

- PA - 01**     **An Evaluation of Growth and Viability of the A549 and MRC-5 Cell Lines Upon Exposure to Selective Organic Inhibitors of Glycolysis**  
**Veshell Lewis and Ibrahim Farah**  
*Department of Biology, Jackson State University, Jackson, MS 39217, USA*
- PA - 02**     **Toxicity Level Assessment of *Vernonia amygdalina* Extract as Compared to Traditional Anti-Cancer Drugs in MCF-7 Cells**  
**Lecia Gresham<sup>2</sup>, Ernest B. Izevbigie<sup>2,3,4</sup>, Yi Zhang<sup>1,2</sup> and Carolyn B. Howard<sup>1,3,4</sup>**  
*<sup>1</sup>Breast Cancer Research Laboratory, and <sup>2</sup>The Laboratory of Phytochemicals, cancer therapies and prevention;<sup>3</sup>NIH-center for Environmental Health, College of Science, Engineering and Technology, <sup>4</sup>Department of Biology, Jackson State University, 1400 Lynch Street, Jackson, Mississippi, 39217, USA*
- PA - 03**     **The Inhibition of NF- $\kappa$ B Activity and Prostate Tumor Cell Growth by Aqueous *Vernonia Amygdalina* Extracts**  
**Keyuna S. Seals and Ernest B. Izevbigie**  
*The Laboratory of Cellular Signaling, Phytochemicals, and Cancer Prevention and Therapies, NIH-Center for Environment Health, College of Science Engineering and Technology; Department of Biology, Jackson State University, Jackson, MS 39217, USA*
- PA - 04**     **Phototoxicity of Pyrene and its Mono-Substituted Derivatives on Hacat Keratinocyte Cells**  
**Tracie E. Perkins and Hongtao Yu**  
*Department of Chemistry & Biochemistry, Jackson State University, Jackson, MS 39217*
- PA - 05**     **Cytotoxicity and Photo-Cytotoxicity of Modified, Water-Soluble Carbon Nanotubes in Human Skin Keratinocytes**  
**Danielle A. McShan, Shuguang Wang, and Hongtao Yu**  
*Department of Chemistry and Biochemistry, Jackson State University, Jackson, MS, 39217, USA*
- PA - 06**     **Ethanol-Extracted *Vernonia amygdalina* Inhibits Spindle Formation of Microtubules in Hela Cells**  
**Brandon J. Hill<sup>2</sup>, Ernest B. Izevbigie<sup>2</sup> and Claire E. Walczak<sup>1</sup>**  
*<sup>1</sup>Department of Biology, Indiana University, Bloomington, IN 47405, USA  
<sup>2</sup>The Laboratory of Cellular Signaling, Phytochemicals, and Cancer Prevention and Therapies, Department of Biology, Jackson State University, Jackson, MS 39217, USA*
- PA - 07**     **Arsenic Trioxide Modulates Apoptosis in Lung Carcinoma (A549) Cells**  
**Alice M. Walker<sup>1</sup>, Jacqueline J. Stevens<sup>2</sup> and Paul B. Tchounwou<sup>1</sup>**  
*<sup>1</sup>Molecular Toxicology Research Laboratory, NIH RCMI-Center for Environmental Health, CSET, Jackson State University, 1400 JR Lynch Street, Box 18540, Jackson, Mississippi, USA  
<sup>2</sup>Molecular and Cellular Biology Research Laboratory, NIH RCMI-Center for Environmental Health, CSET, Jackson State University, 1400 JR Lynch Street, Box 18540, Jackson, Mississippi, USA*
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**PA - 08 Thioamide Derivative Modulates Annexin V Expression in Human Liver Carcinoma (HEPG<sub>2</sub>) Cells**

**Shannon Jackson<sup>1</sup>, Clement Yedjou<sup>2</sup>, Joseph Cameroon<sup>1,2</sup>, and Paul Tchounwou<sup>2</sup>**

<sup>1</sup>Hinds Community College, Department of Biology; <sup>2</sup>Jackson State University, College of Science, Engineering and Technology, Jackson State University, 1400 Lynch Street, P.O. Box 18540, Jackson, Mississippi

**PA - 09 *In Vitro* Mechanisms of Water Soluble Garlic Extract Induced Cytotoxic Effect and Modulation of Caspase-3 Activity in Human Leukemic Cells**

**Jessica Milner, Clement Yedjou, and Paul B. Tchounwou**

Cellomics and Toxicogenomics Research Laboratory, NIH-RCMI Center for Environmental Health, College of Science, Engineering and Technology, Jackson State University, 1400 Lynch Street, Box 18540, Jackson, Mississippi, USA.

**PA - 10 Preclinical Assessment of Water Soluble Garlic Extract-Induced Oxidative Stress and Apoptosis of Human Leukemia (HL-60) Cells.**

**Laurette Thisseu, Clement Yedjou, and Paul B. Tchounwou**

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**PA - 11 Ascorbic Acid Potentiation of Arsenic Trioxide-Mediated Oxidative Stress and P53 Expression in Human Leukemia (HL-60) Cells**

**Maria Gomes, Clement Yedjou, Carolyn B. Howard, and Paul Tchounwou**

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**PA - 12 Thioamide Derivative-Induced Cytotoxic Effect in Human Liver Carcinoma (HEPG<sub>2</sub>) Cells**

**Jarret Young<sup>1</sup>, Clement Yedjou<sup>2</sup>, Joseph Cameroon<sup>1,2</sup> and Paul Tchounwou<sup>2</sup>**

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<sup>2</sup>Jackson State University, College of Science, Engineering and Technology, Jackson State University, 1400 Lynch Street, P.O. Box 18540, Jackson, Mississippi

**PA - 13 *In Vitro* Indices of Oxidative Stress in Human Liver Carcinoma (HEPG<sub>2</sub>) Cells Exposed to Lead**

**Nicolas Walker, Clement G. Yedjou, and Paul B. Tchounwou**

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**PA - 14 Molecular Mechanisms of Cadmium-Induced Toxicity in Human Liver Carcinoma (HEPG<sub>2</sub>) Cells**

**Anthony C. Skipper<sup>1</sup>, Clement Yedjou<sup>2</sup> and Paul B. Tchounwou<sup>1,2</sup>**

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**PA - 15 *In Vitro* Cytotoxic and Genotoxic Effects of Perfluorooctanoic Acid (PFOA) in Human Prostate (RWPE-1) Cells**

**Terrence T. Wright, Barbara Graham, Clement Yedjou and Paul Tchounwou**

*Cellomics and Toxicogenomics Research Laboratory, NIH-Center for Environmental Health, College of Science, Engineering and Technology, Jackson State University, 1400 J. R. Lynch Street, Box 18540, Jackson, Mississippi, USA*

**PA - 16 Perfluorooctanoic Acid (PFOA)-Induced Apoptosis of Human Prostate (RWPE-1) Cells via Oxidative Stress**

**Terrence T. Wright, Barbara Graham, Clement Yedjou and Paul Tchounwou**

*Cellomics and Toxicogenomics Research Laboratory, NIH-Center for Environmental Health, College of Science, Engineering and Technology, Jackson State University, 1400 J. R. Lynch Street, Box 18540, Jackson, Mississippi, USA*

**PA - 17 Basis Apoptotic Mechanisms of Lead Toxicity in Human Leukemia (HL-60) Cells**

**Herbert R. Giles, Myriam Igboavodha, Dwayne Sutton, Clement Yedjou and Paul B. Tchounwou**

*Cellomics and Toxicogenomics Research Laboratory, NIH-RCMI Center for Environmental Health, College of Science, Engineering and Technology, Jackson State University, 1400 Lynch Street, Box 18540, Jackson, Mississippi, USA*

**PA - 18 Arsenic-Induced Cytotoxicity and Apoptosis in Hepatocellular Carcinoma (HEPG<sub>2</sub>) Cells**

**Erika Brown, Clement G. Yedjou and Paul B. Tchounwou**

*Molecular Toxicology Research Laboratory, NIH-Center for Environmental Health, College of Science, Engineering and Technology, Jackson State University, 1400 Lynch Street, P.O. Box 18540, Jackson, MS, USA*

**PA - 19 Lead Induces Apoptosis (Programmed Cell Death) in Human Leukemia (HL-60) Cells via Oxidative Stress**

**Adre Brown, Jessica Milner, Clement G. Yedjou and Paul B. Tchounwou**

*Cellomics and Toxicogenomics Research Laboratory, NIH-RCMI Center for Environmental Health, College of Science, Engineering and Technology, Jackson State University, 1400 Lynch Street, P.O. Box 18540, Jackson, Mississippi, USA*

**PA - 20 The Study and Characterization of Hexachlorobenzene Effects on Jurkat CD4<sup>+</sup> T Lymphocytes**

**Lamar Reed, Kenneth Ndebele and Paul B. Tchounwou**

*Molecular Toxicology Research Laboratory, NIH-Center for Environmental Health, College of Science, Engineering and Technology, Jackson State University, 1400 Lynch Street, P.O. Box 18540, Jackson, MS, USA*

**PA - 21 Consequence of Arsenic-Contaminated Rice on Intestinal Membrane Gene Expression**

**Matilda O. Johnson<sup>1</sup>, Rajendram V. Rajnarayanan<sup>2</sup>, Raphael D. Isokpehi<sup>1</sup>, Asit Panja<sup>3</sup>, Soam Prakash<sup>4</sup>, Omotayo R. Awofolu<sup>5</sup> and Hari H. P. Cohly<sup>1</sup>**

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<sup>2</sup>*Department of Chemistry, Tougaloo College, Jackson Mississippi 39174, USA*

<sup>3</sup>*AlfaGene Bioscience Inc, Somerset, NJ 08873, USA*

<sup>4</sup>*Faculty of Science, Dayalbagh Educational Institute, Dayalbagh, Agra, 282005, India,* <sup>5</sup>*Department of Environmental Sciences, University of South Africa, P.O. Box 392, Pretoria 0003, South Africa*

**PA - 22 A Lentiviral RNAI Disruption of PAK4 Modulates its Function in Human Cervical Cancer Cells**

**Carvey Patterson<sup>1</sup>, Kenneth Ndebele<sup>1</sup>, Barbara Graham<sup>1</sup> and Tai-Guan Jin<sup>2</sup>**

<sup>1</sup>*Laboratory of Cancer Immunology: Target Identification and Validation, Jackson State University, Department of Biology, Jackson, MS 39217, USA*

<sup>2</sup>*Division of Cancer Biology: Harvard Medical School Boston, MA 02115*

**PA - 23 Functional Relatedness of Genomes in Oxygen Requirement Category of the Integrated Microbial Genomes System**

**Tyranni Thomas<sup>1,2</sup>, Akia Young<sup>1,2</sup>, Jamian Rush<sup>1,2</sup>, Hari H. P. Cohly<sup>1</sup> and Raphael D. Isokpehi<sup>1</sup>**

<sup>1</sup>*Center for Bioinformatics & Computational Biology, Department of Biology, Jackson State University, Jackson MS 39217, USA*

<sup>2</sup>*Participant in Microbial Bioinformatics Summer Program*

**PA - 24 Chromosomal Co-Localization of Stress Response and Sulfate Transport Genes in *Arcobacter butzleri***

**Terriona Cowan<sup>1,2</sup>, Shaneka S. Simmons<sup>1</sup>, Udensi K. Udensi<sup>1</sup>, Hari H. P. Cohly<sup>1</sup> and Raphael D. Isokpehi<sup>1</sup>**

<sup>1</sup>*Center for Bioinformatics & Computational Biology, Department of Biology, Jackson State University, Jackson Mississippi 39217, USA*

<sup>2</sup>*2009 High School Summer Intern*

**PA - 25 Strain-Specific Overrepresentation of Transposase and Inactivated Derivatives in *Rhodospseudomonas palustris***

**Stedman M. Ashley, Shaneka S. Simmons, Hari H. P. Cohly, and Raphael D. Isokpehi**

*Center of Bioinformatics and Computational Biology, Department of Biology, Jackson State University, Jackson MS 39217, USA*

**PA - 26 Visualization of Genomic Rearrangements in Regions Encoding Universal Stress Proteins of *Rhodopseudomonas palustris* Strains**

**Shyretha D. Brown, Shaneka S. Simmons, Hari H. P. Cohly and Raphael D. Isokpehi**

*Center for Bioinformatics & Computational Biology, Department of Biology, Jackson State University, Jackson Mississippi 39217, USA*

**PA - 27 Strain-Restricted Chromosomal Cassettes Encoding Stress Response and HEME Biosynthesis in *Rhodopseudomonas palustris***

**Shawntae J. Hughes, Shaneka S. Simmons, Hari H. P. Cohly and Raphael D. Isokpehi**

*Center for Bioinformatics & Computational Biology, Department of Biology, Jackson State University, Jackson MS 39217, USA*

**PA - 28 Biochemical Role of the Universal Stress Proteins from Finished Genomes of *Rhodopseudomonas palustris***

**Shaneka S. Simmons, Raphael D. Isokpehi and Hari H. P. Cohly**

*Center for Bioinformatics & Computational Biology, Department of Biology, Jackson State University, Jackson MS 39217, USA*

**PA - 29 Functional Relatedness of Energy Producing *Rhodopseudomonas palustris* Genomes**

**Shaneka S. Simmons, Raphael D. Isokpehi and Hari H.P. Cohly**

*Center for Bioinformatics & Computational Biology, Department of Biology, Jackson State University, Jackson MS 39217, USA*

**PA - 30 Bio-Electrographic Method in Detecting Heterogeneity and Unique Features in Autism**

**Nataliya Kostyuk<sup>1,2</sup>, Rajendram V. Rajnarayanan<sup>3</sup>, Raphael D. Isokpehi<sup>2</sup>, Mark Yeager<sup>4</sup>, Helene Mann<sup>5</sup>, Korotkov Konstantin<sup>6</sup>, Baraka Williams<sup>2</sup>, Jennifer Sims<sup>2</sup>, Susan Jean Howcroft<sup>1</sup>, Taunjah Bell<sup>7</sup> and Hari H.P. Cohly<sup>2</sup>**

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<sup>2</sup>*Center for Bioinformatics & Computational Biology, Department of Biology, Jackson State University, PO Box 18540, Jackson MS 39217, USA*

<sup>3</sup>*Department of Pharmacology and Toxicology, School of Medicine and Medical Sciences, SUNY Buffalo, NY 14214, USA*

<sup>4</sup>*FAAIDD, PO Box 37, Mize, MS, 39116, USA*

<sup>5</sup>*Department of Education, Iroquois Point El. School, Hawaii Ewa Beach, HI 96706*

<sup>6</sup>*St. Petersburg Federal University of Informatics, Mechanics and Optics, Russian Federation, Saint Petersburg, Drovyanoy pereulok 22, Russia*

<sup>7</sup>*Department of Psychology, Jackson State University, PO Box 18540, Jackson MS 39217, USA*

**PA - 31    Ontology of Language Disorder in Autism**

**Nataliya Kostyuk<sup>1,2</sup>, Raphael D Isokpehi<sup>2</sup>, Rajendram V Rajnarayanan<sup>3</sup>, Tolulola Oyeleye<sup>2</sup>, Susan Jean Howcroft<sup>1</sup>, Taunjah Bell<sup>4</sup> and Hari H.P. Cohly<sup>2</sup>**

<sup>1</sup>*Center of Languages and Cultures, Department of Languages and Cultures, University of Aveiro, Campus Universitário de Santiago, Aveiro 3810-193;*

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<sup>4</sup>*Department of Psychology, Jackson State University, PO Box 18540, Jackson MS 39217, USA*

**PA - 32    Functional Relatedness of *Mycobacterium* Genomes**

**Karen L. Saddler, Wellington K. Ayensu, Hari H. P. Cohly and Raphael D. Isokpehi**

*Center for Bioinformatics & Computational Biology, Department of Biology, Jackson State University, Jackson MS 39217, USA*

**PA - 33    Dibutyl Phosphate Peptides -A Marker For a Nuclear Enrichment Process**

**Donee' McAllister<sup>1,3</sup>, Sara D'Angelo<sup>2</sup>, Jurgen Schmidt<sup>2</sup> and Julianna Fessenden<sup>2</sup>**

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<sup>2</sup>*Los Alamos National Laboratory (LANL), Health Research Laboratory, B-9 Division, Los Alamos, New Mexico;* <sup>3</sup>*2009 Summer Intern at LANL*

**PA - 34    Carbohydrate Utilization Network And Pathways in Sequenced *Rhodopseudomonas palustris***

**Kafui Edusei, Shaneka S. Simmons, Raphael D. Isokpehi and Hari H. P. Cohly**

*Center for Bioinformatics & Computational Biology, Department of Biology, Jackson State University, Jackson MS 39217*

**PA - 35    Functional Annotation Based Classification of Genes Encoding Universal Stress Proteins**

**Jennifer N. Sims, Shaneka S. Simmons, Demareo J. Webb, Baraka S. Williams, Centdrika Dates, Shyretha D. Brown, Dominique N. Smith-McInnis, Shawtae Hughes, Brodericks Daniel, Donee' McAlister, Shelton Griffith, Gabrielle Cooper, Sean R. Scott, Stedman Ashley, Christina Bernard, Terriona Cowan, Natasha Amos, Tolulola O. Oyeleye, Udensi K. Udensi, Matthew N. Anyanwu, Wellington K. Ayensu, Hari H.P. Cohly and Raphael D. Isokpehi**

*Center for Bioinformatics & Computational Biology, Jackson State University, Jackson Mississippi 39217, USA*

**PA - 36    Understanding the Structural Basis of Anti-Estrogen Resistance**

**Jalonda Coats<sup>1</sup>, Bethany Rankin<sup>3</sup>, Hari H. P. Cohly<sup>2</sup>, Raphael Isokpehi<sup>2</sup>, and Rajendram V Rajnarayanan<sup>1,3</sup>**

<sup>1</sup>*Department of Chemistry, Tougaloo College, Tougaloo, MS 39174, USA*

<sup>2</sup>*Department of Biology, Jackson State University, Jackson, MS, USA*

<sup>3</sup>*School of Medicine and Biomedical Sciences, State University of New York at Buffalo, NY 14214, USA*

- PA - 37**     **Bioinformatics Awareness Month (April 2009) at Jackson State University, Mississippi**  
**Iman Abdelrahman, Angelique C. Lee, Udensi K. Udensi, Hari H. P. Cohly and Raphael D. Isokpehi**  
*Center for Bioinformatics & Computational Biology (CBCB), College of Science, Engineering & Technology (CSET), Jackson State University, 1400 Lynch Street, P.O. Box 18540, Jackson, Mississippi, USA*
- PA - 38**     **Update: West Nile Virus Infection in Humans - Text Mining and Trends from 2003-2008 in Mississippi and its Neighboring States**  
**Gabrielle A. Cooper, Tolulola O. Oyeleye, Raphael D. Isokpehi and Hari H. P. Cohly**  
*Center for Bioinformatics & Computational Biology, Department of Biology, Jackson State University, Jackson MS 39217, USA*
- PA - 39**     **Synthesis of Pyridine Based Macrocycles for Anions and Cations**  
**Don Gibson, Kalpana Rani Dey and Md. Alamgir Hossain**  
*Department of Chemistry and Biochemistry, Jackson State University, Jackson, MS 39217*
- PA - 40**     **Strain-Specific Fused Gene Encoding Stress Response and Sugar Transport in *Rhodopseudomonas palustris***  
**Dominique R. Smith-McInnis, Shaneka S. Simmons, Hari H.P. Cohly, and Raphael D. Isokpehi**  
*Center for Bioinformatics & Computational Biology, Department of Biology, Jackson State University, Jackson MS 39217*
- PA - 41**     **Small Conserved Universal Stress Proteins in Seven *Salmonella enterica* Genomes with Potential Role in Cell-Cell Aggregation in Non-Host Environments**  
**Christina Bernard<sup>1,2</sup>, Shaneka S. Simmons<sup>1</sup>, Christopher Jackson<sup>1,2</sup>, Shyretha D. Brown<sup>1</sup>, Udensi K. Udensi<sup>1</sup>, Wellington K. Ayensu<sup>1</sup>, Hari H.P. Cohly<sup>1</sup> and Raphael D. Isokpehi<sup>1</sup>**  
*<sup>1</sup>Center for Bioinformatics & Computational Biology, Department of Biology, Jackson State University, Jackson Mississippi 39217, USA*  
*<sup>2</sup>2009 High School Summer Intern*
- PA - 42**     **Drug Resistance Observed in Novel Strain of *Plasmodium falciparum***  
**Centdrika Dates<sup>1</sup>, Emily Wilson<sup>1</sup> and Joseph DeRisi<sup>1</sup>**  
*<sup>1</sup>Center for Bioinformatics & Computational Biology, Department of Biology Jackson State University, Jackson, MS 39217, <sup>2</sup>DeRisi's Lab, Department of Biochemistry, University of San Francisco California, San Francisco, CA\* Summer Intern at UCSF*
- PA - 43**     **Functional Coupling of Stress Response and Cation Transport in *Rhodopseudomonas palustris***  
**Broderick K. Daniels, Sheneka S. Simmons, Hari H.P. Cohly and Raphael D. Isokpehi**  
*Center for Bioinformatics & Computational Biology, Department of Biology, Jackson State University, Jackson MS 39217, USA*
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**PA - 44 Genetically Engineered Mice as Models to Study the Role of Connexin 43 on Bones**

**Baraka S. Williams**<sup>1,3</sup>, Nicolette Bivi<sup>2</sup>, Racheal Lee<sup>2</sup>, Yumie Rhee<sup>2</sup>, Lillian Plotkin<sup>2</sup> and Teresita Bellido<sup>2</sup>

<sup>1</sup>Center for Bioinformatics & Computational Biology, Jackson State University, Jackson, MS 39217, USA

<sup>2</sup>Department of Anatomy and Cell Biology, Indiana University School of Medicine, Indiana University-Purdue University Indianapolis (IUPUI), Indianapolis, IN 46202, USA

<sup>3</sup>2009 Summer Intern at IUPUI

**PA - 45 Substituted Adamantyl Benzenes as Sub-Type Specific Estrogen Receptor Modulators**

**Bethany Rankin**<sup>1</sup>, Jolanda Coats<sup>2</sup>, Hari H. P. Cohly<sup>3</sup>, Raphael Isokpehi<sup>3</sup> and Rajendram V Rajnarayanan<sup>1,3</sup>

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<sup>2</sup>Department of Chemistry, Tougaloo College, Tougaloo MS 39174, USA

<sup>3</sup>Department of Biology, Jackson State University, Jackson, MS 39217, USA

**PA - 46 Domain Classification, Sequencing Status and Functional Relatedness of Bacteria Genomes from Body Sample Sites**

**Anami Cohly**<sup>1</sup>, Ashley Turner<sup>1,2</sup>, Taravien Turner<sup>1,2</sup>, Desaree Coleman<sup>1,2</sup>, Hari H.P. Cohly<sup>1</sup>, and Raphael D. Isokpehi<sup>1</sup>

<sup>1</sup>Center for Bioinformatics & Computational Biology, Department of Biology, Jackson State University, Jackson, MS 39217, USA.

<sup>2</sup>Microbial Bioinformatics Summer Program

**PA - 47 Biochemical Analysis of Certain Liver Enzymes in Mice Exposed to Functionalized Single-Walled Carbon Nanotube**

**Anita Patlolla**<sup>1</sup>, **Brittney McGinnis**<sup>2</sup> and Paul Tchounwou<sup>1</sup>

<sup>1</sup>Molecular Toxicology Laboratory, NIH-Center for Environmental Health, College of Science Engineering and Technology, Jackson State University, Jackson, MS, USA

<sup>2</sup>NSF-REU student from Dillard University, New Orleans, LA, USA

**PA - 48 Bioinformatics Tools Categorizer**

**Tolulola Oyelewe**, Raphael D. Isokpehi, Natarajan Meghanathan, Hari H.P. Cohly and Tzusheng Pei

Center for Bioinformatics & Computational Biology, Department of Biology, Jackson State University, Jackson MS 39217, USA

**PA - 49 “Tanning Beds as Deadly as Arsenic” – Analysis of Media Coverage after Publication of Report by International Agency for Research on Cancer**

**Adrean N. Mason**<sup>1,2</sup>, Hari H.P. Cohly<sup>1</sup> and Raphael D. Isokpehi<sup>1</sup>

<sup>1</sup>Center for Bioinformatics & Computational Biology, Department of Biology, Jackson State University, Jackson MS 39217, USA

<sup>2</sup>Department of Mass Communications, Jackson State University, Jackson MS 39217, USA

- PA - 50**     **Functional Insights into Universal Stress Proteins of *Pseudomonas species***  
**Demareo J. Webb, Wellington K. Ayensu, Hari H. P. Cohly and Raphael D. Isokpehi**  
*Center for Bioinformatics & Computational Biology, Jackson State University, Jackson, MS 39217, USA*
- PA - 51**     **Effect of Metal Oxide Nanoparticles on N<sub>2</sub> Fixation and Growth in Batch Cultures of *Trichodesmium* IMS101**  
**Rajesh Veerepalli and Danuta Leszczynska**  
*Department of Civil and Environmental Engineering, Jackson State University, Jackson MS 39217, USA*
- PA - 52**     **Carbon Nanoparticles: Quantum-Mechanical and QSAR Modeling of Fullerene C<sub>60</sub> Solubility in Organic Solvents**  
**Tetyana Petrova<sup>1</sup>, Bakhtiyor F. Rasulev<sup>1</sup>, Andrey A. Toropov<sup>1</sup>, Danuta Leszczynska<sup>2</sup>, Jerzy Leszczynski<sup>1</sup>**  
*<sup>1</sup>Interdisciplinary Center for Nanotoxicity, Department of Chemistry and Biochemistry, Jackson State University, Jackson, MS 39217, USA*  
*<sup>2</sup>Department of Civil and Environmental Engineering, Jackson State University, 1400 J.R. Lynch St, Jackson, MS 39217, USA*
- PA - 53**     **Determining Cytotoxicity of Nano Iron Oxide in HepG<sub>2</sub> Cell Line Using MTT Assay**  
**Anita Patlolla<sup>1</sup>, Ashley Berry<sup>2</sup>, Dominique Land<sup>3</sup> and Paul Tchounwou<sup>1</sup>**  
*<sup>1</sup>Molecular Toxicology Laboratory, NIH-Center for Environmental Health, CSET, Jackson State University, Jackson, MS, USA,*  
*<sup>2</sup>Collins High School, Collins, MS, USA and <sup>3</sup>Murrays High School, Jackson, MS, USA*
- PA - 54**     **Understanding the Size and Shape Dependence Geno, Cyto and Phototoxic Effects of Freshly Prepared Silver Nanomaterial**  
**Wentong Lu, Dulal Senapati, Shuguang Wang, Oleg Tovmachenko, Hongtao Yu, Paresh Ray**  
*Department of Chemistry, Jackson State University, Jackson State University, MS, USA*
- PA - 55**     **Ultrasensitive and Highly Selective Detection of Alzheimer's Disease Biomarker Using Two-Photon Rayleigh Scattering Properties of Gold Nanoparticle**  
**Adria Neely, Perry Candice, Birsan Varisli, Anant K. Singh, Dulal Senapati, Jhansi Rani Kalluri, Tahir Arbnesi and Paresh Chandra Ray**  
*Department of Chemistry, Jackson State University, Jackson, MS, USA*
- PA - 56**     **Gold Nanorod Based Dynamic Light Scattering Probe for Selective Detection of Arsenic in PPT Level From Groundwater**  
**Jhansi R Kalluri, Tahir Arbnesi, Perry Candice, Birsan Varisli, Sadia Afrin Khan, Brandon Newton and Paresh C Ray**  
*Department of Chemistry, Jackson State University, 1400 Lynch Street, Jackson, P.O. BOX 17910, MS, USA*
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- PA - 57**     **Gold Nanorod Based Selective Identification of Escherichia Coli Bacteria Using Hyper Rayleigh Scattering Assay**  
**Birsen Y. Varisli, Adria Neely, Perry Candice, Tahir Arbnesi, Dulal Senapati, Anant K. Singh, Jhansi Kalluri, Brandon Newton, Paresch C. Ray**  
*Department of Chemistry, Jackson State University, 1400 Lynch St., Jackson, MS 39217, USA*
- PA - 58**     **Gold Nanoparticle Promoted 1,3-Dipolar Cycloaddition Reactions in Water**  
**Atiereva Adley<sup>1</sup>, Ann Omollo<sup>2</sup> and Ashton T. Hamme II<sup>2</sup>**  
*<sup>1</sup>Department of Biology, Division of Natural Sciences and Public Health, Dillard University, 2601 Gentilly Boulevard, New Orleans, Louisiana, USA*  
*<sup>2</sup>Department of Chemistry & Biochemistry, College of Science, Engineering and Technology, Jackson State University, 1400 Lynch Street, P.O. Box 17910, Jackson, Mississippi, USA*
- PA - 59**     **Studies Toward the Synthesis of Spiroisoxazolines**  
**Erick D. Ellis and Ashton T. Hamme II**  
*Department of Chemistry & Biochemistry, College of Science, Engineering and Technology, Jackson State University, 1400 Lynch Street, P.O. Box 17910, Jackson, Mississippi, USA*
- PA - 60**     **Lewis Acid Promoted 1,3-Dipolar Cycloaddition Reactions in Water**  
**Lenore S. Holmes and Ashton T. Hamme II**  
*Department of Chemistry & Biochemistry, College of Science, Engineering and Technology, Jackson State University, 1400 Lynch Street, P.O. Box 17910, Jackson, Mississippi, USA*
- PA - 61**     **Probing Toxicity of Quantum Dots CDSE/ZNS in Water Environment**  
**L. Beqa<sup>3</sup> and D. Leszczynska<sup>1,2</sup>**  
*<sup>1</sup>Interdisciplinary Center for Nanotoxicity, Jackson State University, 1325 J. R. Lynch Street, P. O. Box 17910, Jackson, Mississippi, 39217-0510, USA*  
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*<sup>3</sup>Department of Chemistry, Jackson State University, 1400 J. R. Lynch Street, P. O. Box 17910, Jackson, Mississippi, 39217-0510, USA*
- PA - 62**     **The Use of POSS Nanostructured Chemicals to Improve the Physical Properties of Protective Coatings for Potential Health Related Applications**  
**Elizabeth Muriuki<sup>1</sup> and Wilbur L. Walters Jr.<sup>2</sup>**  
*<sup>1</sup>REU Summer Undergraduate Researcher, Department of Chemistry, Jackson State University, Jackson, MS*  
*<sup>2</sup>Departments of Physics and Civil and Environmental Engineering, Jackson State University, Jackson, MS*
- PA - 63**     **The Use of POSS Nanostructured Chemicals as Physical Barriers to Moisture Degradation**  
**Tanika Robinson<sup>1</sup> and Wilbur Walters Jr.<sup>2</sup>**  
*<sup>1</sup> REU Summer Undergraduate Researcher, Department of Chemistry, Jackson State University, Jackson, MS*  
*<sup>2</sup> Departments of Physics and Civil and Environmental Engineering, Jackson State University, Jackson, MS*
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**PA - 64**     **Determining Nanotoxicity of C<sub>60</sub> Fullerenes in Organic Solvents Using the Bacteria *Escherichia coli***

**Jessica Joy Jenkins<sup>1</sup>, Sean Cook<sup>2</sup>, Winfred Aker<sup>2</sup> and Huey-Min Hwang<sup>2</sup>**

<sup>1</sup>*Division of Natural Sciences, Tougaloo College, Tougaloo, MS 39174*

<sup>2</sup>*Department of Biology, Jackson State University, Jackson, MS 39217*

**PA - 65**     **Choosing Safe Dispersing Media for C<sub>60</sub> Fullerenes by Using Cytotoxicity Tests of the Bacterium *Escherichia coli***

**Sean Cook, Winfred Aker and Huey-Min Hwang**

*Department of Biology, Jackson State University, Jackson, MS 39217, USA*

**PA - 66**     **Computational Suggestions of Methods for Targeted Cisplatin Delivery**

**Charlene Keyes, Glake A. Hill, Julia Saloni and David H. Magers**

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**PA - 67**     **Multiscale Comparison of Air Quality Modeling for an Ozone Occurrence during the 1996 Paso Del Norte Ozone Campaign**

**Duanjun Lu<sup>1</sup>, Remata S. Reddy<sup>1</sup>, Rosa Fitzgerald<sup>2</sup>, William R Stockwell<sup>3</sup>, Quinton L Williams<sup>1</sup> and Paul B. Tchounwou<sup>1</sup>**

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<sup>2</sup>*Physics Department, University of Texas at El Paso, 500 W. University Avenue El Paso, TEXAS 79968, USA*

<sup>3</sup>*Howard University Program of Atmospheric Sciences, Howard University, Washington DC 20059, USA*

**PA - 68**     **Environmental Pollution and Health Effects**

**Suneet Kaur<sup>1</sup>, Leena El-Sadek<sup>2</sup>, Nabhan Karim<sup>3</sup>, Cherry Singh<sup>4</sup>, Natalie Newell<sup>5</sup>, Suseela Reddy<sup>6</sup> and Paul Tchounwou<sup>6</sup>**

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<sup>3</sup>*Jackson Preparatory School Flowood, MS, 39232, USA*

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<sup>5</sup>*Hinds Community College, Raymond, MS 39154, USA*

<sup>6</sup>*Jackson State University, Jackson, MS 39217, USA*

**PA - 69**     **Effect of the “Clean Air Act” on Air Pollution and Subsequent Decline and Improved Health Status in Asthma Cases? Review of Scientific Literature from 1990 – present?**

**Ruel Michelin<sup>1</sup>, Cynthia Johnson<sup>2</sup>, Joseph Whittaker<sup>3</sup> and Kelly C. Reiss<sup>1</sup>**

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<sup>2</sup>*Morgan State University, School of Community Health & Policy, 1130 E Cold Spring Lane, & <sup>3</sup>School of Computer Mathematical & Natural Sciences, Baltimore, MD 21251, USA*

**PA - 70 Assessment of Heavy Metals in Jackson Public School Playgrounds**

**Bridgette Demerritt<sup>1,2</sup>, Clement Yedjou<sup>1</sup>, and Paul Tchounwou<sup>1,2</sup>**

<sup>1</sup>*Cellomics and Toxicogenomics Research Laboratory, NIH-RCMI Center for Environmental Health;*

<sup>2</sup>*Environmental Toxicology Research Laboratory, College of Science, Engineering and Technology, Jackson State University, 1400 Lynch Street, P.O. Box 18540, Jackson, Mississippi, USA*

**PA - 71 Effect of Oxyfluorfen on Development of Medaka (*Oryzias latipes*)**

**Doris K. Powe<sup>1</sup>, Ikhlas A. Khan<sup>3</sup>, Asok K. Dasmahapatra<sup>3,4</sup> and Paul B. Tchounwou<sup>1,2</sup>**

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<sup>3</sup>*National Center for Natural Product Research, Environmental Toxicology Research Program, University of Mississippi,* <sup>4</sup>*Department of Pharmacology, University of Mississippi, Oxford, Mississippi, USA*

**PA - 72 Effects of Bacteria Inoculation on Growth and Lead Accumulation of *Triticum aestivum* Grown on Lead Contaminated Soil**

**Miriam Igboavodha, Maria Begonia, Gregorio Begonia, Halima Stringer, Marche Smith, Antoinette Taylor, Corey Kinlaw**

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**PA - 73 Growth and Survival of Pathogenic *Vibrio parahaemolyticus***

**Wundu Kwembe<sup>1,3</sup>, Meshack Mudoh<sup>2</sup>, S Parveen<sup>2</sup>, Hari H.P. Cohly<sup>1</sup>, and Raphael D. Isokpehi<sup>1</sup>**

<sup>1</sup>*Center of Bioinformatics and Computational Biology, Department of Biology, Jackson State University, Jackson MS 39217, USA*

<sup>2</sup>*University of Maryland Eastern Shore 2009*

<sup>3</sup>*REU Participant at University of Maryland Eastern Shore*

**PA - 74 Molecular Approach for Targeting Specific Fecal Contamination in the Grand Bay**

**Stephen S. Kishinihi<sup>1</sup>, Ibrahim O. Farah<sup>1</sup>, Kenneth Ndebele<sup>1</sup>, Barbara Graham<sup>1</sup>, Melanie McHenry<sup>1</sup>, Hilliard Lackey<sup>1</sup>, Christina Watters<sup>2</sup>, Mark Woodrey<sup>2</sup>, Dave Ruple<sup>2</sup>, Christine Walters<sup>2</sup> and Paul B. Tchounwou<sup>1</sup>**

<sup>1</sup>*Department of Biology; Environmental Microbiology Research Laboratory, NIH – Center for Environmental Health, College of Science, Engineering and Technology, Jackson State University, Box 18540, Jackson, MS 39217, USA;* <sup>2</sup>*Grand Bay National Estuarine Research Reserve, Moss Point, MS, USA*

**PA - 75 Ecotoxicology and Risk Assessment of Mercury in the Grand Bay National Estuarine Research Reserve**

**MelanieMcHenry-Johnson<sup>1</sup>, Paul Tchounwou<sup>1</sup>, Zikri Arslan<sup>1</sup>, Stephen Kishini<sup>1</sup>, William McHenry<sup>1</sup>, Hilliard Lackey<sup>1</sup>, Anjaneyulu Yerramilli<sup>1</sup>, Mark Woodrey<sup>2</sup> and Christina Watters<sup>2</sup>**

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<sup>2</sup>*Grand Bay Reserve, 6005 Bayou Heron Road Moss Point, MS 39562, USA*

**PA - 76 Profiling Mercury Distribution in National Estuarine Research Reserve (NERR) by Cold Vapor Generation AAS: Preliminary Results from Water, Sediment and Fish Samples**

**Melanie N. McHenry<sup>1</sup>, Zikri Arslan<sup>2</sup> and Paul Tchounwou<sup>1</sup>**

<sup>1</sup>*Environmental Science PhD Program, Jackson State University, Jackson, Mississippi, 39217*

<sup>2</sup>*Department of Chemistry, Jackson State University, Jackson, Mississippi 39217 USA*

**PA - 77 Effect of Lead Dissolution by Plants**

**Catherine C. Thomas<sup>1</sup>, Afrachanna D. Butler<sup>2</sup>, Victor F. Medina<sup>2</sup> and Steven L. Larson<sup>2</sup>**

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**PA - 78 Environmental Release of Mercury from Compact Fluorescent Light Bulbs**

**Li Jin, Samson Bulti and Yadong Li**

*Department of Civil and Environmental Engineering, Jackson State University, MS 39217, USA*

**PA - 79 Development of Water Correction Algorithm for Underwater Vegetation Signals**

**Marvin Washington, Hyun J. Cho and D. Lu**

*Department of Biology, Jackson State University, Jackson, MS 39217, USA*

**PA - 80 Follow the Light: Is Inorganic Turbidity Solely Responsible for Light Limitations in Ross Barnett Reservoir?**

**Shawn Gompa<sup>1</sup>, Inderjeet Singh<sup>1</sup> and Dmitri Sobolev<sup>2</sup>**

<sup>1</sup>*Summerhill Junior High School, Jackson, MS, USA*

<sup>2</sup>*Department of Biology, Jackson State University, Jackson, MS, USA*

**PA - 81 Study of Beds of *Ruppia maritima* and *Halodule wrightii* at Grand Bay National Estuarine Research Reserve, Mississippi**

**Cristina C. Nica and Hyun J. Cho**

*Department of Biology, Jackson State University, 1400 Lynch St., Jackson, MS 39217, USA*

**PA - 82 The Susceptibility of Structural Alveolar Cells to Ceramides-induced Autophagy**

**Dorothy K. Ndishabandi<sup>1,3</sup>, Daniela Petrusca<sup>2</sup>, Kenneth Ndebele<sup>1</sup> and Irina Petrache<sup>2</sup>**

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<sup>2</sup>*Indiana University School of Medicine, Indianapolis, IN 46206, USA*

<sup>3</sup>*Summer Research Fellowship Program*

**PA - 83 Biosurfactant Production in Deproteinised Juice (DPJ) of Eucalyptus by *Rhizopus Nigricans***

**Uma Aulwar<sup>1</sup>, Babu Patlolla<sup>2</sup> and R. S. Awasthi<sup>1</sup>**

<sup>1</sup>*Mahyco Research Foundation Trust's, Badrinarayan Barwale College, Jalna (Maharashtra) India*

<sup>2</sup>*Alcorn State University, Alcorn, MS, USA*

**PA - 84 Effect of Culture Conditions on Growth and Biosurfactant Production by Different Soil Fungi**

**Uma Aulwar<sup>1</sup>, Babu Patlolla<sup>2</sup> and R.S. Awasthi<sup>1</sup>**

<sup>1</sup>*Mahyco Research Foundation Trust's, Badrinarayan Barwale College, Jalna (Maharashtra) India*

<sup>2</sup>*Alcorn State University, Alcorn, MS, USA*

**PA - 85 Fungal Spore Data Preparation to Correlate with Weather Variables**

**Alicia M. Epps<sup>1</sup>, Fazlay Faruque<sup>2</sup> and Martha Brackin<sup>3</sup>**

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<sup>3</sup>*Independent Consultant, 609 Camelia Trail, Brandon, Mississippi 39047, USA*

**PA - 86 Optically-Based System for Cancer Detection**

**Shelton D. Griffith<sup>1,3</sup>, Claire Sanders<sup>2</sup>, Antoinette Trujillo<sup>2</sup> and Judith R. Mourant<sup>2</sup>**

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<sup>2</sup>*Los Alamos National Laboratory (LANL), Health Research Laboratory, B-9 Division, Los Alamos, New Mexico*

<sup>3</sup>*2009 Summer Intern at LANL*

**PA – 87 Measurement of Ionic Cadmium by ICP-AES from Liver and Kidney Samples of Rats Exposed to CdSe Nanoparticles**

**Wanaki McDuffy<sup>1</sup> and Zikri Arslan<sup>2</sup>**

<sup>1</sup>*Department of Chemistry, Tougaloo College., Mississippi, 39174, USA*

<sup>2</sup>*Department of Chemistry and Biochemistry, Jackson State University, Jackson, Mississippi 39217, USA*

**PA – 88 Light Scattering and Light Spectroscopy**

**Shelton D. Griffith<sup>1,3</sup>, Claire Sanders<sup>2</sup>, Antoinette Trujillo<sup>2</sup> and Judith R. Mourant<sup>2</sup>**

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<sup>2</sup>*Los Alamos National Laboratory (LANL), Health Research Laboratory, B-9 Division, Los Alamos, New Mexico; <sup>3</sup>2009 Summer Intern at LANL*

- PA - 89**     **Solid Phase Preconcentration on Activated Alumina with EDTA For Determination of Trace Elements in Water and Fish Otoliths by ICP-AES**
- Fahmida Zereen<sup>1</sup>, Sitki Baytak<sup>2</sup> and Zikri Arslan<sup>1</sup>**
- <sup>1</sup>*Department of Chemistry, Jackson State University, Jackson, Mississippi 39217 USA*  
<sup>2</sup>*Department of Chemistry, Science and Arts Faculty, Nevsehir University, Nevsehir 50300 Turkey*
- PA – 90**     **Determination of Antimony, Bismuth, Lead and Tin in Biominerals by On-Line Hydride Generation ICP-AES**
- Domingos de Oliveira Afonso<sup>1</sup>, Sitki Baytak<sup>2</sup> and Zikri Arslan<sup>1</sup>**
- <sup>1</sup>*Department of Chemistry, Jackson State University, Jackson, Mississippi 39217, USA*  
<sup>2</sup>*Department of Chemistry, Science and Arts Faculty, Nevsehir University, Nevsehir 50300 Turkey*
- PA – 91**     **Determination of Trace Sulfate Analysis**
- Ashley M. Tanner<sup>1</sup>, Yiming Liu<sup>2</sup> and Hongtao Yu<sup>2</sup>**
- <sup>1</sup>*REU Summer Undergraduate Researcher, Department of Chemistry, Jackson State University, Jackson, MS*  
<sup>2</sup>*Department of Chemistry, Jackson State University, Jackson, MS*
- PA - 92**     **Anion Binding Studies with Tripodal Ammonium Hosts in Solution and Solid States**
- Whitney Quinn, Musabbir.A. Saeed and Md. Alamgir Hossain**
- Department of Chemistry, Jackson State University, Jackson, MS 39217, USA*
- PA - 93**     **Oxoanion Binding with Ployazamacrocyclic Receptors**
- Musabbir A. Saeed and Md. Alamgir Hossain**
- Department of Chemistry and Biochemistry, Jackson State University, Jackson, MS 39217*
- PA - 94**     **Disaccharide Utilization Annotation in Sequenced Vibrio Species: Cellobiose Utilization Network**
- Jennifer N. Sims<sup>1</sup>, Raphael D. Isokpehi<sup>1</sup>, Alison St. John<sup>2</sup> and Hari H. P. Cohly<sup>1</sup>**
- <sup>1</sup>*Center for Bioinformatics & Computational Biology, Department of Biology, Jackson State University, Jackson MS 39217,* <sup>2</sup>*National Biodefense Analysis and Countermeasures Center, Frederick MD 21702.*