CNMS URS 2018 Winners

MORNING SESSION

AA

1st Kinan Abouassali # 168 GREEN SYNTHESIS OF GRAPHITIC AND CHALCOPYRITIC QUANTUM DOTS FOR SOLAR CELL APPLICATIONS 2nd Benjamin Hammel #206 SYNTHESIS AND CHARACTERIZATION OF CU-DOPED TIO2 NANORODS AS A VISIBLE LIGHT PHOTOCATALYST BA 1st Benjamin England #196 SYNTHESIZING PENTADENTATE SCHIFF BASE NICKEL(II) AND COBALT(III) COMPLEXES: DOES A MONODENTATE LIGAND BIND TOO? 2nd Adetunji Adeniran-Adetoye #169 TOWARD ONE-POT WET CHEMISTRY SYNTHESIS OF ALUMINUM METAL-ORGANIC FRAMEWORK (AI-MOF) CAU-10 AND ENTRAPMENT OF THE **BIOMEDICALLY ACTIVE MOLECULE** CA 1st Erin Krist #223 NEW TRANSITION METAL COMPOUNDS INCORPORATING THE HYDROTRIS(DIMETHYLTRIAZOLYL)BORATE LIGAND 2nd Ayanna Culmer-Gilbert #188 MICROWAVE SYNTHESIS OF FAC-TRICARBONYL (PENTYLCARBONATO) (α- DIIMINE) RHENIUM COMPLEXES DA 1st Katherine Elliott #195 STUDY OF THE LYSINE DEPROTONATION MECHANISM IN UBIQUITIN **CONJUGATING ENZYME UBC13** 2nd Katie Holland, Randy Hilleary #209 DESIGN AND SYNTHESIS OF LPXC INHIBITORS AS POTENTIAL ANTIBIOTICS AGAINST GRAM-NEGATIVE BACTERIAL INFECTIONS EA 1st Shirlev Wolz #272 EXAMINING DENITRIFICATION AGENT PERFORMANCE IN A CLOSED FRESHWATER SYSTEM BY ION CHROMATOGRAPHY WITH UV DETECTION 2nd Lannae Boydon #179 AUTOMATED OPTIMIZATION OF INTERVAL-PARTIAL LEAST SQUARES **REGRESSION (IPLS) FOR MULTIVARIATE CALIBRATION AND PREDICTION**

FA

1st Kirsten Kelsall, James Garraway #218

IMPACT RESISTANT POLYMERS: INVESTIGATING POLYAMIDES VIA CIS/TRANS ISOMERIZATION

 2^{nd} Hunter Muratore #241 ATMOSPHERIC REACTIONS OF α -PINENE OXIDE ON THE MINERAL DUST KAOLINITE AS A FUNCTION OF RELATIVE HUMIDITY

GA

- 1st Jennifer Suon, Amanda Evans #269, CONTROLLED RELEASE DELIVERY OF ACYCLOVIR FROM POLY-EVA AND SILICONE
- 2nd Avery York #274 DESIGN AND SYNTHESIS OF DIPEPTIDE-BORONIC ACID GELATORS

HA

- 1st Earl Bampo #174 NICKEL CATALYZED CROSS-COUPLINGS OF AMINO ACID DERIVATIVES VIA C-N BOND ACTIVATION
- 2nd Spencer Lawson #228 DEVELOPMENT OF A NICKEL-CATALYZED AZA-HECK CYCLIZATION

IA

- 1st Marsha Pozhilenko #250 PARTIAL MOLAR VOLUMES AND VOLUME OF MIXING OF SALTS AND OSMOLYTES
- 2nd Rebekah Soliday #266 COMPUTATIONAL ANALYSIS OF RO-VIBRATIONS OF VINYL ALCOHOL AND THE FORMATION OF 2-CHLOROETHANOL

JA

- 1st Kameron Langford #225 MEASURING FORCE OF A SINGLE-BEAM OPTICAL TRAP FOR MANIPULATION OF GOLD NANOSTRUCTURES FOR IMAGING APPLICATIONS
- 2nd Karis Barnett #176 CHARACTERIZING THE VOLTAMMETRIC RESPONSE AND CAPACITANCE OF DIAMOND THIN-FILM ELECTRODES OF DIFFERENT MICROSTRUCTURE AND MORPHOLOGY

KA

- 1st Shehar Y. Awan #5 ANALYSIS OF ANTIBIOTIC RESISTANCE GENES *AMPC* AND *BLA* FOUND IN LOCAL WATER SAMPLES
- 2nd Kevin Beaver #7 DESIGNING REDOX SHUTTLES FOR SALT-TOLERANT MICROBIAL FUEL CELLS

LA

- 1st Jalen Wilcher #84 OPTIMIZATION OF A CHIP ASSAY TO ASSESS THE WT CD44-ICD BINDING TO THE MMP9 GENE PROMOTER
- 2nd Alma Rivera #65 DYNAMICS OF TYPE III SECRETION SYSTEM YOPE-SYCE INTERACTIONS IN LIVE YERSINIA ENTEROCOLITICA

MA

- 1st Eliana Crentsil #24 EFFECTS OF MIR-34A ON NEUROBLASTOMA CELL SENSITIVITY TO RADIATION TREATMENT
- 2nd Christopher Burkhardt #15 DIETARY POLYPHENOLS AND SULFORAPHANE: IMPACT ON CELL PROLIFERATION, APOPTOSIS, AND METASTASIS IN COLON CANCER

NA

- 1st Jafira Johnson #41 INVESTIGATING MECHANISMS OF ACTION OF A NOVEL NUCLEOSIDE ANALOG TO TREAT PRIMARY EFFUSION LYMPHOMA, COLON AND PANCREATIC ADENOCARCINOMAS
- 2nd Rosalie Gandarillas #30 DETERMINING TERMINATION CODON READTHROUGH EFFICIENCY PROMOTED BY PREDICTED SIGNALS IN INFECTIOUS RNA ALPHAVIRUS

ΟΑ

- 1st Jordan Giffith #33 CHARACTERIZING TRANSLATIONAL RECODING IN INFECTIOUS RNA VIRUSES
- 2nd Jonathan Gutierrez #35 THE INFLUENCES OF ALCOHOL ON CAENORHABDITIS ELEGANS LOCOMOTION

PA

- 1st Nithesh Chandrasekharan #18
 Characterization of the Allosteric Regulation of BAM2 in Arabidopsis thaliana
- 2nd Michaela Drake #25 CHARACTERIZATION OF THE HUMAN UFM1 ACTIVATING ENZYME, UBA5

QA

1st Spenser Grewe #32 LONG-RANGE REGULATION OF CYTOCHROME C BINDING TO BC1 COMPLEX 2nd Eva Gerber #31 BIOCHEMICAL AND STRUCTURAL STUDIES OF A HIV CA-BINDING NANOBODY

RA

- 1st Alexander Zeher #166 ANTENNAE POINTING DURING THE ESCAPE RESPONSE TO LOOMING STIMULI IN THE CRICKET, ACHETA DOMESTICUS
- 2nd Avantika Krishna #117 EFFECT OF E-CIGARETTE FLAVORING AS A MASKING AGENTS ON MOUSE CONSUMPTION OF NICOTINE CONTAINING SOLUTIONS

SA

- 1st Meagan Gagnon #105 MYOELECTRIC 3D PRINTED PROSTHETIC HAND
- 2^{nd} Nicole Rossi #148 DOES $\alpha V\beta 8$ -INTEGRIN INFLUENCE POST CATARACT SURGERY INFLAMMATION?

TA

- 1st Yishak Woldetsadik #162 IDENTIFICATION AND CHARACTERIZATION OF SMALL PROTEINS IN THE HUMAN PATHOGEN STREPTOCOCCUS PNEUMONIAE
- 2nd Daniel Morreale #134 INVESTIGATING THE ROLE OF COSR IN THE OSMOTIC STRESS RESPONSE OF THE HALOPHILE VIBRIO PARAHAEMOLYTICUS

UA

- 1st Dominique Brooks #92 PROVIDING CELLULAR AND MOLECULAR EVIDENCE FOR THE PRESENCE OF HINGEPOINTS WITHIN THE ZEBRAFISH FOREBRAIN
- 2nd Jeremy Rubin #149 LETTING THE LAXKAT OUT OF THE BAG: PACKAGING, SIMULATION, AND NEUROIMAGING DATA ANALYSIS FOR A POWERFUL KERNEL TEST

VA

- 1st Jamira Bowens #89 WATER QUALITY ANALYSIS AND MACROINVERTEBRATE COMPOSITION OF AQUATIC ECOSYSTEMS ON ROSEMONT COLLEGE CAMPUS
- 2nd Casey Peck #141 INFLUENCE OF DIFFERENT N, P, AND SI ADDITIONS ON UREA UTILIZATION PATHWAYS IN AN ANACOSTIA RIVER MICROBIAL COMMUNITY

WA

- 1st Keira Mull #135 CAN ENVIRONMENTAL DNA (EDNA) BE USED FOR DETECTION OF ENDANGERED SPECIES IN FRESHWATER?- DEVELOPING SPECIES-SPECIFIC MARKER FOR RHODEUS PSEUDOSERICEUS
- 2nd Anju Ghimirey #107 DOES ROAD SALT FACILITATE THE INVASION OF A CARNIVOROUS AQUATIC PLANT?

XA

- 1st Aleem Mohamed #133 ELUCIDATION OF MYCOBACTERIOPHAGE GENE FUNCTION
- 2nd Joanna Lum #123 IDENTIFYING NOVEL REGULATORS OF RETROTRANSPOSON SILENCING IN MOUSE EMBRYONIC STEM CELLS

AFTERNOON

AP

- 1st Darila Yehorova #273 DONOR/ACCEPTER VERSATILITY OF COBALT SELENIDE CLUSTERS IN CLUSTER-SMALL MOLECULE SIMPLE MIXTURE ACTIVE LAYER FOR FLEXIBLE SOLAR CELL APPLICATIONS
- 2nd Hadi Kelani #217 SYNTHESIS OF GRAPHENE OXIDE-METAL NANOPARTICLE HYBRIDS FOR SENSING AND CATALYTIC APPLICATIONS

BP

- 1st Justin Kim #220 SYNTHETIC STUDIES TOWARDS CLADOSIN B
- 2nd Kris Mason #235 SYNTHETIC OPTIMIZATION OF MCD-66, A PROMISING THERAPEUTIC FOR THE TREATMENT OF ACUTE MYELOID LEUKEMIA

СР

- 1st Megan Quattrone, Kevin Webster #252 DESIGN, SYNTHESIS AND EVALUATION OF SELECTIVE INHIBITORS OF THE MONO-(ADP-RIBOSYL)TRANSFERASE, PARP10
- 2nd Patricio Pichling #248 SYNTHESIS OF MODIFIED PEPTIDE PROBES FOR STUDYING PROTEIN INTERACTIONS

DP

- 1st Clare Lipscombe #230 SYNTHESIS OF FUNCTIONAL, UNSYMMETRICAL TETRAZINES VIA PALLADIUM CATALYZED CROSS-COUPLINGS USING ORGANOSTANNANES AND ORGANOBORANES
- 2nd Abhishek Purohit #251 RAPID SYNTHESIS OF HIGHLY SUBSTITUTED OXAZOLE COMPOUNDS

EΡ

- 1st Pierce Perkins #247 FACILE RHODAMINE-BASED FLUORESCENT AND COLORIMETRIC CHEMOSENSOR FOR DETECTION OF METAL IONS
- 2nd Ryan Mitch #238 HIGHLY EFFICIENT HETEROBIMETALLIC Au(I)/Au(I) AND Au(I)/Cu(I) PHOSPHORS FOR MODERN DISPLAY, SIGNAGE AND LIGHTING APPS

FP

- 1st Mark Joseph #215 ISOLATION AND CHARACTERIZATION OF ESSENTIAL OILS IN MEDICINAL HERBS, PLANTS, AND ALGAE; AND THEIR APPLICATIONS IN PEST CONTROL.
- 2nd Avi Newman #242 DETECTION OF N2-ETHYLGUANINE USING LIQUID CHROMATOGRAPHY – TRIPLE QUADRUPOLE (LC-TQ) MASS SPECTROMETRY INSTRUMENTATION

GP

- 1st Marella Schammel #260 COMPARING THE BROMINATION AND CHLORINATION KINETICS OF THE HERBICIDE DIMETHENAMID IN NATURAL AND IN SYNTHETIC WATERS
- 2nd Christopher Reyes #254 CATALYTIC ACTIVITY OF Au AND NI NANOCATALYSTS IN THE REDUCTION OF 4-NITROPHENOL AND NITROANILINES WITH NABH4

ΗP

- 1st Froylan Fernandez #199 CF2H ANALOGS OF TRADITIONAL BIFURCATED HYDROGEN BOND DONORS
- 2nd Carolyn McGrail #236 Differences in the energy and reactivity of malemide enediynes

- IP
- 1st Domonique Butler #185 CHEMICAL ANALYSIS AND TOXICITY OF VOC EMISSION FROM HAIR CARE PRODUCTS FOR AFRICAN AMERICAN WOMEN
- 2nd Maria Camarca #186 AN INFRARED SURVEY OF VOLATILES IN COMET 252P/LINEAR FOLLOWING A NEAR APPROACH TO EARTH

JP

- 1st Yasmin Mann #54 THE EFFECTS OF ANTI-CANCER DRUGS ON THE REGULATION OF CILIA-ASSOCIATED PDGFRA SIGNALING
- 2nd Christina Niavi #59 DECIPHERING AN IKK/NF-KB-MIRNA TRANSCRIPTIONAL REGULATORY NETWORK IN NSCLC CELL PROLIFERATION; THE INTERACTION BETWEEN MIR-342-3P AND FOSB, MAF.

KP

- 1st Sanjana Ojha #60 CHARACTERIZATION AND REGULATION OF STEROID SULFATASE IN NIH-3T3 CELLS
- 2nd Roxanna Fouladi #29 CHARACTERIZATION OF HUMAN ATPASE P97 – A KEY CONTRIBUTOR TO THE DEGRADATION OF MISFOLDED PROTEINS

LP

- 1st Hana Flores #27 CHARACTERIZING THE DYNAMIC CAPSID-SP1 JUNCTION HELIX OF THE HIV-1 GAG POLYPROTEIN AND MATURATION INHIBITOR INTERACTION
- 2nd Adrianna Vaskas #77 EFFECTS OF CURCUMIN ON PANCREATIC CANCER

MΡ

- 1st Francisco Hernández #38 A NEW MOUSE MODEL FOR OCULAR DISEASE: DEVELOPMENT OF LENS-SPECIFIC CONDITIONAL ELL2 KNOCKOUT MICE AND THEIR CHARACTERIZATION TO UNCOVER A NEW PATHWAY FOR EYE PATHOLOGY
- 2nd Scott Schumacker #68 TRANSCRIPTOME ANALYSIS OF THE HUMAN RETINA

- NP 1st Adrianne Lee #52 THE STRUCTURE AND FUNCTIONAL CHARACTERIZATION OF LEISHMANIA DONOVANI'S UFM-YLATION PATHWAY 2nd Thomas Harmon #36 Synthesis of Muramyl Dipeptide Dimers OP 1st Thomas Swayne #73 CRYSTALLIZATION AND CHARACTERIZATION OF MUTANT E. COLI CLPS CONSTRUCTS 2nd Christine Kenney #46 OXIDATIVE CONTROL OF HYDROGELS VIA THIOPHENYLALANINE PP 1st Mary Grace Murray, Christopher Cortes #8 EXAMINATION OF UV SENSITIVITY IN HAPLOID YEAST CELLS AND SPORES OF SACCHAROMYCES CEREVISIAE 2nd Brianna Myung #58 CREATION OF GENETIC KNOCKOUTS OF PUTATIVE MRNA DECAY GENES IN SACCHAROMYCES CEREVISIAE QP 1st Courtney Link #121 ANALYSIS OF 3D CHROMATIN CONFORMATION AT RASGRF1 RELATING TO ITS EXPRESSION IN MOUSE LIVER
- 2nd Kimber Mapili #127 AGE-RELATED MACULAR DEGENERATION (AMD): GENOTYPIC STUDY OF THE RETINAL DISEASE AND ITS ASSOCIATED GENES WITH COMMON AND RARE VARIANTS

RP

- 1st Andrew Bynum #93 PATHOPHYSIOLOGY OF NEURONS IN THE CHILDHOOD NEURODEGENERATIVE DISEASE, MUCOLIPIDOSIS TYPE IV (MLIV)
- 2nd Katarina Liberatore #120 INSULIN SIGNALING AND NEURONAL REGULATION IN AROUSAL IN C. ELEGANS

SP

- 1st Ryan Skinner #153 SUBSTRATE STIFFNESS DETERMINES CHONDROCYTE SENSITIVITY TO OSMOLARITY VIA TRPV4 REGULATION
- 2nd Miranda Czymek #96 NAVIGATING THROUGH YEAST MEIOSIS USING A COMPASS

ΤР

- 1st Erin Jackson #113 THE ROLE OF FIBRONECTIN IN POST CATARACT SURGERY INFLAMMATION
- 2nd Eric Malani #126 MANUAL GROSS DEXTERITY ANALYSIS OF FOUR POPULAR STYLES OF ENABLE 3D PRINTED PROSTHETIC HANDS USING THE BOX AND BLOCK TEST

UP

- 1st Erich Miller, Eric Recktenwald #131 SSRI PRESCRIPTION TRENDS IN THE TREATMENT OF OBSESSIVE-COMPULSIVE DISORDER
- 2nd Temiloluwa Okusolubo #139 CORRELATING GRAMICIDIN ION-CHANNEL FORMATION TO ARTIFICIAL MEMBRANE DYNAMICS

VP

- 1st Olumide Fagboyegun #102 EFFECT OF PARKINSON'S DISEASE PATHOPHYSIOLOGY ON DOWNSTREAM TARGETS OF HSF1
- 2nd Samantha Lazo-Contreras #118 OLIGODENDROGLIAL SOX 17 DEFICIENCY DECREASES PROGENITOR PROLIFERATION AND OLIGODENDROCYTE DEVELOPMENT IN POSTNATAL WHITE MATTER

WP

- 1st Caitlin Ritchey, Catherine Lacovara #145 CONSEQUENCES OF EARLY IRON DEFICIENCY AND LEAD CO-EXPOSURE ON DOPAMINE SIGNALING
- 2nd Darius McKoy #128 CELL-SPECIFIC LESIONING REVEALS THE ROLE OF THE SUBSTANTIA NIGRA IN SLEEP-WAKE CONTROL