

# RESEARCH PROPOSALS

*June 21, 2007*

California Environmental Protection Agency



Air Resources Board

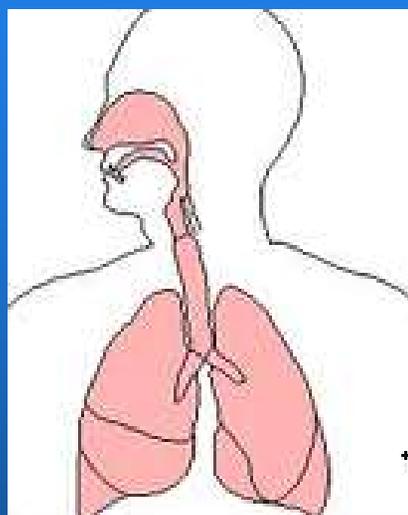
# Spatial Synoptic Classification Approach to Projected Heat Vulnerability under Future Climate Change Scenarios

Kent University  
Scott Sheridan, Ph.D.  
\$191,553 (24 months)

**Objective:** To investigate the influence of climate change over the course of this century on heat-related deaths under different emissions scenarios.

**Expected Results:** Estimates of heat waves and heat-related deaths across California's seven largest metropolitan areas through 2100.

# Effect of GSTM1 Genotype on Ozone-Induced Allergic Airway Inflammation



University of California, San Francisco  
John Balmes, M.D.  
Original: \$497,990  
Augmentation: \$250,000 (24 months)

**Objective:** To determine whether specific genotypes and pre-exposure to allergen enhance inflammatory responses to ozone exposure.

**Expected Results:** Characterization of the susceptibility of asthmatics to ozone exposure and potential explanation for the wide variability in responses of asthmatics to ozone.

# **Cardiovascular Health Effects of Fine and Ultrafine Particles during Freeway Travel**

**University of California, Los Angeles**

**William Hinds**

**Original: \$580,205**

**Augmentation: \$60,469**

**Objective: To determine the cardiovascular effects of exposure to ambient air during travel on freeways.**

**Expected Results: Data on the effects of UFP on cardiac function and blood markers of systemic inflammation, and more information about freeway pollutant exposures.**

# Improving the Carbon Dioxide Emission Estimates from the Combustion of Fossil Fuels in California



UCB/LBNL  
Lynn Price  
Original: \$75,000  
Augmentation: \$30,000

**Objective:** To collect spatial disaggregated data on energy consumption.

**Expected Results:** Improve the characterization of California's CO<sub>2</sub> emissions from a wide variety of local sources.

# **RECOMMENDATION**

**Approve Resolutions  
07-22, 23, 24 and 07-30**