

Supplemental Material

Climate Change, Human Health, and Biomedical Research: Analysis of the National Institutes of Health Research Portfolio

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Table S1. List of Tier 1 projects^a identified in the analysis of the FY 2008 project records stored in the NIH RCDC system database.

| Project | Title |
|----------------------|--|
| 1 R01AI079411-01 | An Integrated System for the Epidemiological Application of Earth Observation Technologies |
| 5 R21GM084704-02 | Dynamic Ecological Simulation Model of Tsetse Transmitted Trypanosomosis in Kenya |
| 3 R21GM084704-01S1 | Dynamic Ecological Simulation Model of Tsetse Transmitted Trypanosomosis in Kenya |
| 1R01TW008067-01 | Eco-epidemiology of Schistosomiasis, Malaria and Polyparasitism in Coastal Kenya |
| 2 R01AI050243-07A2 | Ecology of African Highland Malaria |
| 3 R01AI050243-07A2S1 | Ecology of African Highland Malaria |
| 5-D43-TW005750-07 | UAB- International Training in Environmental and Occupational Health (ITREOH) Program |

^aTier 1 projects include studies on health impact or interventions directly related to climate projections and studies of the impacts of inter-annual variability in environmental factors. Note that the same project may appear multiple times because project supplements were awarded during the time period being analyzed. The duplication of project titles does not reflect duplication of funded activities.

Table S2. List of Tier 2 projects^a identified in the analysis of the FY 2008 project records stored in the NIH RCDC system database.

| Project | Title |
|--------------------|--|
| 5 R01AG024373-05 | Adaptive Physiology of mtDNA Longevity Mutations |
| 1 R01HD057599-01 | Adversity and Resilience after Hurricane Katrina |
| 5 R01AG028621-02 | Age, Disruption, and Life Reorganization after Hurricane Katrina |
| 5 P50ES012742-05 | Alexandrium Population Biology in the Gulf of Maine |
| 5 R01ES015375-04 | Apple Peel Extract Protects UV-Induced Carcinogenesis |
| 5 R01AR054856-02 | Calcineurin signaling in the keratinocyte UVB response |
| 5 P01ES014635-02 | Cell Cycle Check Points |
| 5 P50ES012762-05 | Core--Environmental Facility |
| 5 P50ES012736-05 | Core--Remote Sensing |
| 5R01EY013127-08 | Corneal-Epithelial Nuclear Ferritin and U.V. Protection |
| 1 R01ES015552-01A1 | Defining critical aspects of environmental ultraviolet exposure in melanogenesis |
| 5 R01ES013679-03 | Developing genomic resources for the toxic dinoflagellate <i>Alexandrium tamarense</i> |
| 5 R01ES012459-05 | Domoic Acid Neurotoxicity in Native Americans |
| 3 R01ES012459-05S1 | Domoic Acid Neurotoxicity in Native Americans |
| 5 R01MH078152-03 | Ecological Approaches to Understanding Post-Disaster Distress |
| 5 R01AI049724-08 | Ecology of Encephalitis Viruses in the USA |
| 5 R01TW007869-03 | Ecology-Based Risk Assessment and Early Warning for HPAI in Asia |
| 3 R01TW007869-03S1 | Ecology-Based Risk Assessment and Early Warning for HPAI in Asia |
| 3 R01TW007869-03S2 | Ecology-Based Risk Assessment and Early Warning for HPAI in Asia |

| Project | Title |
|--------------------|---|
| 5R01EY018100-02 | Elevated potassium ion in lacrimal fluid and the health of the ocular surface |
| 5 R21DA023045-02 | Emergency management for disruptions in methadone treatment. |
| 5 P30AR039750-18 | Epigenetic Responses to Solar UVR in Melanocytes |
| 5 R01DA021887-03 | Family-Based Drug Services for Young Disaster Victims |
| 5 K01ES014003-04 | Gene-environment Cancer Risks in Melanoma |
| 2 R01HL061388-09 | Heat Stress and Circulatory Control |
| 5 P50ES012742-05 | Human Pathogens and Coastal Ocean Processes |
| 1 R01MH081832-01 | Hurricane Katrina Community Advisory Group |
| 1 P30MH082760-01 | Hurricane Katrina Community Analysis Group Pilot |
| Y1MD5024-9-0-1 | Hurricane Katrina Relief Efforts |
| 3 R01TW006986-04S1 | Impact of Land Cover Change on Hantavirus Ecology |
| 5 R01CA106807-05 | Indoor Tanning Use, DNA Repair and Risk of Melanoma |
| 1 Z01AI000996-02 | Influenza Viral Genomics and Evolution |
| 5 R01AI044793-08 | Invasion Biology of Aedes albopictus |
| 5 R01HL065599-08 | Mechanisms of Cutaneous Active Vasodilation |
| 5R01EY018343-02 | Mechanisms of Environmental Stress Affecting Corneal Epithelial Wound Healing |
| 1 R01ES015585-01A1 | Mechanisms of UV-induced skin carcinogenesis |
| 5 P50ES012740-05 | Microbial Pathogens in Tropical Coastal Waters |
| 5 P50ES012742-05 | Microecology and Evolution of Two Marine Pathogens |
| 5 R01AR043369-12 | Mitf: A Master Gene for Melanocyte Development |

| Project | Title |
|--------------------|--|
| 5 R01AR051552-03 | Mitochondrial DNA Mutations in Keratinocyte Hyperplasia |
| 5 R01AI042164-10 | Modeling and empirical studies of arboviruses in Florida |
| 1 R01GM085335-01A2 | Molecular genetics of thermotaxis |
| 1 R21AI078463-01A1 | Molecular Markers for Anopheles Gambiae Age Grading |
| 5 R01AI058279-04 | Molecular regulation of diapause in Culex pipiens |
| 5 R01EY011490-10 | Molecular Mechanisms & Role of Corneal Aldehyde Dehydrogenase |
| 5 P01ES014635-02 | Murine & Human In Vivo Models of Melanoma Formation |
| 5 R01ES015028-03 | National Assessment of the Mortality and Morbidity Effects of Tropospheric Ozone |
| 5 R01HL084072-03 | Neural and non-neural modulators of skin blood flow and sweating in humans |
| 5 R01CA057494-14 | Non-Melanoma Skin Cancer in New Hampshire |
| 5 R01AR052190-03 | Novel Biosynthetic Pathway for Secosteroids in the Skin |
| 5 P50ES012740-05 | Pacific Research Center for Marine Biomedicine - Research Project 1: Ciguatera-Dinoflagellate Nutrient Profile and Ecology |
| 5 D43TW001505-09 | Population Biology of African Malaria Vectors |
| 1 K01HD055415-01A1 | Population-environment dynamics influencing malaria risk in the Peruvian Amazon |
| 1 Z01AI000208-28 | Protein Synthesis And Developmental Transitions In Plasmodium |
| 5 R01CA101602-05 | Quantification of the environmental UVA exposure |
| 5 K25AR050397-04 | Quantitative Characterization of UV induced skin damage |
| 5 P41RR002594-23 | Raman spectroscopy studies of tropical, temperate and polar corals |
| 5 P50ES012736-05 | Recreational microbes: indicators for monitoring water quality |
| 1 R01EY018177-01A1 | Regulation of UV-induced apoptosis |

| Project | Title |
|--------------------|---|
| 1 R21HD059087-01 | Resettlement and Well-Being of New Orleans Residents After Hurricane Katrina |
| 5 P60AR047785-08 | Risk Factors for Gout Attacks: A Case-crossover Study |
| 5 K08AI067549-02 | Risk for Future Outbreaks of Henipaviruses in South Asia |
| 5-R03-AR-53710-02 | Role of PPARgamma in ultraviolet stress responses |
| 5 P20RR016466-08 | S. parryii – A model hibernator physiology |
| 1 R01AG030619-01A2 | SAFEHAVEN: Decision Support for Nursing Home Resident Disaster Evacuations |
| 5 P50ES012762-05 | Shellfish Kinetics |
| 2 R01ES009110-10 | Signaling Pathways for UV-Induced Melanogenic Response |
| 1 R21AR054361-01A2 | Slug Mediates the Acute Cutaneous Response to UVR |
| 5 R01CA112524-04 | Solar Exposure and Melanoma Survival |
| 5 K25AI067791-03 | Spatially-explicit mathematical model of human monocytic ehrlichiosis |
| 1 Z01CP010135-13 | Studies of Non-Ionizing Radiation-Related Cancer |
| 1 Z01CP010132-13 | Studies of Populations Exposed to Environmental Sources of Radiation |
| 5 R01TW007248-02 | Study of risk factors of tick-borne encephalitis in Poland |
| 5 R01DA021852-03 | Substance Use and Other Health Consequences Among Katrina Evacuees in Houston |
| 3 R01DA021852-03S1 | Substance Use and Other Health Consequences Among Katrina Evacuees in Houston |
| 5 K07CA104556-04 | Sun Exposure and Melanoma in Agricultural Workers |
| 1 R01HD059106-01 | Survey of New Orleans Residents Displaced by Hurricane Katrina |
| 1 R21HD057608-01 | The Displaced New Orleans Residents Pilot Study |
| 2 R56AR049342-06 | The Framingham School Study of Nevi in Children: Sonic II |

| Project | Title |
|--------------------|--|
| 5 P30AR050948-05 | The Innate Immune System in Regulation of DVB Induced Skin Carcinogenesis |
| 5-K02-AR-50993-06 | The replication checkpoint and genomic fidelity in skin |
| 1 R21ES015832-01A2 | The role of E-cadherin in photocarcinogenesis |
| 5 P50ES012736-05 | Toxic Harmful Algal Blooms (HABs) |
| 5 R01CA077646-09 | Ultraviolet-Induced Signal Transduction |
| 2 R01CA086928-06A2 | UV-induced and NOS-mediated Zn elevation, translation regulation and apoptosis |

^aTier 2 projects include studies on the effects of climate variables (e.g., temperature, UV, humidity, rainfall, precipitation, weather, CO₂) on biological systems, disease, and public health. Note that the same project may appear multiple times because project supplements were awarded during the time period being analyzed. The duplication of project titles does not reflect duplication of funded activities.