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47th Annual Fall MACUB Conference

Conference Theme:

*"Unique Biology Opportunities in
Research and Community Involvement"*

KEYNOTE ADDRESSES BY:

David Micklos

*"Course Based Research Projects
in Gene and Genomic Analysis"*

and

Donald E. Stearns

"Teaching and Learning With a Sense of Community"

**Saturday, November 1, 2014
Molloy College
Rockville Centre, New York**

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Conference Notes

M.A.C.U.B.

METROPOLITAN ASSOCIATION
OF
COLLEGE AND UNIVERSITY BIOLOGISTS

2014 ANNUAL CONFERENCE

Member Presentations And Student Poster Presentations

Saturday, November 1, 2014
Molloy College
Rockville Centre, New York

MEMBER PRESENTATIONS

Member Paper Presentations Chaired by Dr. Jodi Evans

Student perceptions of anatomical case studies in clinically-based programs. P. Field, Kean University, Union, NJ 07083

Incorporating Authentic Research Experience in Undergraduate Classroom. Nidhi Gadura, Biology Department, Queensborough Community College, Bayside, NY 11364

The vascular flora of Pea Island, Long Island Sound, New York. Richard Stalter, Robert Kerns, Mindita Ingh and Kevin Arjune, St. John's University.

Assessment of Student Outcomes in Community College Anatomy and Physiology I. Maureen N. Gannon and Abass Abdullahi, Bronx Community College, Bronx, NY.

Somatic progenitor cell differentiation to myofibroblast requires an increase in integrin beta1/CD29 expression
Namita Sen, Mark Weingarten, Matthew Lubin, Yakov Peter
Department of Biology and Pulmonary Medicine, Yeshiva University, New York, NY 10033

Analysis of genes coding for tRNA in the genome of Mycobacteriophage Littleton *Yi Jiang and Urszula Golebiewska, Department of Biological Sciences, Queensborough Community College, Bayside, NY

Some Don't Like it Hot: The Ability of the Juice from Different Varieties of Capsicum annuum to Inhibit the Growth of Escherichia coli, Staphylococcus aureus, Enterococcus faecalis, Salmonella typhimurium, and Enterobacter aerogenes. *Yikie Creighton, Elizabeth Mulligan. Kingsborough Community College, Brooklyn, NY USA.

Putative Transition Proteins in 12 Sequenced Drosophila Species. Zain A. Alvi*, Tin-Chun Chu, Angela V. Klaus. Department of Biological Sciences, Seton Hall University, South Orange, NJ 07079.

Dendritic Spine Alterations in Hippocampal CA1 Pyramidal Neurons of Alexander Disease. Rujin Tian¹, Guomei Tang² .PhD, Department of Biology, Bronx Community College, CUNY 2. PhD, Department of Neurology, Columbia University, New York, 10032

Ancestors in Our Genome – The New Science of Human Evolution. Eugene E. Harris, City University of New York and the Center for the Study of Human Origins, New York University

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STUDENT ABSTRACT PRESENTATIONS

Computational study of the cerebellar function: A model of cerebellar circuit for motor error detection and correction. *Abraham Dickey III, Shao-Ying Hua, PhD, York College of the City University of New York

Population trends of Juvenile Atlantic Horseshoe Crab (*Limulus polyphemus*) on Plumb Beach, Brooklyn, NY Pursuant to a Beach Renourishment Project, Abraham Tuachi, Christina P. Colon, Ph.D. Department of Biological Sciences, Kingsborough Community College

Exploring Relationships among Different Melons in Cucurbitaceae Family. Aisha Noor, Dr Nidhi Gadura Queensborough Community College, 222-05 56th Ave., Bayside, NY 11364

Causes of *Bromelia pinguin* dominance in lowland wet forests and its effects on plant diversity in Costa Rica Katherine Andrade¹, Martha Jane Peters², *Alessa Vindas-Cruz¹, Dr. Daniela Shebitz¹. ¹Kean University, Union, New Jersey, USA, ²Northwestern University, Evanston, Illinois, USA.

Comparison of Selected *Enterococcus* and *E. coli* Detection Methods in Recreational Waters Myla Ramirez¹, *Alessandra Rossi¹, Edward Wong², Meiyin Wu¹, and Lee H. Lee¹. ¹Montclair State University, Montclair, New Jersey, USA, ²Livingston High School, Livingston, New Jersey, USA.

Identifying Candidate Reproductive Genes from Apomictic Pistils of *Cenchrus ciliaris* (Buffelgrass) Using Genomic Methods. *Victor Leon, Jermin Adrawy, and Terry L Kamps, Ph.D. Biology Department, New Jersey City University, Jersey City, NJ

Sand fiddler crabs (*Uca pugilator*) appear not to be a vector for dermo (*Perkinsus marinus*) infection of eastern oysters (*Crassostrea virginica*). Victor Flores, Craig Hinkley, and Gary Sarinsky, Kingsborough Community College, Brooklyn, NY.

Determining Whether Treatment of Depression After Sustaining a Hip Fracture Injury Leads to An Increased Survival Rate Among Geriatric Patients. *Victoria Uceda¹, David Arroyo¹. ¹Hackensack University Medical Center, Research Associate Program, 30 Prospect Ave, Hackensack, NJ, USA.

Determining the Structure of Citrate, Glycine, and Zinc Complex in Aqueous Solution Using Vibrational Spectroscopy.*Washington Ramirez, Jinnette Tolentino Dr. Ruel Z. Desamero². ¹Queensborough Community College, Bayside NY, ²York College, Jamaica, NY.

Antioxidants Boost Male Fertility: The role of reactive oxygen species in modulating fertility and sperm viability in *D. melanogaster* Weily Lang*, Min Shin*, Preethi Radhakrishnan. LaGuardia Community College, 31-10 Thomson avenue, Long Island City, NY 11101.

Characterization of Leishmania major phosphatidylethanolamine methyltransferases LmjPEM1 and LmjPEM2 and their inhibition by choline analogs. Stergios S. Bibisa,b, Kelly Dahlstromc, Tongtong Zhua, Rachel Zuffereya,c, Department of Biological Sciences, St John's University, 8000 Utopia Parkway, Jamaica, NY 11439, USA, b Biology Department, University of Bridgeport 126 Park Avenue, Bridgeport, CT 06604, USA, c Department of Biochemistry, Kansas State University, Manhattan, KS 66506, USA

Uncontrolled Non-Production Materials Have Led to a High Audit and Injury Risk at 18 Chrysler Facilities. *Tiffany Bobb-Semple, Amy Humphries and Shelly Nault, Medgar Evers College, Brooklyn, NY and Chrysler Group LLC, Auburn Hills, MI.

Linking an increase in inflammation in LADMAC cells exposed to a genetic variant Beta-casomorphin-7 with cerebral inflammation in Autistic Individuals Katia Macklin, Ritchell Goldman, Tisha Paul, Suzan Benitez, Joyce Mangalathu, and Arun Rambarran, Mary Kusenda. Molloy College, Rockville Centre, New York, USA

Comparison of Lichens from Long Island versus Manhattan, Brooklyn, and Queens for the Presence of Polyketide Synthase Gene. * Vanita Thompson, Ivan Shun Ho. Kingsborough Community College, Brooklyn, New York, USA

Antiviral Activity of Black Tea Theaflavins against Herpes Simplex Virus 1. *Aline de Oliveira and Tin-Chun Chu. Seton Hall University, South Orange, New Jersey, USA

Establishing the embryonic zebrafish as a model of neuronal development under environmental stressors. Amith, M.1*, Sherine, F. 1*, Chan, K. 1*, Hernandez, A. 1, Arumov A. 1*, Ciprian, A. 1, Agosto A. 1, Aspiazu, K. 1, Demaria, A. 1, Feratovic, E. 1, Fletcher, D. 1, Nolan, K. 1 and Dell A. L. 1,2 1. Department of Biology St. Francis College, Brooklyn, NY 11201 USA 2. Department of Neuroscience, University of Pennsylvania, Philadelphia, PA 19104 USA

Diagnosing KRAS Gene Mutations Using Molecular Beacons and SuperSelective Primers. *Alix Duarte¹, Dr. Salvatore A.E. Marras ². ¹New Jersey City University, Jersey City, New Jersey, USA, ²Rutgers, The State University of New Jersey, Newark, New Jersey, USA.

Effects of Ultraviolet Light on Serratia marcescens' Prodigiosin Production. *Alyssa Joyce Bacalan¹. ¹ Hunter College, New York, New York, USA. (Research was done previously while attending Kingsborough Community College, Brooklyn, New York, USA.)

Molecular Characterization of Microbial Community Composition as a Function of Depth in Estuary Sediments. *A. Espinosa, D. Jadev and J. Coombs. Adelphi University, Garden City, NY USA.

The Effects of Dipentyl Phthalate on Drosophila melanogaster Development. *Amy Gimpel¹, Heather Cook¹. ¹Wagner College, Staten Island, New York, USA.

Flow Cytometry Analysis of Cyanobacteria in Barnegat Bay, New Jersey. *Anaika Singh, *Jillian Cortese, Robert Newby Jr. and Tin-Chun Chu. Seton Hall University, South Orange, New Jersey, USA.

The Northern Rock Barnacle (*Balanus balanoides*) Does Not Appear to Be an Intermediate Host for MSX (*Haplosporidium nelsoni*). *Andrea Saavedra, Craig Hinkley and Gary Sarinsky. Kingsborough Community College, Brooklyn, NY USA.

Development of a Gene Transfer Strategy to Deliver an anti-EGFR RNA Therapeutic Aptamer to the Glioblastoma Microenvironment. *Andrew R. Gilson, *Sachin Parikh and Martin J. Hicks. Monmouth University, West Long Branch, NJ, USA.

Antibacterial Effect of *Polygonum multiflora*. *Andy S. Demianicz and Tin-Chun Chu. Seton Hall University, South Orange, New Jersey, USA.

Effect of Black Tea Extract on Herpes Virus Type-2 Infection of A549 cells *Anum Aftab, Dr. Lee H. Lee, Ph.D., Dr. Sandra D. Adams, Ph.D. College of Science and Mathematics, Department of Biology and Molecular Biology, Montclair State University, Montclair, NJ 07043 USA.

Proteomic Investigation of Style Development in *Petunia hybrida*: An SDS-PAGE Study of Total Proteins in Styles of Buds and Mature Flowers *Artem Gordon, Farshad Tamari, Ph.D. Kingsborough Community College,

A DNA Superstructure Study: Bioinformatics Applied to Mapping a *Drosophila biarmipes* Gene. *Sherley Demetrius and Cindy Jo Arrigo, Department of Biology, William J. Maxwell College of Arts and Sciences, New Jersey City University, Jersey City, NJ, USA.

Green Tea Polyphenols, EGCG and EGCG-Stearate as Potential Inhibitors of Herpes simplex virus-1 in Human Epithelial A549 cells. *Shivani N. Patel, Dr. Lee H. Lee, Dr. Sandra Adams, Department of Biology and Molecular Biology, Montclair State University, Normal Avenue, Montclair, NJ .

Self-assembled Monolayer Formation of Alkyl Phosphate on Tooth Enamel for Tooth Decay Prevention Researchers: Bumjung Kim, Ph.D¹, Shrushti Patel* Marcos Castillo², Thomas Howard. The William J. Maxwell College of Arts and Science, Department of Chemistry, New Jersey City University, Jersey City, NJ 07305 USA, North Bergen High School, North Bergen, 07047, 3St.Peters Preparatory School, Jersey City, NJ

Characterization of iron in *Petroselinum crispum* (Parsley) Using Mossbauer Spectroscopy. *Stephan Smith¹, Sunil Dehipawala¹, Harry Gafney. Queensborough Community College, Bayside NY, 2Queens College, Flushing, NY

Can Infrared Spectroscopy Have a Place in the Introductory Biology Lab R. Helburn * and K. Nolan Department of Chemistry and Physics, 2Department of Biology and Health Promotion. St. Francis College, Brooklyn Heights NY 11201

The Impact of Beach renourishment on Spawning Habitat of the Atlantic Horseshoe Crabs (*Limulus polyphemus*) on Plumb Beach (Brooklyn NY) Safinaz Mashali, Christina P. Colon, Ph.D. Department of Biological Sciences Kingsborough Community College, City University of New York, Brooklyn, NY

Using Ethnobotanical Indicators for *in vitro* Antimicrobial Screening of Medicinal Plant Leaves from the Lowland Wet Forests of Costa Rica *Sana Baig, Kean University, Union, New Jersey

A Comparison of the Effectiveness of Traditional & Non-traditional Antifungal Agents. *Sashane A. Campbell, Mary T. Ortiz, Loretta Brancaccio-Taras. Kingsborough Community College, Brooklyn, New York, USA.

Spatial Learning and Memory in a Rat Model of Sporadic Alzheimer's Disease. *Shanique Martin¹, Juan Mosquera¹, Jamel Travis² and Francisco Villegas, PhD².
¹Queensborough Community College, Bayside NY,² York College, Jamaica, NY.

Histamine Receptors in Gill of the Bivalve *Crassostrea virginica* and the Actions of Histamine at the Gill Interfilamental Junctions. *Ave Harris, Jarreau Harrison, Fabienne Mondelus, Edward J. Catapane Margaret A. Carroll, Medgar Evers College, Brooklyn, NY.

Synergistic Effect of Green Tea Polyphenols with Antibiotics on *Escherichia coli* and *Staphylococcus aureus*. *Ayuni Yussof and, Syed Samy and Lee H. Lee, Montclair State University, Montclair, New Jersey.

Modifying the Surface Chemistry of Two Types of Electrodes: Boron-Doped Diamond (BDD) and Glassy Carbon (GC). *Azeez Ibrahim¹ and Greg M. Swain², ¹Medgar Evers College, Brooklyn, NY and ²Michigan State University, East Lansing, MI.

Modifying the Surface Chemistry of Two Types of Electrodes: Boron-Doped Diamond (BDD) and Glassy Carbon (GC). *Azeez Ibrahim¹ and Greg M. Swain², ¹Medgar Evers College, Brooklyn, NY and ²Michigan State University, East Lansing, MI.

Histamine and Histamine Receptor Involvement in Sensory-Motor Integration of Gill Lateral Cell Cilia Activity in the Bivalve *Crassostrea virginica*. *Beatrix Boissette, Ave Harris, Patrick Akande, Edward J. Catapane and Margaret A. Carroll, Medgar Evers College, Brooklyn, NY

.Biological Assessments of the Ursino Dam Area, John's Cove on the Arthur Kill Blueway, and South Front Street Situated at the Mouth of the Elizabeth River and the Arthur Kill Blueway, New Jersey, (A citizen Science Effort). *Bill Surena¹, Mariam Katu Binti². New Jersey City University, Jersey City, NJ, USA.

Examination of Household Chemicals on the Growth of Normal Flora. *Blondine Paul and Kevin Bonney Kingsborough Community College, Brooklyn, New York USA.

Construction of Rhomboid SCO3855-S.coelicolor Knock-out mutant Brandon Ackerman*, Naydu Carmona, Ph.D., Peter Novick, Ph.D., Monica Trujillo, Ph.D. Queensborough Community College, City University of New York, Bayside NY 11364

Subcellular localization of Akt protein in unaffected and Bloom's syndrome SV40-transformed fibroblasts stimulated with insulin-like growth factor. *Britni Hinderhofer, Anthony Mangelli, and Maureen Sanz. Molloy College, Rockville Centre, New York, USA.

Protein interaction networks and novel isoforms in Schizophrenia and concordance in a murine model Brittiny Dhital*¹, Elizabeth Kolmus¹, and Jeremy Seto² ¹Undergraduate Program in Biomedical Informatics and ²Department of Biological Sciences, New York City College of Technology, The City University of New York.

The Effects of Lipophilic Green Tea Polyphenols in Controlling Endospore Germination in *Bacillus cereus*. *Bushra Ali, Hassan Tahir, and Lee H. Lee, Department of Biology and Molecular Biology, Montclair State University, New Jersey, USA.

Nuclear Tip60 overexpression exacerbates chemotherapeutic drug treatment in breast, lung, and pancreatic cancer cell lines. *Priyadarshini Ravichandran, Daniel S. Ginsburg. LIU Post, Brookville, New York 11548, USA.

Development of a Gene Transfer Strategy of Antisense RNA Therapeutic to Alter HGFR Expression.*Priyal Patel, Sarah C. Falotico, and Martin J. Hicks. Monmouth University, West Long Branch, NJ, USA.

**Cytoplasmic localization of the *XRR1* gene in *Saccharomyces cerevisiae* Ramita Suwal*¹ and Marci J. Swede² ¹Long Island University, Post, Department of Biomedical Sciences, Brookville, NY
²Long Island University, Post, Department of Health Sciences, Brookville, NY**

Testing a *Saccharomyces cerevisiae* genomic library to determine copper induced cell death pathways. *Ricky Shao and Dr. Nidhi Gadura Biology Department, Queensborough Community College, Bayside NY 11364

Physiological and Molecular Analyses of ZnCl₂ Stress Response in Cyanobacterium *Synechococcus* sp. IU 625.*Robert Newby Jr. and Tin-Chun Chu. Seton Hall University, South Orange, New Jersey, USA.

Investigating the Roles of *EGR1* and *ANGPTL4* in the Protection of Rat Testis Following Lipopolysaccharide-induced Inflammation. *Mitchell I. Parker, *Rekha Penmetcha. Monmouth University, West Long Branch, New Jersey, USA. Faculty Mentor: Dr. Michael A. Paladino.

The Third River Pathogen Study. *Myla Ramirez¹, Matthew Newton¹, Meiyin Wu¹, Lee Lee¹, Jonathan Gruper Vera Lazar, Daniel Cruz, Elsa Latheef, Edward Wong. ¹Montclair State University, Montclair, New Jersey, USA, Friends of Bonsal Preserve, Montclair, New Jersey, USA, ³Livingston High School, Livingston, New Jersey, USA.

Comparison of Chromosome Four Protein-Coding Regions between *D. melanogaster* and *D. biarmipes*. *Najee Ford and Cindy Jo Arrigo, Department of Biology, William J. Maxwell College of Arts and Sciences, New Jersey City University, Jersey City, NJ, USA.

Preliminary Characterization of a *Streptomyces* Strain Collection Paula Delos-Reyes, Kimberly Deleon, Kanchanpreet Kaur, Chung Tse, Monica Trujillo and Mangala Tawde Biology Department, Queensborough Community College, CUNY

The Male Reproductive System and Testis Stem Cell Niche in *Drosophila ananassae* and *Drosophila persimilis*. Cassandra Lawson, Crystal Calise, and Angela V. Klaus, Department of Biological Sciences, Seton Hall University, South Orange, NJ, 07079

p-Aminosalicylic Acid (PAS) Reverses Neurotoxic Effects of Manganese on a Dopaminergic System. *Cassandra Mezalón, *Toshana McBean, Edward J. Catapane and Margaret A. Carroll, Medgar Evers College, Brooklyn, NY.

A comparison of summer macroinvertebrate communities and selected environmental factors in two locations of Muddy Branch Tributary, Montgomery County, Maryland. Chantal Agnew*, Donald Stearns. Wagner College, One Campus Road, Staten Island New York 10301 USA.

Study the Effect of Different Tea Polyphenols on the Biofilm formation in *Pseudomonas aeruginosa*. *Christopher Chen, Hassan Tahir and Lee H. Lee, Montclair State University, Montclair, NJ,

Plant Polyphenols Reduce Invasive Potential of Human Melanoma Cells *Correy R. Jones¹, Carleta A. Joseph¹, Virinder S. Parmar², and Anthony L. DePass¹ ¹Long Island University, Brooklyn, NY, Department of Biology ²University of Delhi, New Delhi, India, Department of Chemistry

Fluorinated protein block polymers for drug delivery. *Cynthia Xu, Joseph Frezzo, Jin Montclare, Ph.D. New York University Polytechnic School of Engineering, 6 Metrotech Center, Brooklyn, NY 11201.

Immunohistofluorescence Localization of Histamine and Histamine Receptors in Ganglia and Tissues of the Bivalve Mollusc, *Crassostrea virginica*. *Danellie Semple¹, *Ayana McLeod², Margaret A. Carroll² and Edward J. Catapane², ¹Kingsborough Community College and ²Medgar Evers College, Brooklyn, NY.

Determination of Phylogenetic Relationship between Potato Family by DNA Barcoding. *Daysi Proano, Weiwu Li, Eunjung Shin and Dr. Nidhi Gadura. Queensborough Community College, Bay-side, New York, USA.

A PRIMATE ECOLOGY FLOW CHART *Deborah Swartz, University of Maine at Fort Kent, Fort Kent, ME 04743

Antiviral activity of *Polygonum multiflorum*. *Derek Prince and Tin-Chun Chu. Seton Hall University. South Orange, New Jersey, USA.

Determination of Phylogenetic Relationship between Potato Family by DNA Barcoding. *Daysi Proano, Weiwu Li, Eunjung Shin and Dr. Nidhi Gadura. Queensborough Community College, Bay-side, New York, USA.

Src Kinase is Required for the Interruption of Cholera Toxin Uptake in Cells Overexpressing Ack1 Devina Persaud^{1*}, Victoria Prieto-Echagüe², Deborah A. Brown³, Todd Miller⁴ and Azad L. Gucwa¹ Department of Biomedical Sciences, Long Island University, Brookville, NY. ¹ Institut Pasteur de Montevideo, Montevideo, Uruguay. ² Department of Biochemistry and Cell Biology³ and Department of Physiology and Biophysics⁴, School of Medicine, Stony Brook University, Stony Brook, NY

The vascular flora of Pea Island, Long Island Sound, New York. Richard Stalter, Robert Kerns, Mindita Singh and Kevin Arjune, St. John's University.

Three-dimensional reconstruction of planarian micrographs in search of human proto oncogene orthologs. *[†]Michael Cataldo¹, *[†]James Ducey¹ and #Jonathan Blaize¹ Wagner College, Department of Biological Sciences Campus Road, Staten Island NY

ATP modulates Hypothalamic Oxytocin Exocytosis via Mitochondrial Calcium Michael Altimari, QCC/CUNY Jaya Haldar, St John's University.

Horseshoe Crabs (*Limulus polyphemus*) from Shell Bar and Davis Park in New York are from the Same Population, Michael K. Nyarko*, Craig Hinkley, and Gary Sarinsky, Kingsborough Community College, Brooklyn, NY

The Role of NMDA Receptors in Cancer. Mina Youssef, Jan Osea, Katrin Llanos, and Natalia Coleman, PhD. NJCU, Jersey City, NJ. USA.

Conservation of Mammalian U-Rich Elements Involved in Polyadenylation. *Mingzhao Liu, Dr. Scott Frees, Dr. Paramjeet Bagga. Ramapo College of New Jersey, Mahwah, New Jersey, USA.

MYST1 is the New Co-activator that Regulates the Proliferation of PCa Cells *Marc Philzaire¹, Shiraz Mujtaba¹, Kerry Burnstein², and Alice Levine³. ¹Department of Biology, Medgar Evers College, City University of New York, Brooklyn, NY 11225 USA, Division of Endocrinology, ²Department of Molecular and Cellular Pharmacology, Miller School of Medicine, University of Miami, Miami, FL 33136 USA and, ³Department of Medicine, Mount Sinai School of Medicine, NY, NY 10029 USA.

Use of qPCR to Map the Distribution and Seasonal Changes in Early Developmental Forms of the Atlantic Sea Nettle (*Chrysaora quinquecirrha*) in Barnegat Bay, New Jersey. Maria Carvalho*, Dena Restaino, Nashali Ferrara, Zachary Fetske, Isabella Pastore, Paul A.X. Bologna, and John J. Gaynor. Dept. of Biology & Molecular Biology, Montclair State University, Montclair, New Jersey, USA.

Induction of Osteogenesis in Mesenchymal Cells Isolated from Limb Buds of Early Chicken Embryos, Nicole DellaPorta, *Danielle Jarvis, Taylor Kenney, *Matthew McLeod, Meghan Orlando and Anthony Tolvo. Molloy College, Rockville Centre, New York, USA.

Elucidating the Bioactivity of Spent Ground Coffee Extracts Maurice Chandon SUNY Old Westbury Old Westbury NY.

Examination of Social Foraging in *Bufo americanus*. Elizabeth Ramirez and Charles Sontag, Bergen Community College

Cloning and Sequencing of 16S rRNA and ITS Genes Isolated from Compost DNA to Describe the Microbial Community of a Composting System. Elizabeth Kulko*, Elyssa Baron, and Luis Jimenez. Biology and Horticulture Department, Bergen Community College, Paramus, New Jersey, USA

.Examination of Social Foraging in *Bufo americanus*. Elizabeth Ramirez and Charles Sontag, Bergen Community College

Transcriptional Changes that Occur in Response to the Activation of Receptor Tyrosine Kinase RET *Elizabeth Y. Flores¹ and Dr. Quinn C. Vega¹ Department of Biology and Molecular Biology, Montclair State University, New Jersey, USA¹

Building a Rat Model of Benign Essential Blepharospasm. *Ellen Mutter¹, Craig Evinger². ¹Rockland Community College, Suffern, NY. ²Department of Neurobiology and Behavior, Stony Brook University, Stony Brook, NY.

Molecular Characterization and Antimicrobial Susceptibility of *Staphylococcus aureus* isolates from a Healthy Student Population. Elyssa Baron*, Elizabeth Kulko, and Luis Jimenez. Biology and Horticulture Department, Bergen Community College, Paramus, New Jersey, USA.

Egg Densities of the Atlantic Horseshoe Crabs (*Limulus polyphemus*) on the East ends of Plumb Beach (Brooklyn NY).

*Ernest Fatoke-Osobukola, Christina Colon PhD.

Ancestors in Our Genome – The New Science of Human Evolution. Eugene E. Harris, City University of New York and the Center for the Study of Human Origins, New York University.

Western Blot Identification of Dopamine and GABA Receptors in Gill of the Bivalve *Crassostrea virginica*. *Fabienne Mondelus, Beatrix Boissette, Fiana Bess, Margaret A. Carroll and Edward J. Catapane, Medgar Evers College, Brooklyn, NY.

Mapping the ubiquitination sites of the transcriptional repressor ICER *Fanaye Woldeamanuel and Carlos Molina. Montclair State University, Montclair, NJ, USA.

The Effects of Atypical PKC on the Differentiation of Kidney Cells. Fatime Qosaj*, Alana Doonachar, and Alan Schoenfeld, Adelphi University, Garden City, New York.

Presence of Octopamine Receptors in Heart of the Bivalve *Crassostrea virginica*. *Fiana Bess, Ave Harris, Christopher Welsh, Margaret A. Carroll and Edward J. Catapane, Medgar Evers College, Brooklyn, NY.

Role of Glutamate Receptor Interacting Protein 1 (GRIP1) in Pseudophosphorylated CaMKII targeting inhibitory synapses. Giancarlo Perez*, Reed C. Carroll, Anthony Torres. The William J. Maxwell College of Arts and Sciences, Biology Department, New Jersey City University, Jersey City, NJ 07305 USA

The Effectiveness of Nontraditional Agents in the Treatment of Mycobacterial Infections. *Hadiya James, Mary T. Ortiz, Loretta Brancaccio-Taras. Kingsborough Community College, Brooklyn, New York, USA

Cellular suicide in ovarian cancer: How DNA methylation of GSK3 β results in chemoresistance . *Lauren Vieira¹, Noelle Cutter¹⁻², Rosivel Flores¹, Michael O’Sullivan¹, Rebecca Reinold¹, Ashley Stumpel, Benjamin Honigsfeld³. ¹Molloy College, Rockville Centre, New York, USA. ²Cold Spring Harbor Laboratory, Cold Spring Harbor, New York, USA. ³Mepham High School, Merrick, New York, USA. ⁴Hofstra University, Hempstead, NY, USA

Genetic engineering of a novel *Streptomyces* strain Linsy Benjamin*, and Monica Trujillo, Ph.D. Queensborough Community College, City University of New York, Bayside NY 11364

p-Aminosalicylic Acid (PAS) Reverses the Neurotoxic Effects of Manganese on Dopamine Post-Synaptic Receptors. *Loren Dubose, *Kurt Loney-Walsh, Edward J. Catapane² and Margaret A. Carroll, Kingsborough Community College, Brooklyn, NY and Medgar Evers College, Brooklyn, NY.

Elucidating the Effects of Dopamine On Pharyngeal Pumping in *Caenorhabditis elegans* Madeeha Rahat, University of Southampton, Southampton, United Kingdom and SUNY College at Old Westbury, Old Westbury, NY Faculty Mentor: Dr. Fernando Nieto Ph.D. SUNY College at Old Westbury

OPTIMIZATION OF BIOFUEL PRODUCTION IN CHLAMYDOMONAS REINHARDTII BY INTRODUCTION OF A SYNTHETIC FATB GENE Elizabeth Calvente, Maritza Galeas, Kamai Silber¹, Natasha Tsay¹, Joseph Saccente, Dimitrios Papamichail² J. Robert Coleman¹ and Kerry A. Lutz Bioscience Department, Farmingdale State College, Farmingdale, NY 11735
Department of Computer Science, The College of New Jersey, Ewing, NJ 08628

Engineering comp based Fluorinated coiled-coil fiberS *Kevin Zhang, Haresh T. More, Nikita Srivastava, and Jin K. Montclare, New York University Polytechnic School of Engineering Department of Chemical and Biomolecular Engineering, 6 Metrotech Center Brooklyn, NY 11201

Synergistic Antibacterial Activity of Turmeric and Garlic with Selected Antibiotics. *Kirsten Simmons, *Nicolle Segarra, *Leslie Landy, *Jonathan Valsechi-Diaz and Tin-Chun Chu. Seton Hall University, South Orange, New Jersey, USA.

In Vitro Artificial RNA Selection of an Aptamer against the Oncometabolite 2-Hydroxyglutarate. *Krima Patel, Dr. Jonathan Ouellet. Monmouth University, West Long Branch, NJ, USA

Temporal and Geographic Variation in a Marine Snails Reproductive Investment. *Kristin Spsychalsky, Aaren Freeman, Adelphi University, Garden City, New York, USA.

Bioinformatic Approach to Investigate a Relationship Between *cis*-regulatory Elements Involved in Mammalian Polyadenylation *Haley Wight, Dr. Scott Frees, Dr. Paramjeet Bagga Ramapo College of New Jersey Mahwah, NJ, USA.

Manganese Accumulation in Leaves and Radishes Grown in Manganese Supplemented Soils. *Hasani Douglas, *Kortni Garcia, Shellyann Clarke-Lambert, Karl Ruddock and Dereck Skeete, Medgar Evers College, Brooklyn, NY

Determining the Genetic Pathways Involved in Cell Death of Copper Treated *Saccharomyces cerevisiae* By Haseeb Shah* and Dr. Nidhi Gadura Biology Department, Queensborough Community College, Bayside, NY

The effect of PKD2 inhibitors on the feeding behavior of Hydra Hyo Jung Shin¹, Maryam Khan¹, Susan McLaughlin Biology Department, Queensborough Community College, Bayside, NY.

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Cloning and Sequencing of 16S rRNA Genes Isolated from Soil DNA to Detect the Predominant Bacterial Species in New Jersey Soils. Isabella Canals*, Elyssa Baron, and Luis Jimenez. Biology and Horticulture Department, Bergen Community College, Paramus, New Jersey, USA.

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Bioinformatics couples D. biarmipes RNA editing of Calcium Activated Protein for Secretion (CAPS) mRNA to potential involvement in developmental expression levels. *Jasmine Fenner and Cindy Jo Arrigo, Department of Biology, William J. Maxwell College of Arts and Sciences, New Jersey City University, Jersey City, NJ, USA.

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The Horseshoe Crab (*Limulus polyphemus*) does not appear to be a vector for the transmission of Dermo (*Perkinsus marinus*) to the Eastern Oyster (*Crassostrea virginica*). *Katherine Valdivieso, Craig Hinkley, Gary Sarinsky, Kingsborough Community College, Brooklyn, NY 11235. USA

Linking an increase in inflammation in LADMAC cells exposed to a genetic variant Beta-casomorphin-7 with cerebral inflammation in Autistic Individuals Katia Macklin, Ritchell Goldman, Tisha Paul, Suzan Benitez, Joyce Mangalathu, and Arun Rambarran, Mary Kusenda. Molloy College, Rockville Centre, New York, USA

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Prevalence of Escherichia coli among ruminants in public animal settings in both cold and warm temperatures *Judith Betz¹, Marc Valitutto², Kathleen A. Bobbitt¹, and Christopher P. Corbo Microbiology Program, Department of Biological Sciences, Wagner College, Staten Island, NY Animal Care Department, Staten Island Zoo, Staten Island, NY

A practical response to the antibiotic crisis: student-led research in the isolation and characterization of antibiotic producing bacteria.*Julia Halbersma, *Rebecca Przywara¹ and Jacqueline Washington Nyack College, Nyack, New York, USA

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