Winners' List

16th Annual Undergraduate Research Symposium in the Chemical and Biological Sciences

The College of Natural and Mathematical Sciences;
The Department of Chemistry and Biochemistry &
The Department of Biological Sciences

UMBC
AN HONORS UNIVERSITY IN MARYLAND

Sponsored by:

National Institute of General Medical Sciences of the National Institutes of Health (NIGMS/NIH)

Winners' List

Morning Poster Session
Group A - Chemical Sciences

1st Place

SYNTHESIS AND CHARACTERIZATION AND CYTOTOXICITY OF CHIRAL PLATINUM(II) BIOXAZOLINE COMPLEXES

Chelsea Thorsheim, Alexandra Ranucci, Gregory Whitehill, Daniel Himelstein, Jennifer Schmidt, and Mark Schofield
Department of Chemistry, Haverford College, 370 W. Lancaster Avenue, Haverford, PA 19041

2nd Place

A NEW TETRAPYRROLE MACROCYCLE THAT SUPPORTS A MULTIELECTRON PHOTOCHEMISTRY

Benjamin M. Lefler, Jennifer W. Eddy, Glenn P. A. Yap, Joel Rosenthal
Department of Chemistry and Biochemistry, University of Delaware, 102 Brown Laboratory, Newark, DE 19716

Morning Poster Session
Group B - Chemical Sciences

1st Place

ELECTROCHEMICAL REDUCTION OF CO_2 WITH BISMUTH BASED ELECTRODES

Thomas Keane, Jonnathan Medina Ramos, John DiMeglio and Joel Rosenthal
Department of Chemistry and Biochemistry, University of Delaware, 102 Brown Laboratory, Newark, DE 19716

2nd Place

CORRECTING FORCE-FIELD BIAS IN PIN1WW

Denise McKaig, Alexandra Iuga and Isaiah Sumner
Department of Chemistry and Biochemistry, James Madison University, 901 Carrier Drive, Harrisonburg, VA 22807

Morning Poster Session
Group C - Chemical Sciences

1st Place

NITROXIDATION OF SI(111) SURFACES WITH NITROBENZENE AND NITROSOBENZENE

Yuexing Cui, Fangyuan Tian, Andrew Teplyakov
Department of Chemistry and Biochemistry, University of Delaware, 102 Brown Laboratory, Newark, DE 19711

2nd Place

AN INVESTIGATION INTO 4-DIMETHYLAMINO PYRIDINIUM SALTS SYNTHESIS AND CHARACTERIZATION AS IONIC LIQUIDS

Yehnara Ettinoffe and Dr. Yousef Hijji
Department of Biology and Department of Chemistry, Morgan State University, 1700 East Cold Spring Lane, Baltimore, MD 21251

Winners' List

Morning Poster Session
Group D - Chemical Sciences

1st Place

SYNTHESIS OF MURAMIC ACID DERIVATIVES TO INVESTIGATE THE PROMISCUITY OF BACTERIAL CELL WALL BIOSYNTHETIC ENZYMES

Douglas J. Kenny, Dr. Yu Liu, Dr. Catherine L. Grimes
Department of Chemistry and Biochemistry, University of Delaware,
210 South College Ave., Newark, DE 19711

2nd Place

NOVEL AZO-REZVERATROL ANALOGUES AS INHIBITORS OF QUINONE REDUCTASE II

Michele Paterson[1], Yu-Chen Yen[2], Jillian M. Jespersen[1], Katherine C. Jensen[2], Andrew D. Mesecar[2], and Craig N. Streu[2]
[1] Department of Chemistry and Biochemistry, St. Mary's College of Maryland, 18952 East Fishers Rd., St. Mary's City, MD 20686
[2] Department of Biological Sciences, The Purdue University Center for Cancer Research, Purdue University, West Lafayette, IN 47907

Morning Poster Session
Group E - Chemical Sciences

1st Place

FINE TUNING THE ISOMERIC STABILITY AND METAL-BINDING PROPERTIES OF LIGHT-TRIGGERED HYDRAZONE METAL CHELATORS

Rory C. McAtee[1], Andrew T. Franks[2], and Katherine J. Franz[2]
[1]Lycoming College, Department of Chemistry, Williamsport, PA 17701
[2]Duke University, Department of Chemistry, Durham, NC 27708

2nd Place

THE SYNTHESIS AND CHARACTERIZATION OF THIENYL PHOSPHINE DERIVATIVES FOR POLYMERIZABLE METAL COMPLEXES

Jessica L. Shott, Brycelyn M. Boardman
Department of Chemistry and Biochemistry, James Madison University,
Harrisonburg, VA 22807

Morning Poster Session
Group F - Biochemistry & Molecular Biology

1st Place

BIO-ANALYTICAL METHODS TO DETERMINE ANDROGEN RECEPTOR O-GLCNACYLATION

Jhullian J. Alston[1], Jordy J. Hsiao[2], Brandon H. Ng[2], Melinda M. Smits[2], Michael E. Wright[2]
[1]Department of Biology, UMBC, 1000 Hilltop Circle, Baltimore, MD 21250
[2]Department of Molecular Physiology & Biophysics,
University of Iowa Carver College of Medicine, Iowa City, IA,52240

2nd Place

EFFECTS OF INSULIN-DEGRADING ENZYME ON INSULIN AMYLOID FORMATION

Joel Kleinberg, Dr. Melanie Nilsson
Department of Chemistry, McDaniel College, 2 College Hill, Westminster, MD 21157

Winners' List

Morning Poster Session
Group G - Biochemistry & Molecular Biology

1st Place

DEVELOPMENT OF A FLUORESCENT BAR-CODING SYSTEM FOR CELL-BASED PROTEOMIC LIBRARIES

Seth Ritter, Stefanie Berges, Erin Aho, David Colby, Ph.D.
Department of Chemical and Biomolecular Engineering, University of Delaware, 150 Academy Street, Newark, DE 19716

2nd Place

EFFECTS OF NEEDLE AND OIL VARIABLES ON AMYLOID FORMATION DUE TO INSULIN INJECTIONS

Laura Carvalho, Megan Cook and Melanie R. Nilsson
Department of Chemistry, McDaniel College, 2 College Hill, Westminster, MD 21157

Morning Poster Session
Group H - Biochemistry & Molecular Biology

1st Place

INVESTIGATING UBIQUITIN CONJUGATING ENZYME (E2) MECHANISM USING NMR

Reid Putney, Christopher Berndsen, Nathan Wright
Department of Chemistry and Biochemistry, James Madison University, 901 Carrier Drive, MSC 4501, Harrisonburg, VA 22807

2nd Place

EFFECTS OF CONDUCTIVE BUFFERS ON DNA MOBILITY

Lauren Burton[1], Kristin Parker[1,2], Elizabeth A. Craft[1], Derek C. Braun[1]
[1]Molecular Genetics Laboratory, Department of Science, Technology, & Mathematics, Gallaudet University, Washington, DC 20002
[2]Rochester Institute of Technology, Rochester, NY 14623

Morning Poster Session
Group I - Biochemistry & Molecular Biology

1st Place

A PROMOTER ELEMENT IN THE C. ELEGANS TAILLESS GENE LINKS SEX-SPECIFIC REGULATION WITH UTERINE ORGANOGENESIS

Dominic Lapadula, Pearly Ezzio, Sheila Clever and Bruce Wightman
Department of Biology, Muhlenberg College, Allentown, PA 18104

2nd Place

DIFFERENCE FT-IR STUDIES ON THE EFFECTS OF BUFFERS ON NUCLEOTIDE BINDING TO RECA

Joshua Temple, Michael Metrick, Dr. Gina MacDonald
Department of Chemistry and Biochemistry, James Madison University, 901 Carrier Drive, MSC 4501, Harrisonburg, VA 22801

Winners' List

Morning Poster Session
Group J - Biochemistry & Molecular Biology

1st Place

STRUCTURAL AND FUNCTIONAL ANALYSIS OF DISEASE CAUSING MUTATIONS IN THE M10 DOMAIN OF TITIN

Michael W. Rudloff, Nathan T. Wright
Department of Chemistry and Biochemistry, James Madison University,
901 Carrier Drive, MSC 4501, Harrisonburg, VA 22807

2nd Place

EXAMINING HMGB-1 MEDIATED EXPRESSION OF C/EBPβ IN GLIAL CELLS

Dahyana Arias and Jennifer Staiger
Department of Science, School of Natural Science and Mathematics,
Mount St. Mary's University, Emmitsburg, MD 21727

Morning Poster Session
Group K - Biological Sciences

1st Place

M1-MUSCARINIC ACETYLCHOLINE RECEPTOR AND OLFACTORY BEHAVIOR

Anthony Quang-Vinh Bui, Wilson Chan and Ricardo C. Araneda
Department of Biology, University of Maryland, College Park, MD 20742

2nd Place

DOES PRENATAL NICOTINE EXPOSURE ALTER 5HT NEURON DEVELOPMENT IN THE PET-1 KNOCKOUT MOUSE? AN UNBIASED STEREOLOGICAL APPROACH

Jessica A. Nardone and Jeffery T. Erickson
Department of Biology, The College of New Jersey, 2000 Pennington Road,
Ewing, NJ 08628

Morning Poster Session
Group L - Biological Sciences

1st Place

IDENTIFICATION OF DIFFERENTIALLY EXPRESSED TRANSCRIPTS IN *Tdrd7* NULL MUTANT MOUSE LENS

Shaili Patel, Carrie Barnum, Salil A.Lachke
Department of Biological Sciences, University of Delaware, 210 S. College Avenue,
Newark, DE 19711

2nd Place

BLUNTED RESISTANCE TRAINING-INDUCED MUSCLE REGROWTH AMONG ATROPHIED OLDER ADULTS IS ASSOCIATED WITH HEIGHTENED INFLAMMATORY/PROTEOLYTIC SIGNALING

Yu-Rei Raymond Chang[1], Michael Stec[2], Marcas Bamman[2]
[1]Department of Biological Sciences, UMBC, 1000 Hilltop Circle, Baltimore MD 21250
[2]Department of Cell, Developmental, and Integrative Biology,
University of Alabama at Birmingham, 1720 2nd Avenue South, Birmingham, AL 35294

Winners' List

Morning Poster Session
Group M - Biological Sciences

1st Place

FUNCTION OF THE CONSERVED NUCLEAR RECEPTOR *FAX-1* IN *C. ELEGANS* CELL MIGRATION AND SLEEP REGULATION

Emily Bayer and Bruce Wightman
Department of Biology, Muhlenberg College, 2400 Chew St., Allentown, PA 18104

2nd Place

MODELING TAT-PROTEIN FEEDBACK NETWORK IN HIV-1: MICRO-RNA INFLUENCE ON HIV-1 LATENCY

Zachary Fox[1] and Abhyudai Singh, PhD[2]
[1,2]Department of Biomedical Engineering, University of Delaware,
125 E. Delaware Ave., Newark, DE 19711
[2]Department of Electrical and Computer Engineering, University of Delaware,
139 The Green, Newark, DE 19716

Morning Poster Session
Group N - Biological Sciences

1st Place

CONTRIBUTION OF ELF3 TO THE TLR-DRIVEN CATABOLIC RESPONSES IN ARTICULAR CHONDROCYTES: POTENTIAL ROLE IN CARTILAGE DESTRUCTION IN OSTEOARTHRITIS

Catrina Johnson[1,2], Miguel Otero[3], Mary Goldring[3,4]
[1]Gateways to the Laboratory Program, Weill Cornell/Rockefeller/Sloan-Kettering,
Tri-Institutional MD-PhD Program, New York, NY 10021
[2]UMBC, 1000 Hilltop Circle, Baltimore, MD 21250
[3] Tissue Engineering Repair and Regeneration Program, The Hospital for Special Surgery,
New York, NY 10021
[4]Cell and Developmental Biology Program,
Weill Cornell Graduate School of Medical Sciences, New York, NY 10021

2nd Place

TIME-DEPENDENT EFFECT OF OSTEOCHONDRAL FRACTURE ON HYALURONAN CONCENTRATION IN EQUINE SYNOVIAL FLUID

Elelbin A Ortiz[1], Michele M Temple-Wong, Ph.D[2], Christina M Lee, PhD[3],
David D Frisbie, DVM, PhD[3], C Wayne McIlwraith, DVM, PhD[3], Robert L Sah, MD, ScD[2]
[1]Department of Biochemistry, UMBC, 1000 Hilltop Circle, Baltimore, MD 21250
[2]Cartilage Tissue Engineering Lab, University of California-San Diego, La Jolla, CA
[3]Orthopaedic Research Center, Colorado State University, Fort Collins, CO

Winners' List

Morning Poster Session
Group O - Biological Sciences

1st Place

THE CARDIAC CONNECTION: EXPLORING THE EFFECTS OF PRENATAL NICOTINE EXPOSURE ON CARDIORESPIRATORY CONTROL AND NEONATAL MORTALITY IN THE 5-HT DEFICIENT PET-1 KNOCKOUT MOUSE

Renuka K. Reddy and Jeffery T. Erickson
Department of Biology, The College of New Jersey, 2000 Pennington Road, Ewing, NJ 08628

2nd Place

CHARACTERIZATION OF A 3D CELL CULTURE SYSTEM FOR STUDYING MAMMARY GLAND DEVELOPMENT

Kwadwo Owusu-Boaitey[1], Ethan Sokol[2], Piyush Gupta[2]
[1]Department of Biological Sciences, UMBC, 1000 Hilltop Circle, Baltimore, MD 21250
[2]Department of Biology, Massachusetts Institute of Technology, Whitehead Institute for Biomedical Research, Nine Cambridge Center, Cambridge, MA 02142

Morning Poster Session
Group P - Biological Sciences

1st Place

BREATHING IN A DISH: RECORDING CENTRAL RESPIRATORY RHYTHM FROM THE ISOLATED BRAINSTEM-SPINAL CORD OF THE NEONATAL PET-1 KNOCKOUT MOUSE

Robert M. Myers and Jeffery T. Erickson
Department of Biology, The College of New Jersey, 2000 Pennington Road, Ewing, NJ 08628

2nd Place

SERIAL SECTION ELECTRON MICROGRAPH ALIGNMENT AND STITCHING IN CONNECTOME RECONSTRUCTION

Talmo Pereira[1], Ashwin Vishwanathan[2] and Hyunjune Sebastian Seung[2]
[1]Department of Chemistry and Biochemistry, UMBC, 1000 Hilltop Circle, Baltimore, MD 21250
[2]Department of Brain and Cognitive Sciences, Massachusetts Institute of Technology, 77 Massachusetts Avenue, Cambridge, MA 02139

Winners' List

Morning Poster Session
Group Q - Biological Sciences

1st Place

DIFFERENTIAL METHYLATION AT THE IMPRINTED *DLK1* GENE IN 6.5 DAY EMBRYOS

Jessica Arbon and Dr. Tamara Davis
Biology Department, Bryn Mawr College, 101 North Merion Avenue, Bryn Mawr, PA 19010

2nd Place

EXAMINING O-XYLOSYLTRANSFERASE SHEDDING IN *DROSOPHILA*

Brooke Palus, Dr. Erica M Selva
Department of Biological Sciences, University of Delaware, 210 S. College Ave., Newark, DE 19711

Afternoon Poster Session
Group R - Chemical Sciences

1st Place

SPECIFIC CATION EFFECTS ON AGGREGATION BEHAVIORS OF PEO-PPO-PEO TRIBLOCK COPOLYMERS

Tsung-Yu Wu, Jacob C. Lutter, Yanjie Zhang
Department of Chemistry and Biochemistry, James Madison University, Harrisonburg, VA 22807

2nd Place

STUDIES OF BCl_3 AND $B(C_6F_5)_3$ ADDUCTS OF AZAFERROCENES

Jason R. Smith[1], Arnold L. Rheingold[2], Timothy J. Brunker[1]
[1]Department of Chemistry, Towson University, 8000 York Road, Towson, MD 21252
[2]Department of Chemistry, University of California, San Diego, 9500 Gilman Drive, San Diego, CA 92093-0358

Afternoon Poster Session
Group S - Chemical Sciences

1st Place

T1 AND T2 RELAXATIONS: USING MRI TECHNOLOGY IN THE PHYSICAL CHEMISTRY LABORATORY

Arlie Bagley, Dr. Thomas DeVore
James Madison University, Department of Chemistry and Biochemistry, Harrisonburg,VA 22807

2nd Place

TIME-RESOLVED INFRARED SPECTROSCOPY OF [FeFe]-HYDROGENASE MODEL COMPOUNDS

Tara Biser[1], Rachel Meyer[1], Christopher J. Stromberg[1], and Edwin J. Heilweil[2]
[1]Department of Chemistry and Physics, Hood College, 401 Rosemont Ave., Frederick, MD 21701
[2]Radiation Physics Division, Physical Measurement Laboratory, National Institute of Standards and Technology, 100 Bureau Drive, Gaithersburg, MD 20899

Winners' List

Afternoon Poster Session
Group T - Chemical Sciences

1st Place **THE ROLE OF BACTERIAL CELL WALL DIMERS IN THE INNATE IMMUNE RESPONSE**

Lauren Genova, James Melnyk, Vishnu Mohanan, and Catherine Leimkuhler Grimes
Department of Chemistry and Biochemistry, University of Delaware, Newark, DE 19711

2nd Place **LIMESTONE ANALYSIS FOR ARCHEOLOGY**

Jacob Roodman, Daniel Downey
Department of Chemistry and Biochemistry, James Madison University, Harrisonburg, VA 22807

Afternoon Poster Session
Group U - Chemical Sciences

1st Place **QUANTITATIVE ANALYSIS OF COPPER IN AQUATIC ENVIRONMENTS USING ICP-MS**

Rebecca Neubauer, Josh Wilhide, Gregory Winter, Dr. William R. LaCourse
Department of Chemistry, UBMC, 1000 Hilltop Circle, Baltimore, MD 21250

2nd Place **TALE OF TWO APPALACHIAN STREAMS: ACID MITIGATION PLANNING AND RESULTS**

Lindsay House and Daniel Downey
Department of Chemistry and Biochemistry, James Madison University,
901 Carrier Drive, MSC 4501, Harrisonburg, VA 22807

Afternoon Poster Session
Group V - Chemical Sciences

1st Place **QUANTITATIVE ANALYSIS OF NITRATE AND BROMIDE IN AQUATIC SAMPLES USING ION CHROMATOGRAPHY (IC)**

Suejane Tan[1], Margaret LaCourse[1], Ian Shaffer[1], Taylor Smith[1], Joshua Wilhide[1], Dr. William R. LaCourse[1], Jill Arnold[2], Kimberly Gaeta[2], and Dave Cohrs[2]
[1]Molecular Characterization Analysis Complex (MCAC), UMBC, 1000 Hilltop Circle, Baltimore, MD 21250
[2]National Aquarium, 501 E Pratt St. Baltimore, MD 21202

2nd Place **EFFECTS OF HOFMEISTER ANIONS ON INTERFACIAL TENSION AT THE HYDROPHOBIC/AQUEOUS INTERFACE**

Diana Al Husseini, Natalie Trinh and Yanjie Zhang
Department of Chemistry and Biochemistry, James Madison University,
Harrisonburg, VA 22807

Winners' List

Afternoon Poster Session
Group W - Chemical Sciences

1st Place

COMPLEXATION STUDIES OF BIPYRIDINE AZA-CROWN MACROCYCLES

Benjamin Carpenter, Marc Harris
Department of Chemistry, Lebanon Valley College, 101 North College Ave., Annville, PA 17003

2nd Place

A "GREEN" APPROACH TO PYRAZOLE HALOGENATION THROUGH THE *IN SITU* GENERATION OF ELECTROPHILIC HALOGENS FROM INORGANIC SALTS

Kathryn L. Olsen, Dr. James A. MacKay
Department of Chemistry and Biochemistry, Elizabethtown College, 1 Alpha Drive, Elizabethown, PA 17022

Afternoon Poster Session
Group X - Biochemistry & Molecular Biology

1st Place

***IN VIVO* PREPARATION OF SITE-SPECIFICALLY LABELED RNA FOR NMR STRUCTURAL STUDIES OF RIBOSWITCHES**

Rachel E. Brown[1], My T. Le[2], Andrew P. Longhini[1], and T. Kwaku Dayie[1]
[1]Center for Biomolecular Structure and Organization, Department of Chemistry and Biochemistry, University of Maryland, College Park, MD 20742
[2]Department of Cell Biology and Molecular Genetics, University of Maryland, College Park, MD 20742

2nd Place

DNA METHYLATION AT THE *Rasgrf1* DMR EXTENDS BEYOND PREVIOUSLY DEFINED BOUNDARIES

Ekaterina Vlasova, Dr. Tamara L. Davis
Department of Biology, Bryn Mawr College, 101 N Merion Avenue, Bryn Mawr, PA 19006

Afternoon Poster Session
Group Y - Biochemistry & Molecular Biology

1st Place

STRUCTURAL ANALYSIS OF THE IG59 DOMAIN OF OBSCURIN

Tracy A. Caldwell, Nathan T. Wright
Department of Chemistry and Biochemistry, James Madison University, 901 Carrier Drive, MSC 4501, Harrisonburg, VA 22807

2nd Place

SPECTROSCOPIC STUDIES OF THE ENZYME DEHALOPEROXIDASE FROM AMPHITRITE ORNATA

Jonathan Birabaharan[1], Danielle Miller[1], Reza A. Ghiladi[2] and Codrina V. Popescu[1]
[1]Department of Chemistry, Ursinus College, 601 Main St., Collegeville, PA 19426
[2]Department of Chemistry, North Carolina State University, Raleigh, NC 27695

Winners' List

Afternoon Poster Session
Group Z - Biochemistry & Molecular Biology

1st Place

EFFECTS OF HEPARIN AND FIBROBLAST GROWTH FACTOR ON HUMAN CARDIOVASCULAR CELLS

Fanta Kalle[1] and Robert E. Akins Jr.[1,2]
[1]University of Delaware, Newark, DE 19716
[2]Nemours Biomedical Research, Alfred I. duPont Hospital for Children, Wilmington, DE, 19803

2nd Place

FRET-BASED ANALYSIS OF THE TRANSIT PEPTIDE *IN VITRO* INTERACTION WITH TOC34

Amber Bassett, Kristen Holbrook, L. Evan Reddick and Barry D. Bruce
Biochemistry, Cellular and Molecular Biology Department, 1414 Cumberland Avenue, University of Tennessee, Knoxville, TN 37996

Afternoon Poster Session
Group AA - Biochemistry & Molecular Biology

1st Place

THE ROLE OF ADIPONECTIN IN HIGH FAT-MEDIATED CARDIOPROTECTIVE PROGRAMS

Mashhood Wani[1], Lauren Haar[2], Avni Amratia[2], Christopher Gonzalez[2], WK Jones[2]
[1]Department of Chemistry & Biochemistry, UMBC, 1000 Hilltop Circle, Baltimore, MD 21250
[2]Department of Internal Medicine, Division of Cardiovascular Diseases, University of Cincinnati, 231 Albert Sabin Way, Cincinnati, OH, 45367

2nd Place

OXIDATIVE STRESS RESPONSE IN *Caenorhabditis elegans* AFTER SUPPRESSION OF *MRCK-1* BY RNA INTERFERENCE

Michael Robben, Patti Erickson
Department of Biological Sciences, Salisbury University, 1101 Camden Ave., Salisbury, MD 21801

Afternoon Poster Session
Group BB - Biological Sciences

1st Place

INHIBITION OF LUNG TUMOR INITIATION BY RNAI TARGETING WNT SIGNALING

Sagar Bajpai[1],Tuomas Tammela[2] ,Tyler Jacks[2]
[1]Department of Biological Sciences, UMBC, 1000 Hilltop, Baltimore, MD 21250
[2]David H. Koch Integrative Cancer Institute, Massachusetts Institute of Technology

2nd Place

DEVELOPING AN NCHIP-QPCR ASSAY FOR THE STUDY OF HISTONE MODIFICATIONS IN MOUSE

Paige De Rosa, Dr. Tamara Davis
Department of Biology, Bryn Mawr College, 101 North Merion Ave. Bryn Mawr, PA, 19010

Winners' List

Afternoon Poster Session
Group CC - Biological Sciences

1st Place

IDENTIFICATION AND CHARACTERIZATION OF *Bacillus colbertis* SJS sp. nov.

Samantha Stropko and Dr. Jeffrey Newman
Department of Biology, Lycoming College, 700 College Place, Williamsport, PA 17701

2nd Place

ASSESSING THE EFFECTIVENESS OF SUNSCREENS AGAINST UV LIGHT IN *E. COLI*

Saarah Hussain, Hailey Summa, Jeena Mathew, Zehra Husain,
Kesha Sheth, and Aikaterini Skokotas
Biology Department, Rosemont College, 1400 Montgomery Avenue,
Rosemont, PA 19010

Afternoon Poster Session
Group DD - Biological Sciences

1st Place

SITE CHARACTERIZATION AND COMPARISON OF BACTERIA POPULATIONS OF A HISTORIC DIESEL-CONTAMINATED SITE ON PRUDENCE ISLAND, NARRAGANSETT BAY, RI

Hubbard, A.[1], Pierce, S.[1,2], Penniman, M.[1], and McNally, D.[1]
[1]Bryant University, 1150 Douglas Pike, Smithfield, RI 02917
[2]Community College of Rhode Island, 400 East Ave., Warwick, RI 02886

2nd Place

TREATMENT OF GREY WATER USING BIOSYNTHESIZED SILVER-NANOPARTICLES

Jingyi Zhang, Jetka T. Wanner, and Om V. Singh
[1]Division of Biological and Health Sciences, University of Pittsburgh at Bradford,
Bradford, PA 16701

Winners' List

Afternoon Poster Session
Group EE - Biological Sciences

1st Place

TESTING FOR FEMALE SONG IN NEWLY RECOGNIZED SPECIES: THE PUERTO RICAN ORIOLE

Susanna Campbell, Kevin Omland
Department of Biological Sciences, UMBC, 1000 Hilltop Circle, Baltimore, MD 21250

2nd Place

CHARACTERIZING THE FORAGING BEHAVIOR OF MALARIA VECTORS DURING THE WET SEASON IN NCHELENGE, ZAMBIA

Samantha Eng[1], Smita Das[2], Laura C. Norris[3], Douglas E. Norris[2]
[1]Department of Chemistry and Biochemistry, UMBC, 1000 Hilltop Circle, Baltimore, MD 21250
[2]Department of Molecular Microbiology and Immunology, Johns Hopkins Bloomberg School of Public Health, 615 N Wolfe Street, Baltimore, MD 21205
[3]Department of Pathology, Microbiology, and Immunology, University of California, Davis, One Shields Avenue, Davis, CA 95616

Afternoon Poster Session
Group FF - Biological Sciences

1st Place

MEASURING GEOGRAPHICAL VARIATION IN *ACANTHOSCELIDES MACROPHTHALMUS* (COLEOPTERA: CHRYSOMELIDAE: BRUCHINAE) SEED PREDATION ON *LEUCAENA LEUCOCEPHALA* (JIMBAY) AND PARASITOID WASPS ON SAN SALVADOR, BAHAMAS

Alicia E. Barone, and Daniel S. Kjar
[1]Department of Biology, Elmira College, One Park Place, Elmira, NY 14901

2nd Place

THE TOXIN-REMOVING ROLE OF ABC TRANSPORTERS IN HONEYBEES

Kaliah Miller, Nathan Swan, Grace Kunkel, Dr. David Hawthorne
Department of Entomology, University of Maryland, College Park, MD 20742

Afternoon Poster Session
Group GG - Biological Sciences

1st Place

DIVERSITY ANALYSIS OF WILD TOMATO SPECIES IN THE LYCOPERSICUM CLADE USING TRANSCRIPTOMES

Amelia Lovelace[1], Lukas Mueller[2], Suzy Strickler[2]
[1]Department of Biology, Hood College, 401 Rosemont Avenue, Frederick, MD 21701
[2]SolGenomics, Boyce Thompson Institute of Plant Research, 533 Tower Road, Ithaca, NY 14853

2nd Place

CHARACTERIZATION OF TSO1 FUNCTION IN *Arabidopsis* FLOWER (ANTHER) DEVELOPMENT

Dae Ik Yi, Wanpeng Wang, Zhongchi Liu
The Department of Cell Biology and Molecular Genetics, University of Maryland, College Park, MD 20742

Winners' List

Afternoon Poster Session
Group HH - Biological Sciences

1st Place

MODULATION OF GRANULE AND MITRAL CELLS BY MUSCARINIC RECEPTORS IN THE OLFACTORY BULB

Andre DeSouza, Ricardo Araneda
Department of Biology, University of Maryland, College Park, MD 20742

2nd Place

CHARACTERIZATION OF STEROID SULFATASE IN *XENOPUS LAEVIS*.

Anderson Chen, Kyle W. Selcer
Department of Biological Sciences, Duquesne University, 600 Forbes Avenue, Pittsburgh, PA 15219