

## **DR PAUL B TCHOUNWOU'S GRANTSMANSHIP**

### **Currently Funded Grants**

- **“JSU-RCMI Center for Environmental Health”**  
*Role:* Director (2008-Present); Deputy Director (2003-2008)  
*Sponsor:* National Institutes of Health - NIH  
*Amount:* \$9,024,000.00 (06/01/2008 - 06/30/2013)  
*Amount:* \$8,400,000.00 (07/01/2003 - 05/31/2008)  
*Goal:* To develop and provide a state-of-the-art scientific infrastructure to support biomedical research that addresses important environmental and public health issues of concerns to vulnerable and underserved communities.
  
- **“CREST Interdisciplinary Center for Nanotoxicity”**  
*Role:* Co-Investigator  
*Sponsor:* National Science Foundation - NSF  
*Amount:* \$5,000,000.00 (10/2008 - 09/2013)  
*Goal:* To establish a collaborative, multi-disciplined and integrated research and education program focusing on different aspects of the development and production of nanomaterials, and on scientific investigations of their toxicity.
  
- **“Regional Studies in Sustainable Management of Coastal and Marine Habitats for Decision Making: Assessing the impact of Natural and Anthropogenic Factors on Water Quality and Biota in Coastal Waters of Mississippi”**  
*Role:* Principal Investigator  
*Sponsor:* National Oceanic and Atmospheric Administration – NOAA  
*Amount:* \$1,150,000.00 (10/2007-09/2012)  
*Amount:* \$1,220,000.00 (10/2001-09/2006)  
*Goal:* To develop a conceptual model for ecological risk assessment of coastal ecosystems in Mississippi, and to develop and implement research to evaluate the impact of environmental factors on coastal ecosystems.
  
- **“Strengthening the Environmental Science Ph.D. Program at Jackson State University”**  
*Role:* Principal Investigator – Activity Director  
*Sponsor:* U.S. Department of Education – Title III Graduate Education Program  
*Amount:* \$7,771,662.00 (10/2004 - 09/2009)  
*Amount:* \$6,151,962.00 (10/1999 - 09/2004)  
*Goal:* To provide resources to support the instructional, research, and services activities of the doctoral program in environmental science
  
- **“Careers in Aquatic, Fisheries and Atmospheric Sciences - High School Pipeline Project”**  
*Role:* Principal Investigator  
*Sponsor:* National Oceanic and Atmospheric Administration – NOAA  
*Amount:* \$499,999.00 (10/2005-09/2009)  
*Goal:* To recruit, train, and mentor students to pursue careers, advanced degrees or environmental entrepreneurial opportunities in the sciences directly related to the NOAA’s mission.
  
- **“Enhancing Environmental Health and Biomedical Sciences Research and Education**

**at Jackson State University”**

*Role:* Principal Investigator

*Sponsor:* U.S. National Institutes of Health – National Library of Medicine

*Amount:* \$20,000.00 (10/01/2005 - 09/30/2009)

*Goal:* To enhance environmental health and biomedical sciences research and education at Jackson State University, by organizing workshops on the use of the National Library of Medicine web-based resources.

**Completed Grants**

▪ **“Computational Modeling of Chemical Materials – CMCM”**

*Role:* Co-Principal Investigator

*Sponsor:* U. S. Department of the Army - DoA

*Amount:* \$950,000.00 (10/2004 - 09/2006)

*Amount:* \$1,100,000.00 (10/2006 - 09/2008)

*Goal:* To establish a collaborative, multi-disciplined and integrated research and education program focusing on the biomolecular and computational studies of warfare agents and structurally-related compounds.

▪ **“Mississippi Functional Genomics Network: Establishment of a Cellomics and Toxicogenomics Research Laboratory at Jackson State University”**

*Role:* Principal Investigator

*Sponsor:* National Institutes of Health - NIH

*Amount:* \$789,328.00 (09/2001- 08/2004)

*Goal:* To contribute to the development of biomedical research infrastructure in the State of Mississippi, by providing opportunities to biomedical scientists at JSU and other institutions of higher learning, to perform FACS and Microarray analyses.

▪ **“Environmental Risk Assessment Integrative Systems Approach (ERAISA) with GIS/RS”**

*Role :* Co – Principal Investigator

*Sponsor:* National Oceanic and Atmospheric Administration - NOAA

*Amount:* \$2,375,000.00 (09/2001 - 08/2005)

*Goal:* To assess the impact of severe weather conditions on water resources, to develop models to predict their impact on aquatic biota and water quality, and to use the models as a tools for natural resources management

▪ **“HBCU/MI Environmental Technology Consortium: Toxicity Assessment of Lead-Induced Injury/Pathology in Channel Catfish”**

*Role:* Co – Principal Investigator

*Sponsor:* U.S. Department of Energy

*Amount:* \$200,000.00 (10/2002 - 09/2004)

*Goal:* To study the toxicity of lead to catfish and transformed human liver cells, and to identify the biomarkers of exposure, sensitivity and effect associated with lead exposure.

▪ **“Molecular, Analytical, and Computational Environmental Risk Assessment Consortium – MACERAC”**

*Role:* Principal Investigator

*Sponsor:* U. S. Department of the Army - DoA

*Amount:* \$1,130,000.00 (10/2002 - 07/2004)

*Goal:* To study the cellular and molecular mechanisms by which DoA-priority chemicals such as trinitrotoluene and dinitrotoluene induce toxicity, mutagenesis and carcinogenesis, and to develop computational model to characterize their physico-chemical properties, as well as to predict their structure-activity relationship.

▪ **“Toxicokinetics, Histopathology and Genotoxic Effects of Arsenic and Atrazine”**

*Role:* Principal Investigator

*Sponsor:* National Institutes of Health - NIH

*Amount:* \$512,000.00 (07/1998 - 06/2003)

*Goal:* To study the toxicity of arsenic and atrazine in in-vitro, and in-vivo models, and to assess the biomarkers of exposure, sensitivity and effect associated with exposure to these compounds.

▪ **“Graduate Research Fellowship Award for Student Support”**

*Role:* Principal Investigator

*Sponsor:* U.S. Environmental Protection Agency

*Amount:* \$51,480.00 (09/2001 - 08/2003).

*Goal:* To provide resources for graduate research assistantship and research supplies for doctoral dissertation.

▪ **“Minimizing the Economic Costs and the Environmental / Health Effects of the Use of Chemical Pesticides in Egyptian Rural Communities”**

*Role:* Co-Principal Investigator

*Sponsor:* U.S. Agency for International Development/University Extension Program

*Amount:* \$200,000.00 (10/1999 - 05/2002)

*Goal:* To assess the knowledge, aptitudes and practices of Egyptian rural communities with regard to the safe use of pesticides, to assess the levels of pesticides in various environmental samples, and to determine the health risks associated with pesticide exposure.

▪ **“Toxicology and Risk Assessment of 2,4,6-Trinitrotoluene (TNT), and Related Nitroaromatic Compounds”**

*Role:* Principal Investigator

*Sponsor:* US Department of Defense

*Amount:* Part of the BEST Program funded at \$1,400,000.00 (07/1998 - 02/2001)

*Goal:* To investigate the cytotoxicity and molecular mechanisms of toxicity of TNT and its degradation products.

▪ **“Mississippi Science Improvement Program in Environmental Science”**

*Role:* Institutional Coordinator

*Sponsor:* U.S. Department of Education

*Amount:* \$400,000.00 (10/1998 - 09/2001)

*Goal:* To provide professional development opportunities in the multidisciplinary area of environmental science to selected groups of faculty from Jackson State University, Alcorn State University, Mississippi Valley State University, and Tougaloo College.

▪ **“Pollution Assessment of Lead Contamination from a Hazardous Waste in the State of Mississippi”**

*Role:* Principal Investigator

*Sponsor:* Environmental Technology Consortium- US Department of Energy

*Amount:* \$400,000.00 (10/1996 - 09/2000)

*Goal:* To monitor the levels of lead in soil, water, and sediment collected in and around a controlled Superfund site in Flowood, Mississippi, and to compare these levels to environmental standards.

- **“JSU-NASA Partnership for Research and Educational Programs”**

*Role:* Principal Investigator

*Sponsor:* National Aeronautics and Space Administration (NASA)

*Amount:* \$400,000.00 (07/1997 - 09/1999)

*Goal:* To form a productive partnership with NASA Stennis Space Center, by developing and implementing educational and research activities in the areas of earth system science, with focus on the application of GIS and remote sensing technologies in environmental assessment and management.

- **“Matching Fund for the Acquisition of a Microtox Test System”**

*Role:* Principal Investigator

*Sponsor:* Microbics Corporation -Azur Environmental, Carlsbad, California

*Amount:* \$10,000.00 (09/1997)

*Goal:* To strengthen the environmental toxicology research capabilities by acquiring and setting-up a Microtox system to perform aquatic bioassays.

- **"Management of Risks Associated with Agro-Industrial Wastes in Urban Areas: The Case of Mbandjock Sugar-Mill Company, Cameroon".**

*Role:* Principal Investigator

*Sponsor:* Canadian International Centre for Research and Development / African Institute for Urban Management, Dakar, Senegal

*Amount:* \$12,000.00 (1992-1993)

*Goal:* To carry out a longitudinal study to study the impacts of sugar processing wastes on stream water quality in Mbandjock, Cameroon, and to recommend waste management strategies.

- **"Impact of Industrial Effluents on the Quality of Surface Water in Yaounde, Cameroon"**

*Role:* Principal Investigator

*Sponsor:* Rockefeller Foundation / Cameroon National Epidemiology Board - MOH

*Amount:* \$12,000.00 (1993-1994)

*Goal:* To carry out a longitudinal study to study the impacts industrial wastes on stream water quality in Yaounde, the capital city of Cameroon, and to recommend waste management strategies.

- **"Control of Urban Malaria in Yaounde, Cameroon"**

*Role:* Co-Principal Investigator

*Sponsor:* World Health Organization Tropical Diseases Research Program

*Amount:* \$60,000.00 (\$20,000.00/year) (06/1993 - 05/1996)

*Goal:* To study the prevalence and identify the risk factors associated with malaria in selected areas of Yaounde, Cameroon.

- DOE Post-doctoral research fellowship, 1994-1996
- USAID training and research fellowship, 1985-1990
- Cameroon Government fellowship, 1980-1985