survey/Department of the Interior $9,375

National Assessment: Historical Shoreline Changes and Associated Coastal Land Loss Along Sandy Shorelines of the Islands Oahu, Maui, and Kauai

Charles H Fletcher Department of Geology and Geophysics

Analyze statistical techniques for determining long-term shoreline change rates and work with the national assessment co-op in statistical tool development for application to DSAS.

Federal Agencies

USDA Forest Service $69,001

The Invasive Species/Wildfire Cycle: Fuel Loads, Microclimate, Fire Potential, and Fire Behavior in Dominant Grasslands and Adjacent Forests

Creighton Litton Department of Natural Resources and Environmental Management

This research will directly address knowledge gaps in tropical fire ecology by sampling fuels and microclimate regularly across a wide range of sites on Oahu. Integration of this baseline information into existing management scenarios will be crucial for validating and implementing the real-time fire potential and behavior models currently in use in Hawaii.

Foreign

BAE Systems $40,000

Data Analysis and Algorithm Support for BAE Systems

Paul Lucey Hawaii Institute of Geophysics and Planetology

UH Personnel will analyze data provided by BAE Systems and develop scientific algorithms to improve usability of scientific data provided by BAE Systems.

St. Thomas University (STU) $30,209

Influence of Demographic and Economic Changes on the Development of Private Universities in the Osaka and Hyogo Prefectures

Peter A.J. Englert Hawaii Institute of Geophysics and Planetology

The influence of the falling number of eligible students and the changing economic basis in the Hyogo and Osaka prefectures of Japan on the development of private higher education institutions will be investigated.
Gifts, Grants, and Contracts for December 2008

Research

Hawaii- Business and Other

Oceanic Institute-Ctr for Trop & Subtrop Aqua $12,839
Adapting Aquaponics Systems for Use in the American Pacific Islands
Kent D Kobayashi Department of Tropical Plant and Soil Sciences
We believe that the co-culture of fish and plants has certain desirable characteristics for Pacific island farmers. We wish to adapt current techniques to the Pacific islands by understanding the underlying chemistry of the system.

Pukoa Scientific LLC $10,000
Acoustic Fiber Sensor Array Algorithms
John S Allen Department of Mechanical Engineering
Develop algorithms for detection, classification, and tracking of closed circuit drivers in a harbor environment.

Hawaii- Government Agencies

City and County of Honolulu $458,359
Biological and Sediment Monitoring Program with Supplemental Studies
James E Moncur Water Resources Research Center
The fundamental objective of the program is to assess the chronic effects of ocean outfall discharges of treated sewage on the marine communities and sediments.

DLNR-Division of Aquatic Resources $49,768
Integrated Ecosystem Management: Baseline Analysis and Survey Development
Celia M Smith Department of Botany
Specific goals of this proposal are to provide additional support for DAR to maximize success of the Kahekili Herbivore Enhancement Area. Funds will be used to for a thorough baseline analysis of the reef and nearby control sites, to establish detailed survey activities and protocols to measure the effectiveness of the proposed FRA, and develop a volunteer program.

DLNR-Division of Aquatic Resources $29,719
Black Coral Density and Uncertain Taxonomy: What are the implications for the black coral fishery?
John C Wiltshire Hawaii Undersea Research Laboratory
These dives will allow resource manager to measure black coral species densities with a better understanding of species identification.

DLNR-Division of Forestry & Wildlife $47,498
Human Impact Evaluation, Biological Inventory and Assessment, and Information Synthesis of the Ahihi Kinau, Maui Area Reserve
Paul L Jokiel Hawaii Institute of Marine Biology
This project will conduct and compare baseline surveys in 3 management regimes: closed and open areas within the NAR, and areas outside the NAR boundaries of Ahihi Kinau Natural Area Reserve, Maui. We will design methods to detect changes in urchin and seastar populations, fish density and behavior, and benthic cover and create a baseline for impacts to near-shore areas.

DLNR-Division of Forestry & Wildlife $803,816
Natural Area Reserves Management
David C Duffy Department of Botany
Research and manage endangered species in their protected habitats in the state's natural area reserves.
**Gifts, Grants, and Contracts for December 2008**

**Research**

**Hawaii- Government Agencies**

- **Hawaii-Dept of Health**
  - **Hawaii Tumor Registry**
    - Marc T Goodman, Cancer Research Center
    - Hawaii Tumor Registry will maintain a state cancer registry for identification and follow up of all cancer diagnosed in Hawaii as sponsored by the NCI Surveillance Epidemiology and End Results (SEER) program.
  - **Data Analysis of Hawaii's Uninsured Population**
    - Gerard G Russo, Department of Economics
    - Funds will be used to collect data from survey based estimated of number and characteristics of the uninsured population uninsured by age, gender, federal poverty level, race/ethnicity, employment status and country for calendar years 2005, 2006, and 2007 using specified data sources which will facilitate informed decision-making in the near future.
  - **Three Site Evaluation of Cultural Projects Part II**
    - Hamilton I. McCubbin, School of Social Work
    - Conduct evaluations of three cultural projects to determine impact and basis for improvement, run data analysis, report implications and recommendations of the study, and publish findings.
  - **Hair Analysis for Mercury and Arsenic Exposure**
    - Qingxiao Li, Department of Molecular Biosciences and Bioengineering
    - To assist the Hazard Evaluation and Emergency Response Office, Hawaii Department of Health in establishing a biomonitoring project to assess exposure to hazardous substances in the environment. Mercury and arsenic will be measured in hair collected from Women, Infant and Child participants.
  - **Evaluation of the Healthy Hawaii Initiative Nutrition Education Network (FSNE 2)**
    - Katie Heinrich, Office of Public Health Studies
    - Improve existing data resources and surveillance matrix, and identify, track and evaluate nutrition behaviors for Hawaii's food stamp eligible population. Provide outcome and process evaluation for FSNE programs, including quarterly progress evaluation reports, and provide technical assistance for evaluation.

- **Hawaii-Dept of Human Services**
  - **Juvenile Justice System Crime Analysis**
    - Meripa T. Godinet, School of Social Work
    - Perform secondary data analysis of the entire Juvenile Justice Systems data.

- **Hawaii-Dept of Land & Natural Resources**
  - **Growth, Mortality and Reproduction of Kole, Ctenochaetus Strigosus**
    - Ross C Langston, Chancellor, Windward Community College
    - This study will examine the growth, reproduction, and mortality of a Hawaiian reef fish, Ctenochaetus strigosus.
Gifts, Grants, and Contracts for December 2008

Research

Hawaii- Government Agencies

Hawaii-Dept of Land & Natural Resources  $90,179
  Threatened and Endangered Species Recovery: Kauai
  David C Duffy  Department of Botany
  Conduct applied field research to promote recovery of Kauai’s threatened and endangered plants.

Hawaii-Dept of Land & Natural Resources  $310,373
  Three Mountain Alliance Planning and Management
  Clifford W Morden  Department of Botany
  Coordinate the watershed protection plan of the Three Mountain Alliance and address priority objectives of the management plan.

Hawaii-Dept of Land & Natural Resources  $577,020
  Detection & Control of Invasive Species in Maui County
  David C Duffy  Department of Botany
  Implement a county-wide strategy for early detection and control of invasive species in Maui county.

Hawaii-Dept of Land & Natural Resources  $58,500
  Proposal for the Implementation of a Recreational Impacts to Reefs Local Action Strategy Coordinator
  David C Duffy  Department of Botany
  Facilitate the implementation of Hawaii’s Recreational Impacts to Reefs and Lack of Awareness Local Action Strategies.

Hawaii-Dept of Land & Natural Resources  $462,452
  Detection and Control of Invasive Species on the Island of Kaua`i
  David C Duffy  Department of Botany
  Control and eradicate invasive species on Kauai, with an emphasis on early detection and rapid response.

Hawaii-Dept of Land & Natural Resources  $20,000
  Assessment of Acacia Koa Forest cover and Productivity Across Environmental Gradients in Hawaii Using Fine Resolution Remote Sensing
  Travis W Idol  Department of Natural Resources and Environmental Management
  Fine-resolution satellite images will be used to assess Acacia koa forest cover, productivity, and health in Kokee State Park and surrounding areas on the Island of Kauai.

Hawaii-Dept of Land & Natural Resources  $57,900
  APHIS/WS Avian Influenza Surveillance Implementation Plan
  David C Duffy  Department of Botany
  Work collaboratively with multiple partners to sample bird populations for avian influenza.

Hawaii-Dept of Land & Natural Resources  $40,500
  Quantifying Causes of Coral Decline Around Maui Island
  Paul L Jokiel  Hawaii Institute of Marine Biology
Gifts, Grants, and Contracts for December 2008

Research

Hawaii- Government Agencies

This project will focus on identifying and quantifying the relative importance of a range of factors contributing to decline of Maui reefs so that natural resource managers in Hawaii will have improved capacity to develop appropriately targeted management strategies.

Hawaii-Dept of Land & Natural Resources   $34,000
Mauna Kea Watershed Planning and Management
Clifford W Morden Department of Botany
Coordinate the creation of a Mauna Kea Watershed Partnership, including the establishment of a partnership of landowners and development of a conservation plan.

Hawaii-Dept of Land & Natural Resources   $500,552
Detection and Control of Invasive Species on Oahu
David C Duffy Department of Botany
Implement an effective invasive species prevention and control program on Oahu.

Hawaii-Dept of Land & Natural Resources   $227,514
Ko'olau Mountains Watershed Partnership Management Plan Implementation, FY 09
Clifford W Morden Department of Botany
Research and manage watershed conservation on the Koolau Mountains on Oahu.

Hawaii-Dept of Land & Natural Resources   $248,550
State West Maui Mountains Watershed Partnership
Clifford W Morden Department of Botany
Conduct adaptive resource management and forest restoration in West Maui Mountains watershed.

Hawaii-Dept of Land & Natural Resources   $135,000
Maui District Endangered Species Research
David C Duffy Department of Botany
Research and monitor endangered seabirds on Lanai and Maui.

Hawaii-Dept of Land & Natural Resources   $34,000
Waianae Mountains Planning and Management
Clifford W Morden Department of Botany
Coordinate the creation of a Waianae watershed partnership, including the establishment of a partnership of landowners and development of a conservation plan.

Hawaii-Dept of Land & Natural Resources   $4,485
Black Coral Density and Uncertain Taxonomy: What are the Implication for the Black Coral Fishery?
John C Wiltshire Hawaii Undersea Research Laboratory
These dives will allow resource manager to measure black coral species densities with a better understanding of species identification.
Gifts, Grants, and Contracts for December 2008

Research

Hawaii- Government Agencies

Hawaii-Dept of Land & Natural Resources
Arthropod Prey Availability FY 09
Sharon Ziegler-Chong Pacific Aquaculture-UHH
$15,000

Hawaii-Dept of Land & Natural Resources
Watershed Protection in East Maui
Clifford W Morden Department of Botany
Conduct adaptive resource management of the East Maui Watershed.
$315,837

Hawaii-Dept of Land & Natural Resources
USGS Avian Influenza Surveillance Implementation Plan
David C Duffy Department of Botany
Work collaboratively with multiple partners to sample bird populations for avian influenza.
$22,500

Hawaii-Dept of Land & Natural Resources
The CGAPS Project: FY 08
David C Duffy Department of Botany
Continue coordination of Coordinating Group on Alien Pest Species projects, specifically education and public outreach.
$40,000

Hawaii-Dept of Land & Natural Resources
Size-Dependent and Age-Based Female Fecundity and Reproductive Output for Three Hawaiian Goatfish Species (Family Mullidae)
Kathleen Sabina Cole Department of Zoology
This project is to determine size-dependent and age-based female fecundity and reproductive output for three Hawaiian goatfish species, the yellowstripe goatfish, the yellowfin goatfish and the whitesaddle goatfish, in order to aid the development of successful management and conservation policies designed to protect existing populations of these three species.
$29,990

Hawaii-Dept of Transportation
State of Hawaii Vehicle Occupant Protection Studies
Karl E Kim Department of Urban and Regional Planning
Observational studies of seat belt use, child safety restraints, truck beds and helmet use. Also, use of hand held cellular phone by drivers.
$80,000

Hawaii- Non-Profit Organizations

HCF-G.F. Straub Trust
WNV NS4B as a Novel Target for Generating a Live Attenuated WNV Vaccine
Vivek R Nerurkar Dept of Trop Med, Medical Microbiology and Pharmacology
To identify West Nile Virus NS4B region responsible for the formation of the membranous web and to create infectious virus with impaired replication which does not inhibit IN alpha/beta pathway.
$50,000
Gifts, Grants, and Contracts for December 2008

Research

Hawaii- Non-Profit Organizations

HCF-Geist Foundation
R-Ras Regulation of Vascular Permeability
Michelle L Matter Cancer Research Center
We will investigate the role of R-Ras in regulating integrin activity in the vasculature.

HCF-Medical Research Funds
Contribution of Sperm Nucleus to Paternal DNA Replication
William S Ward Dept Anatomy, Biochemistry, Physiology and Reproductive Biol
We will test our hypothesis that the sperm cell provides origin recognition sites for DNA replication in the one cell embryo.

HCF-Medical Research Funds
Functional Investigations of Early Neurogenesis
Elaine C Seaver Pacific Biosciences Research Center
The project will characterize early stages of nervous system development in the annelid Capitella sp. I.

HCF-Medical Research Funds
A Glucose-Regulated Selenoprotein in Alzheimer's and Type II Diabetes
Frederick P Bellinger Department of Cell and Molecular Biology
Oxidative stress causes tissue damage in many disorders including Alzheimer's and type II diabetes. Selenoproteins may help prevent neurodegeneration in the early stages of certain diseases. The overall goal of this study is to determine if a glucose-regulated selenoprotein is associated with plaques of Alzheimer's disease.

HCF-Medical Research Funds
Morphogenetic Potential of the Gene Six2 in Renal Nephron Regeneration
Jack Somponpun Dept Anatomy, Biochemistry, Physiology and Reproductive Biol
The purpose of this research is to determine whether kidney nephrons can be regenerated following injury.

HCF-Medical Research Funds
Tuft, A New Mouse Model for Apoptotic Signaling Pathways in Neural Tube Defects
Keith S.K. Fong John A. Burns School of Medicine
This research is aimed at mapping a gene that causes a neural tube defect (brain tumor) in a mouse model.

Hawaiian Silversword Foundation
Lupea Habitat Restoration: Phase 1
Clifford W Morden Department of Botany
Restore and protect native mamane forest in North Kona to support habitat for the endangered palila and other native bird species.

University of Hawaii Foundation
Pew Marine Conservation Fellowship
Robert H Richmond Pacific Biosciences Research Center
Conduct research in coral bio-marker development and applications through field and laboratory studies in Guam, Palau and Hawaii. This bio marker research will provide a valuable tool for coral reef conservation efforts via data that will demonstrate cause and effect and the underlying mechanism for damage to corals.
Gifts, Grants, and Contracts for December 2008

Research

Hawaii- Non-Profit Organizations

University of Hawaii Foundation $12,676
Real Time, Non-Invasive Lung Water Monitoring
Claude Le Saux Dept Anatomy, Biochemistry, Physiology and Reproductive Biol
To develop a fundamental understanding of the microwave method for measuring changes in lung water content by pursuing both the clinical/physiological and engineering advances of this technology with was originally by the Hawaii Center for Advanced Communications - Engineering group.

Mainland- Business and Other

AmericaView $23,989
State View Program Development and Support for the State of Hawaii
Robert Wright Hawaii Institute of Geophysics and Planetology
Promoting the use of satellite remote sensing in the State of Hawaii through education, research, outreach and technology transfer; archive satellite data relevant to the State of Hawaii.

Battelle Columbus Division $97,934
Pacific Disaster Center Geospatial Data Expertise for Disaster Management Exercises
James R Gaines Vice President for Research
The Pacific Disaster Center Geospatial Data Expertise for Disaster Management Exercises

PPD Development, LP $41,470
AVX-303: A Phase 3, Extension Study of the Safety of Apricitabine in Treatment-Experienced HIV-1 Infected Patients Who Have Completed Protocol AVX-301
Cecilia M Shikuma Department of Medicine
To test experimental HIV drug therapy on HIV-infected individuals.

Smithsonian Astrophysical Observatory $1,200
The Non-Potential Structure of Active Regions
Jing Li Institute for Astronomy
Data taken at the Mees Solar Observatory on the Imaging Vector Magnetograph will be reduced by the PI and shared with the other project members to refine the modeling methods to construct Nonlinear Force Free Fields (NLFFF). This in turn will improve the understanding of the solar magnetic field.

Mainland- Health Organizations

Children's Hospital Los Angeles $540
Kids Seek Cure for Kids
Vivek R Nerurkar Dept of Trop Med, Medical Microbiology and Pharmacology
The goal of this project is to train Chihui Yuan in conducting research in the John A. Burns School of Medicine.

Riverside Research Institute - NY $29,000
Acoustic Contrast Agents for Use with High-Frequency Ultrasound
John S Allen Department of Mechanical Engineering
High frequency ultrasound with contrast agents offers potential for improved imaging and perfusion measurements
Gifts, Grants, and Contracts for December 2008

Research

Mainland- Non-Profit Organizations

Cades Fund
- Support of Biosciences Research and Training at the Bekesy Laboratory
  Daniel K Hartline  Pacific Biosciences Research Center
  Support of training and basic biomedical research in molecular and cellular neurophysiology.

The Employee Ownership Foundation
- Impact of ESOPS on Hawaii Firm Productivity and Employee Satisfaction
  Shirley June Daniel  Shidler College of Business
  Conduct a review of the relevant professional and academic research regarding the use of Employee Stock Ownership Plans in the U.S. and Abroad. The field study component will include a qualitative examination of two in-depth case studies of Hawaii ESPO firms. A Survey will collect data from ESOP and non-ESOP firms in Hawaii.

U.S. - Japan Cooperative Program in High Energy Physics
  Gary S Varner  Department of Physics and Astronomy
  Fabrication of a high speed STURM chip from MOSIS to be used in the accelerator beam diagnostics at the accelerator at KEK, Tsukuba, Japan.

Miscellaneous

'Ohu 'Ohu Ko'olau, Inc.
- Ko`olau Mountains Watershed Partnership Incipient Ungulate Control
  Clifford W Morden  Department of Botany
  Prevent the establishment of feral goats in the upper portions of the Ko`olau Mountains on Oahu.

'Ohu 'Ohu Ko'olau, Inc.
- Oahu Forest National Wildlife Refuge - Eradication of Incipient Populations of Invasive Plants
  Clifford W Morden  Department of Botany
  Remove incipient weeds from Oahu Forest National Wildlife Refuge and collect GIS data on their locations.

National Aeronautics and Space Administration

National Aeronautics & Space Administration
- Combined Raman, Fluorescence, and Lidar Multi-Sensors (RFLMS) for Remote Mineralogical, Biological and Planetary Atmospheric Exploration
  Shiv K Sharma  Hawaii Institute of Geophysics and Planetology
  This project is focused on developing a combined Raman and laser-induced native fluorescence spectrometer and lidar instrument for robotic and lander based exploration of Mars.

National Aeronautics & Space Administration
- Characterization of Hg: Cd: Te Avalanche Photo Diode Arrays: a Path to an Infrared Photon Counting Array
  Donald N Hall  Institute for Astronomy
  The objective of this proposed research is to completely bypass the voltage read noise in conventional charge integrating arrays by demonstrating noiseless infrared photon counting detector arrays limited only by natural background. We propose to demonstrate this for the near infrared utilizing existing, space qualified components.
Gifts, Grants, and Contracts for December 2008

Research

National Aeronautics and Space Administration

National Aeronautics & Space Administration
Morphometry of Martian Impact Crater Ejecta Deposits and its Implication
Joseph M. Boyce
Hawaii Institute of Geophysics and Planetology
Proposal to use the shapes of impact crater ejecta deposits on Mars to infer the mechanisms for fluidized ejecta emplacement.

National Aeronautics & Space Administration
Using the Ion Microprobe to Determine the Abundances and Isotopic Composition of Solar Wind Elements in the Genesis Collectors
Gary Robert Huss
Hawaii Institute of Geophysics and Planetology
I propose to study the solar wind collected by NASA's Genesis Mission by using the Cameca ims 1280 ion microprobe to measure the solar wind profiles in the Genesis collectors.

National Aeronautics & Space Administration
Measurement and Analysis of Aerosol Physio-chemistry and Optical Properties in Support of ARCTAS
Antony D Clarke
Department of Oceanography
To support NASA's mission objectives on board the proposed aircraft P-3b, primarily airborne instrumentation.

National Aeronautics & Space Administration
Support Services, Maintenance and Calibration of the TLRS-4 System
Jeffrey R. Kuhn
Institute for Astronomy
To continue the history of Haleakala as one of two fixed, well-defined geometric reference points in NASA's tectonic motion data solution.

National Science Foundation

National Science Foundation
The Application of Global Positioning System (GPS) Sondes to Hurricane Intensity Evolution
Gary M Barnes
Department of Meteorology
Use the Global Positioning Sondes deployed from research aircraft in several hurricanes to understand intensity evolution and tornadogenesis within the storm.

National Science Foundation
Functional Approaches to the Origin of the Bilaterally Symmetrical Body Plan in Animal Development
Mark Q. Martindale
Pacific Biosciences Research Center
To document anatomical features of bilateral symmetry in the nervous system of "simple" animals (sea anemones) and to investigate whether the molecular basis for bilaterality is the same in this group as it is in "higher" animals.

National Science Foundation
Collaborative Research: The Internal Tide and Mixing in Monterey and Ascension Canyons
Glenn S Carter
Department of Oceanography
A collaborative proposal between UH and APL/UW to model and conduct intensive observations in Monterey Canyon, CA and nearby Ascension Canyon. The focus is on how internal tides propagate in canyons and are steered and focused by the topography.
Gifts, Grants, and Contracts for December 2008

Research

National Science Foundation

National Science Foundation

Collaborative Research: The Role of Viscosity Heterogeneity in Plate-Mantle Coupling
Clinton P. Conrad
Department of Geology and Geophysics
Lithospheric stresses, which lead to mountain building and seismicity, are partially controlled by stresses that mantle flow exerts on the base of tectonic plates. We propose to predict these stresses using global mantle flow models, and to constrain these models using observed plate motions and observations of lithospheric deformation and stress.

US Colleges and Universities

California Institute of Technology

Detecting Transient Surface Features via Dynamic Landmarking
Norbert Schorghofer
Institute for Astronomy
Dr. Norbert Schorghofer will perform analysis on Martian dark slope streaks. He will also travel to JPL to coordinate research.

Mississippi State University

Application of Multi Satellite Radiance Products to NRL NAVDAS
Tim Li
Department of Meteorology
To use the community radiative transfer model (CRTM) to assimilate the radiance products from satellite sensors, SSMIS and AIRS.

Oregon Health Sciences University

A Study of Continuous Oral Contraceptives and Doxycycline
Bliss Kaneshiro
Department of Obstetrics, Gynecology, and Women's Health
This study will help us examine the study drug, doxycycline and access whether the drug can decrease the amount of breakthrough bleeding that happens when a woman starts taking continuous hormonal birth control.

University of Arizona

Interpretation of Mars Odyssey GRS Data
G. Jeffrey Taylor
Hawaii Institute of Geophysics and Planetology
Interpret data from Mars Odyssey Gamma-Ray Spectrometer to understand the formation of the Martian crust and the nature of weathering conditions on it.

University of California, Santa Cruz

The Roms Ias Data Assimilation and Prediction System: Quantifying Uncertainty
Brian Powell
Department of Oceanography
Refine ocean model data assimilation algorithms to determine how observations assist the model, determine the final error of the model, and how to combine different models for more accurate estimations of the ocean.

University of Mississippi

Remote Infrasonic Monitoring of Natural Hazards (RIM)
Milton A. Garces
Hawaii Institute of Geophysics and Planetology
Develop infrasound technology to support NOAA monitoring in the US for severe weather, high surf, and tsunamis.
Gifts, Grants, and Contracts for December 2008

Research

US Colleges and Universities

Yale University $135,242
Alcohol Associated Outcomes Among HIV+/- Aging Veterans
Mariana Gerschenson John A. Burns School of Medicine
Developing mitochondrial and cytoplasmic aspartate aminotransferase antibodies.

Subcount: 98 Subtotal: $35,071,523

Non-Research

DA-Dept of Agriculture

Department of Agriculture $297,224
Extension Outreach and Assistance in Improved Pasture and Livestock Management Practices for Pacific Islanders
Mark S Thorne Department of Human Nutrition, Food and Animal Sciences
The purpose of this proposed project is to provide extension outreach and assistance to Pacific Islanders in Guam and the Commonwealth of the Northern Mariana Islands in grazing and livestock management practices, pasture improvement techniques, and integrated weed management methods.

DHHS-Dept of Health and Human Services

Department of Health & Human Services $201,250
Minority Health Youth Empowerment Grant Program
Errol Yudko Social Sciences-UHH - Division Office

National Cancer Institute/NIH/DHHS $345,555
Cancer Information Service
Carl-Wilhelm Vogel Cancer Research Center
The National Cancer Institute's cancer Information Service is a national resource for information and education about cancer, providing the latest and most accurate cancer information to patients and their families, the public, and health professionals. Hawaii's Partnership Program focuses on Native Hawaiians and other medically underserved populations in the US Pacific.

DOC-Dept of Commerce

DOC-National Marine Fisheries Service $9,980
Create an Educational Interpretive Graphic Panel on the Hawaiian Monk Seal at the Waikiki Aquarium
Andrew Rossiter Waikiki Aquarium
The Waikiki Aquarium is creating an educational graphic panel about the Hawaiian monk seal. The graphic panel will help to bring about public awareness of the threats facing Hawaiian monk seals. This federal and state partnership is an essential step in helping to protect the Hawaiian monk seal.
Gifts, Grants, and Contracts for December 2008

Non-Research

DOI-Dept of Interior

Department of Interior $230,731
University of Hawaii Participation in Vietnam PEPFAR
Cecilia M Shikuma Department of Medicine
Train Vietnamese military physicians in medical management of HIV infected patients, assist in development of in-country HIV/AIDS treatment and care.

Foreign

University of Queensland $5,000
Global Environmental Fund PhD.
Ruth D Gates Hawaii Institute of Marine Biology
This supplement will be used to support travel and miscellaneous costs incurred by the PI to attend meetings associated with the project.

Hawaii- Business and Other

Alu Like $108,045
The Po'okela Project Molokai - Maui Community College - Molokai Education Center
Clyde M Sakamoto Chancellor, Maui Community College
The Po'okela Project Molokai intends to serve 60 native Hawaiian students on Molokai in PY 2007-2009. Students will be assisted through a culturally based recruitment and retention model that provides academic and vocational activities to prepare students for today's high skills, high wage, and high demand occupations locally and globally.

Alu Like $284,110
Po'okela Project Maui Community college
Clyde M Sakamoto Chancellor, Maui Community College
Project to serve 80 Hawaiian students through cohort and summer bridge programs that focus on personal, educational, career and technical development aimed at improving student recruitment and retention.

Alu Like $238,557
Ho'oulu Project
Michael Tagawa Chancellor, Leeward Community College
To improve career and technical education services for Hawaiian natives.

Hawaii Agricultural Development Corporation $43,000
Logistics Arrangement for a Cattlemen's Trip to Australia to Learn About Leucaena
James R Hollyer Department of Plant and Environmental Protection Sciences
Coordinate the Hawaii logistics for Hawaii ranchers and their guests to travel to and partake in a 10-day educational trip to Australia.

Hawaiian Electric Co Inc $15,000
Data Acquisition System Troubleshooting, Repair, Monitoring, and Maintenance of Photovoltaic Systems* for HECO SunPower for Schools Program
Eric L Miller Hawaii Natural Energy Institute
The Hawaii Natural Energy Institute (HNEI) at the University of Hawaii at Manoa (UH) will perform consulting work for the Hawaiian Electric Company (HECO), providing recommendations for repairing, maintaining and operation data acquisition systems at HECO-specified photovoltaic installation sites in the "SunPower for Schools" program.
## Gifts, Grants, and Contracts for December 2008

### Non-Research

#### Hawaii- Business and Other

<table>
<thead>
<tr>
<th>Organization</th>
<th>Amount</th>
<th>Project Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kamehameha Schools</td>
<td>$359,720</td>
<td>Hookulaiwi: Aha Hoonaauao Oiwi, Department of Curriculum Studies. Hookulaiwi aims to offer original insights into Hawaiian knowledge and practices, as well as insights on how this information can be utilized to form the pedagogical foundations to K-12 classrooms with high numbers of Hawaiian children and graduate level education. This request is to primarily support preservice and inservice teachers.</td>
</tr>
<tr>
<td>Kolohala Holdings LLP</td>
<td>$385,000</td>
<td>Renewable Hydrogen Program Management Services, Hawaii Natural Energy Institute. Provide services in support of the Hawaii Renewable Hydrogen Program established under Section 196-10 of the Hawaii Revised Statutes specifically drafting a 2009 to 2010 Program Plan, a 2010 to 2020 Program Plan, provide policy recommendations, conduct quarterly progress meetings, and submit quarterly reports.</td>
</tr>
<tr>
<td>Moana Pa’akai Inc.</td>
<td>$1,000</td>
<td>Dental Packets for all of Maui's Babies, Chancellor, Maui Community College. Dental assisting students will assemble and distribute Baby Dental packets to newborns at Maui Memorial Medical Center.</td>
</tr>
<tr>
<td>Queen Emma Land Company</td>
<td>$491,791</td>
<td>Reimbursement Agreement - FY2009, Agreement No. SF09-QMC-QELC-MED, Department of Medicine. Salary, Fringe Benefit &amp; Malpractice reimbursement agreement to provide physician and physician related services for FY 2009.</td>
</tr>
</tbody>
</table>

#### Hawaii- Government Agencies

<table>
<thead>
<tr>
<th>Organization</th>
<th>Amount</th>
<th>Project Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>DLNR-Division of Forestry &amp; Wildlife</td>
<td>$75,000</td>
<td>Wao Kele o Puna Forest Reserve Coordinator, Department of Botany. Coordinate the conservation management and protection of the newly established Wao Kele o Puna Forest Reserve</td>
</tr>
<tr>
<td>Hawaii-Civil Defense Division</td>
<td>$120,000</td>
<td>Disaster Public Awareness Campaign for Hawaii, Social Science Research Institute. The project is designed to improve hazard mitigation and risk assessment public education and awareness in the State of Hawaii. Activities include improving the mitigation website, providing links to decision-support tools, and developing materials and products that provide information that can be used by the public to reduce hazard risks.</td>
</tr>
<tr>
<td>Hawaii-Dept of Accounting &amp; General Services</td>
<td>$47,001</td>
<td>Hawaii Small Business Preference Regulations Training, William Richardson School of Law. The University of Hawaii Procurement Institute proposes to design curriculum, select qualified trainers, and teach a course titled &quot;Successful Implementation of Small Business Preference Regulations: Policy, Practices, and Performance.&quot;</td>
</tr>
</tbody>
</table>
Gifts, Grants, and Contracts for December 2008

Non-Research

Hawaii- Government Agencies

Hawaii-Dept of Education

$27,038

Teacher Training through Hands-On and Excursion-Based Activities in Aerospace Science: A Mathematics and Science Partnership between the Windward Dis

Joseph E Ciotti College of Natural Sciences

Provide series of in-service teacher training workshops in aerospace science for Windward District K-12 teachers. Workshops include: two preparatory half-day, a 7-day full-day and one follow-up full day session. On-campus resources includes WCC's Imaginarium, NASA Flight Training Aerospace Education Laboratory, Aerospace Exploration Lab and Lanihuli Observatory.

Hawaii-Dept of Health

$25,998

Graduate Assistant Research and Evaluation Project

Charles Mueller Department of Psychology

Psychology Department and Department of Child and Adolescent Mental Health Division (DOH-CAMHD) collaborate to provide research and evaluation training for graduate psychology students.

Hawaii-Dept of Human Services

$276,236

Partnership to Promote the Efficiency and Effectiveness of the State of Hawaii's Medicaid Program Through an Oral Health Initiative

Nancy K Johnson Chancellor, Maui Community College

Maui Community College Allied Health Department and Oral Health Professionals will provide administrative case management, intra/agency coordination, collaboration and administration, program planning and policy development, quality management and training of dental auxiliaries.

Hawaii-Dept of Human Services

$498,403

Title IV-E Training Academy

Meripa T. Godinet School of Social Work

To train public child welfare workers and administrators to meet key competency areas in the public child welfare system. In addition, the project will also provide evaluation and assessment on trainings provided by the Title IV-E Training Academy.

Hawaii-Dept of Human Services

$70,542

Partnership to Increase the Quality of Hawaii's Child Welfare Services

Jon K Matsuoka School of Social Work

To provide consultative services in the areas of Child Welfare policy/practice and Finance/Management.

Hawaii-Dept of Human Services

$153,078

Partnership to Increase the Quality of Hawaii's Child Welfare Services

Jon K Matsuoka School of Social Work

To provide consultative services in the areas of Child Welfare policy/practice and Finance/Management.

Hawaii-Dept of Land & Natural Resources

$120,000

Volcano Rare Plant Facility

Kenneth Y Kaneshiro Pacific Biosciences Research Center

Propagation and maintenance of endangered Hawaiian plant species at the Volcano Rare Plant Propagation Facility.
Gifts, Grants, and Contracts for December 2008

Non-Research

Hawaii- Health Organizations

Queen's Medical Center

Reimbursement Agreement - FY2009, Agreement No. SF09-QMC-SURG-ORTHO
Danny M Takanishi Department of Surgery
Salary, Fringe Benefit & Malpractice reimbursement Agreement to provide physician and physician related services for FY 2009.

Waianae Coast Comprehensive Health Center

Life Exploration and Planning and Job Search Skills class
Michael Tagawa Chancellor, Kapiolani Community College
Provide instruction for IS 104 Career/Life Exploration and Planning and IS105C Job Search Skills class

Hawaii- Non-Profit Organizations

University of Hawaii Foundation

East Asian Buddhism Professorship
Mary Elizabeth Tiles Department of Philosophy
To pay for salary and fringe of the East Asian Buddhism Professorship for the College of Arts & Humanities.

University of Hawaii Foundation

Kellogg P-3 Expenditures
Linda K Johnsrud College of Education
To pay for payroll (salary and fringe) and non-payroll expenditures related to the Kellogg P-3 grant for the project period of July 1, 2007 through December 31, 2014.

University of Hawaii Foundation

Manoa Journal
R F Stewart Department of English
Funds for staff wages.

University of Hawaii Foundation

Kellogg Interest P-20 Administration
Linda K Johnsrud Vice President for Academic Planning and Policy
To pay for P-20 Administrative salary and fringe charges.

Mainland- Business and Other

Council for Biotechnology Information

Tomorrow's Table Education Tour
Kevin M Kelly Vice President for Research
I propose bringing Pamela Ronald and her husband Raoul Adamchak to Hawaii in February 2009 for a series of presentations and discussions regarding their book, Tomorrow's Table. Pamela is a rice geneticist and genetic engineer at UC Davis and Raoul is an organic farmer who runs the UC Davis Student Farm's Market Garden.
Gifts, Grants, and Contracts for December 2008

Non-Research

Mainland- Business and Other

Nature Conservancy $40,040
Marine Biological Monitoring Assessment and Program Development
Charles Birkeland Hawaii Cooperative Fishery Research Unit
Provide marine survey design and analysis and data management expertise to support Nature Conservancy (TNC) monitoring programs in Hawaii. Additionally, summarize research relevant to making the case for area based management in Hawaii, and assist TNC in assessing scientifically validity of current management regulations.

Mainland- Health Organizations

American Academy of Pediatrics $10,000
Medical/Legal Partnership for Children
Dina M Shek William Richardson School of Law
Train medical providers to utilize on-site lawyers and law students to address social and environmental problems that are detrimental to the health and well-being of children in low-income families.

Mainland- Non-Profit Organizations

American Meteorological Society $39,299
Journal of Physical Oceanography
Eric Firing Department of Oceanography
To provide editorial assistant support for AMS journals for current editors of the Journal of Physical Oceanography (E. Firing) and Journal of Climate (S.P. Xie).

Chinese Language Teachers Association $25,000
Chinese Language Teachers Association (CLTA)
Cynthia Y Ning Center for Chinese Studies
Handles accounts, records and general communication (national and international) of the Chinese Language Teachers Association.

Sidney Stern Memorial Trust $2,500
Actors from the London Stage: A Hawaii Residency
Timothy Roy Slaughter Outreach College
An arts residency with theater company, Actors from the London Stage, including 1 public performance and 30 outreach activities.

Miscellaneous

International Union of Nutritional Sciences $3,800
Financial Duties for the International Union of Nutritional Sciences (IUNS)
Laurence N Kolonel Cancer Research Center
Send annual dues notices to approximately 80 countries that are Adhering Bodies (ABs) of IUNS; Receive & deposit dies from ABs and sent receipts; Communicate as needed with ABs regarding overdue dues; Disperse funds as directed by Treasurer (Dr. S. Murphy); Maintain accurate financial records for IUNS & provide a final report of expenditures.
## Gifts, Grants, and Contracts for December 2008

### Non-Research

#### National Aeronautics and Space Administration

- **National Aeronautics & Space Administration**
  - Tour Through the Solar System: Using NASA Data Sets for Inspiring High School Level Science and Mathematics Education Through Problem-Based Learning
  - Jeffrey Gillis-Davis
  - Hawaii Institute of Geophysics and Planetology
  - We will develop a high school curriculum that is comprised of (1) modular lesson plans, (2) teacher tutorials, and (3) hands-on laboratory experiments based on the latest NASA mission materials that we work with. This planetary exploration themed curriculum coherent we be aligned with national and Hawaii education science standards.

#### US Colleges and Universities

- **Mississippi State University**
  - University of Hawaii Participation in MOS University Consortium PET Project
  - David K Lassner
  - Information Technology Services
  - The University of Hawaii will support the MOS University Team with the Training Coordination of the DoD PET Program. It will also respond to requests for technical training support as requested.

- **Saddleback College**
  - "Rapid Tech" National Center for Rapid Technologies
  - Michael Jennings
  - Chancellor, Honolulu Community College
  - Curriculum development in 3D Rapid Prototyping in architecture.

- **University of Arizona**
  - Water Quality Research and Extension Coordination in Hawaii
  - Carl I Evensen
  - Department of Natural Resources and Environmental Management
  - This revised budget is to cover expenses that will be incurred from organizing and conducting a Regional Project Review by a panel of water coordinators from USDA CSREES's Water Program on members of Region 9. This review is mandatory to fulfill our project requirements.

- **University of California, Los Angeles**
  - Pacific Public Health Training Center
  - Valerie Yontz
  - Office of Public Health Studies
  - The grant's goal is to develop and support public health training opportunities that are consistent with the public health workforce development objectives in Healthy People 2010.

- **University of California, San Francisco**
  - HIV Care Services Training & Educational Services
  - Cyril K Goshima
  - Department of Psychiatry
  - Provide HIV/AIDS Care Services Training and Educational Services to health care providers in Hawaii and South Pacific.

- **University of California, San Francisco**
  - HIV Care Services Training & Educational Services
  - Cyril K Goshima
  - Department of Psychiatry
  - Provide HIV/AIDS Care Services Training and Educational Services to health care providers in Hawaii and South Pacific.
Gifts, Grants, and Contracts for December 2008

Non-Research

US Colleges and Universities

University of Melbourne $198,865
Relating to Malaria in Pregnancy, Major Activity 13: Pathogenesis, Immunity and Burden of Disease, (Placental Malaria Workshop and Ultrasound Study)
Diane W. Taylor Dept of Trop Med, Medical Microbiology and Pharmacology
The goal of this subcontract agreement is to: 1) organize and conduct a workshop on Placental Malaria in Cameroon, March 2008 and 2) conduct studies using ultrasound to examine the importance of timing of malaria infection to pregnancy outcome.

Subcount: 46 Subtotal: $5,879,438
Count: 144 Total: $40,950,961
Funds Received from UH Foundation for 12/01/2008 - 12/31/2008

Non-Research

Hawaii- Non-Profit Organizations

University of Hawaii Foundation
"Kellogg Interest P-20 Administration"
Johnsrud, Linda K Vice President for Academic Planning and Policy
To pay for P-20 Administrative salary and fringe charges.

University of Hawaii Foundation $56,510

"Kellogg P-3 Expenditures"
Johnsrud, Linda K College of Education
To pay for payroll (salary and fringe) and non-payroll expenditures related to the Kellogg P-3 grant for the project period of July 1, 2007 through December 31, 2014.

University of Hawaii Foundation $74,066

"Manoa Journal"
Stewart, R F Department of English
Funds for staff wages.

University of Hawaii Foundation $3,500

"East Asian Buddhism Professorship"
Tiles, Mary Elizabeth Department of Philosophy
To pay for salary and fringe of the East Asian Buddhism Professorship for the College of Arts & Humanities.

Research

Hawaii- Non-Profit Organizations

University of Hawaii Foundation $12,676
"Real Time, Non-Invasive Lung Water Monitoring"
Le Saux, Claude Dept Anatomy, Biochemistry, Physiology and Reproductive Biol
To develop a fundamental understanding of the microwave method for measuring changes in lung water content by pursuing both the clinical/physiological and engineering advances of this technology with was originally by the Hawaii Center for Advanced Communications - Engineering group.

University of Hawaii Foundation $48,250
"Pew Marine Conservation Fellowship"
Richmond, Robert H Pacific Biosciences Research Center
Conduct research in coral bio-marker development and applications through field and laboratory studies in Guam, Palau and Hawaii. This bio marker research will provide a valuable tool for coral reef conservation efforts via data that will demonstrate cause and effect and the underlying mechanism for damage to corals.

Count: 6 Total: $223,165
### Extramural Research Awards
for the Month of
December 2008

Distribution by Sponsors

<table>
<thead>
<tr>
<th>AGENCY-UNIT</th>
<th>NO. OF AWARDS</th>
<th>AMOUNT</th>
<th>PERCENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>DA-Dept of Agriculture</td>
<td>2</td>
<td>$134,309</td>
<td>0.38%</td>
</tr>
<tr>
<td>DHHS-Dept of Health and Human Services</td>
<td>2</td>
<td>$1,087,567</td>
<td>3.10%</td>
</tr>
<tr>
<td>DOD-Department of Defense</td>
<td>15</td>
<td>$21,532,640</td>
<td>61.40%</td>
</tr>
<tr>
<td>DOE-Dept of Energy</td>
<td>2</td>
<td>$4,014,395</td>
<td>11.45%</td>
</tr>
<tr>
<td>DOI-Dept of Interior</td>
<td>1</td>
<td>$9,375</td>
<td>0.03%</td>
</tr>
<tr>
<td>Federal Agencies</td>
<td>1</td>
<td>$69,001</td>
<td>0.20%</td>
</tr>
<tr>
<td>Foreign</td>
<td>2</td>
<td>$70,209</td>
<td>0.20%</td>
</tr>
<tr>
<td>Hawaii- Business and Other</td>
<td>2</td>
<td>$22,839</td>
<td>0.07%</td>
</tr>
<tr>
<td>Hawaii- Government Agencies</td>
<td>33</td>
<td>$5,220,143</td>
<td>14.88%</td>
</tr>
<tr>
<td>Hawaii- Non-Profit Organizations</td>
<td>10</td>
<td>$470,915</td>
<td>1.34%</td>
</tr>
<tr>
<td>Mainland- Business and Other</td>
<td>4</td>
<td>$164,593</td>
<td>0.47%</td>
</tr>
<tr>
<td>Mainland- Health Organizations</td>
<td>2</td>
<td>$29,540</td>
<td>0.08%</td>
</tr>
<tr>
<td>Mainland- Non-Profit Organizations</td>
<td>3</td>
<td>$60,190</td>
<td>0.17%</td>
</tr>
<tr>
<td>Miscellaneous</td>
<td>2</td>
<td>$102,891</td>
<td>0.29%</td>
</tr>
<tr>
<td>National Aeronautics and Space Administration</td>
<td>6</td>
<td>$816,187</td>
<td>2.33%</td>
</tr>
<tr>
<td>National Science Foundation</td>
<td>4</td>
<td>$564,072</td>
<td>1.61%</td>
</tr>
<tr>
<td>US Colleges and Universities</td>
<td>7</td>
<td>$702,657</td>
<td>2.00%</td>
</tr>
<tr>
<td><strong>Total:</strong></td>
<td><strong>98</strong></td>
<td><strong>$35,071,523</strong></td>
<td><strong>100%</strong></td>
</tr>
</tbody>
</table>

## Extramural Non-Research Awards
for the Month of
December 2008
Distribution by Sponsors

<table>
<thead>
<tr>
<th>AGENCY-UNIT</th>
<th>NO. OF AWARDS</th>
<th>AMOUNT</th>
<th>PERCENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>DA-Dept of Agriculture</td>
<td>1</td>
<td>$297,224</td>
<td>5.06%</td>
</tr>
<tr>
<td>DHHS-Dept of Health and Human Services</td>
<td>2</td>
<td>$546,805</td>
<td>9.30%</td>
</tr>
<tr>
<td>DOC-Dept of Commerce</td>
<td>1</td>
<td>$9,980</td>
<td>0.17%</td>
</tr>
<tr>
<td>DOI-Dept of Interior</td>
<td>1</td>
<td>$230,731</td>
<td>3.92%</td>
</tr>
<tr>
<td>Foreign</td>
<td>1</td>
<td>$5,000</td>
<td>0.09%</td>
</tr>
<tr>
<td>Hawaii- Business and Other</td>
<td>9</td>
<td>$1,926,223</td>
<td>32.76%</td>
</tr>
<tr>
<td>Hawaii- Government Agencies</td>
<td>10</td>
<td>$1,413,296</td>
<td>24.04%</td>
</tr>
<tr>
<td>Hawaii- Health Organizations</td>
<td>2</td>
<td>$413,040</td>
<td>7.03%</td>
</tr>
<tr>
<td>Hawaii- Non-Profit Organizations</td>
<td>4</td>
<td>$162,239</td>
<td>2.76%</td>
</tr>
<tr>
<td>Mainland- Business and Other</td>
<td>2</td>
<td>$51,600</td>
<td>0.88%</td>
</tr>
<tr>
<td>Mainland- Health Organizations</td>
<td>1</td>
<td>$10,000</td>
<td>0.17%</td>
</tr>
<tr>
<td>Mainland- Non-Profit Organizations</td>
<td>3</td>
<td>$66,799</td>
<td>1.14%</td>
</tr>
<tr>
<td>Miscellaneous</td>
<td>1</td>
<td>$3,800</td>
<td>0.06%</td>
</tr>
<tr>
<td>National Aeronautics and Space Administration</td>
<td>1</td>
<td>$106,978</td>
<td>1.82%</td>
</tr>
<tr>
<td>US Colleges and Universities</td>
<td>7</td>
<td>$635,723</td>
<td>10.81%</td>
</tr>
<tr>
<td><strong>Total:</strong></td>
<td><strong>46</strong></td>
<td><strong>$5,879,438</strong></td>
<td><strong>100%</strong></td>
</tr>
</tbody>
</table>
### Extramural Research Awards
#### Year to Date: 07/01/08 - 12/31/08
#### Distribution by Sponsors

<table>
<thead>
<tr>
<th>AGENCY-UNIT</th>
<th>NO. OF AWARDS</th>
<th>AMOUNT</th>
<th>PERCENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>DA-Dept of Agriculture</td>
<td>61</td>
<td>$6,798,696</td>
<td>4.20%</td>
</tr>
<tr>
<td>DHHS-Dept of Health and Human Services</td>
<td>63</td>
<td>$39,254,557</td>
<td>24.22%</td>
</tr>
<tr>
<td>DOC-Dept of Commerce</td>
<td>47</td>
<td>$19,452,059</td>
<td>12.00%</td>
</tr>
<tr>
<td>DOD-Department of Defense</td>
<td>42</td>
<td>$27,824,554</td>
<td>17.17%</td>
</tr>
<tr>
<td>DOE-Dept of Energy</td>
<td>11</td>
<td>$5,699,416</td>
<td>3.52%</td>
</tr>
<tr>
<td>DOI-Dept of Interior</td>
<td>25</td>
<td>$2,394,970</td>
<td>1.48%</td>
</tr>
<tr>
<td>Federal Agencies</td>
<td>5</td>
<td>$2,431,879</td>
<td>1.50%</td>
</tr>
<tr>
<td>Foreign</td>
<td>10</td>
<td>$3,042,383</td>
<td>1.88%</td>
</tr>
<tr>
<td>Hawaii- Business and Other</td>
<td>22</td>
<td>$3,192,029</td>
<td>1.97%</td>
</tr>
<tr>
<td>Hawaii- Government Agencies</td>
<td>95</td>
<td>$13,496,830</td>
<td>8.33%</td>
</tr>
<tr>
<td>Hawaii- Health Organizations</td>
<td>10</td>
<td>$477,340</td>
<td>0.29%</td>
</tr>
<tr>
<td>Hawaii- Non-Profit Organizations</td>
<td>34</td>
<td>$1,484,446</td>
<td>0.92%</td>
</tr>
<tr>
<td>Mainland- Business and Other</td>
<td>56</td>
<td>$9,049,692</td>
<td>5.58%</td>
</tr>
<tr>
<td>Mainland- Health Organizations</td>
<td>7</td>
<td>$388,578</td>
<td>0.24%</td>
</tr>
<tr>
<td>Mainland- Non-Profit Organizations</td>
<td>13</td>
<td>$1,002,032</td>
<td>0.62%</td>
</tr>
<tr>
<td>Miscellaneous</td>
<td>2</td>
<td>$102,891</td>
<td>0.06%</td>
</tr>
<tr>
<td>National Aeronautics and Space Administration</td>
<td>43</td>
<td>$5,032,114</td>
<td>3.11%</td>
</tr>
<tr>
<td>National Science Foundation</td>
<td>64</td>
<td>$17,614,190</td>
<td>10.87%</td>
</tr>
<tr>
<td>US Colleges and Universities</td>
<td>38</td>
<td>$3,318,141</td>
<td>2.05%</td>
</tr>
<tr>
<td><strong>Total:</strong></td>
<td><strong>648</strong></td>
<td><strong>$162,056,797</strong></td>
<td><strong>100%</strong></td>
</tr>
</tbody>
</table>

Attachment A-1, December 2008 Report, p. 26
## Extramural Non-Research Awards

### Year to Date: 07/01/08 - 12/31/08

### Distribution by Sponsors

<table>
<thead>
<tr>
<th>AGENCY-UNIT</th>
<th>NO. OF AWARDS</th>
<th>AMOUNT</th>
<th>PERCENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>DA-Dept of Agriculture</td>
<td>14</td>
<td>$3,921,277</td>
<td>4.18%</td>
</tr>
<tr>
<td>DHHS-Dept of Health and Human Services</td>
<td>27</td>
<td>$8,067,030</td>
<td>8.59%</td>
</tr>
<tr>
<td>DOC-Dept of Commerce</td>
<td>9</td>
<td>$1,338,705</td>
<td>1.43%</td>
</tr>
<tr>
<td>DOD-Department of Defense</td>
<td>12</td>
<td>$2,912,734</td>
<td>3.10%</td>
</tr>
<tr>
<td>DOI-Dept of Interior</td>
<td>27</td>
<td>$1,469,500</td>
<td>1.57%</td>
</tr>
<tr>
<td>ED-Dept of Education</td>
<td>68</td>
<td>$27,744,169</td>
<td>29.55%</td>
</tr>
<tr>
<td>Federal Agencies</td>
<td>17</td>
<td>$4,799,007</td>
<td>5.11%</td>
</tr>
<tr>
<td>Foreign</td>
<td>11</td>
<td>$2,753,730</td>
<td>2.93%</td>
</tr>
<tr>
<td>Hawaii- Business and Other</td>
<td>37</td>
<td>$4,991,591</td>
<td>5.32%</td>
</tr>
<tr>
<td>Hawaii- Government Agencies</td>
<td>91</td>
<td>$16,813,536</td>
<td>17.91%</td>
</tr>
<tr>
<td>Hawaii- Health Organizations</td>
<td>25</td>
<td>$6,170,792</td>
<td>6.57%</td>
</tr>
<tr>
<td>Hawaii- Non-Profit Organizations</td>
<td>51</td>
<td>$2,792,748</td>
<td>2.98%</td>
</tr>
<tr>
<td>Mainland- Business and Other</td>
<td>7</td>
<td>$475,772</td>
<td>0.51%</td>
</tr>
<tr>
<td>Mainland- Health Organizations</td>
<td>2</td>
<td>$12,000</td>
<td>0.01%</td>
</tr>
<tr>
<td>Mainland- Non-Profit Organizations</td>
<td>12</td>
<td>$350,828</td>
<td>0.37%</td>
</tr>
<tr>
<td>Miscellaneous</td>
<td>2</td>
<td>$4,800</td>
<td>0.01%</td>
</tr>
<tr>
<td>National Aeronautics and Space Admin</td>
<td>5</td>
<td>$2,005,005</td>
<td>2.14%</td>
</tr>
<tr>
<td>National Science Foundation</td>
<td>10</td>
<td>$4,939,724</td>
<td>5.26%</td>
</tr>
<tr>
<td>US Colleges and Universities</td>
<td>21</td>
<td>$2,310,423</td>
<td>2.46%</td>
</tr>
<tr>
<td><strong>Total:</strong></td>
<td><strong>448</strong></td>
<td><strong>$93,873,371</strong></td>
<td><strong>100%</strong></td>
</tr>
</tbody>
</table>