

# **ROCHESTER ACADEMY OF SCIENCE**

**44<sup>th</sup> Annual Fall Scientific Paper Session**

**Saturday, November 11, 2017**



**Hosted by St. John Fisher College**

# Rochester Academy of Science

## Fall Scientific Paper Session

Saturday, November 11, 2017

Hosted by:  
St. John Fisher College  
Rochester, NY

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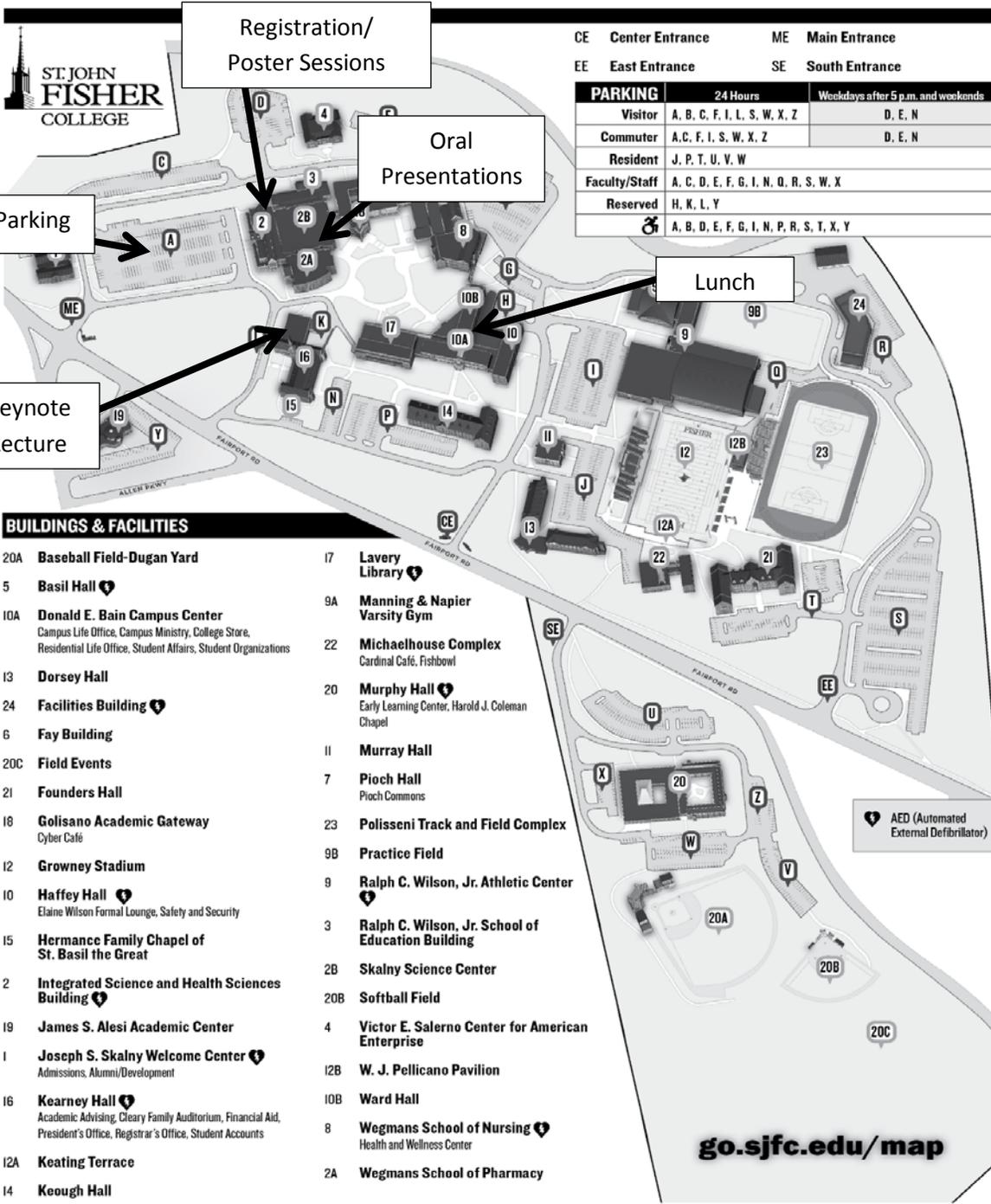
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## Schedule of the Day

8:00 – 9:00	<b>Registration and Coffee</b>	Integrated Sciences and Health Sciences (ISHS) Entrance
8:00 – 11:15	<b>Poster Setup</b>	Wegmans School of Pharmacy (WSOP) Atrium
9:00 – 10:15	<b>Oral Presentations</b>	
Session I	Chemistry	Skalny 141
Session II	Ecology I	ISHS 118
Session III	Cellular & molecular biology I	WSOP129
Session IV	Animal physiology & behavior	WSOP132
Session V	Microbiology & Biotechnology	WSOP133
10:15 – 10:30	<b>Break</b>	
10:30 – 11:45	<b>Oral Presentations</b>	
Session VI	Ecology & biotechnology	Skalny 141
Session VII	Ecology II	ISHS 118
Session VIII	Cellular & molecular biology II	WSOP129
Session IX	Cellular & molecular biology III	WSOP132
Session X	Geology, ethnography, and education	WSOP133
12:00– 1:00	<b>Poster Session</b>	Campus Center
	Wegmans School of Pharmacy Atrium	
1:00 – 2:00	<b>Lunch</b>	Ward-Haffey Dining Hall
	<i>Reserved Seating straight ahead of entrance</i>	
	Last minute diners may pay at the Cafeteria	
2:00 – 3:00	<b>Public Keynote Lecture</b>	Cleary Auditorium, Kearney Hall

### ***Saving the rainforest with a stethoscope and hoof trimmers***

Dr. Jeff Wyatt, DVM, Professor & Chair of Comparative Medicine at the University of Rochester School of Medicine & Dentistry and Director of Animal Health & Conservation at Seneca Park Zoo



## Oral Presentations

Presentations are located in Skalny Science Center, Integrated Sciences and Health Sciences, and Wegmans School of Pharmacy Buildings

### Session I – Chemistry

Room: Skalny 141

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- 9:00 – 9:15 a.m.**      **X-RAY PHOTOELECTRON SPECTROSCOPY FROM TITANIUM NANOPARTICLES ON METAL OXIDES.**  
Conner Brown, Michael Pierce, *Rochester Institute of Technology*
- 9:15 – 9:30 a.m.**      **CARBENE LABELLING OF GAS PHASE PEPTIDE IONS: A NOVEL TECHNIQUE FOR STUDYING PROTEIN TOPOGRAPHY.**  
Gregory Ballard, Paul Martino, *Houghton College*
- 9:30 – 9:45 a.m.**      **DISTRIBUTED PHARMACEUTICAL ANALYSIS LABORATORY (DPAL) – METFORMIN ANALYZED VIA HPLC.**  
Maham Alamgir, Dr. Robyn E. Goacher, *Niagara University*
- 9:45 – 10:00 a.m.**      **SURFACE MODIFICATION OF POLYBENZIMIDAZOLE (PBI) TREATED WITH OZONE.**  
Omran Omar\*, Bao Ha\*, Katerina Vega\*, Andrew Fleischer\*, Hyukin Moon\*, Joel Shertok\*, Alla Bailey\*, Micheal Mehan\*\*\*, Surendra K. Gupta\*\*, and Gerald A. Takacs\*.  
\* *RIT School of Chemistry and Material Science*, \*\* *RIT Dept. of Mechanical Engineering*, \*\*\* *Xerox Analytical Services*
- 10:00 – 10:15 a.m.**      **THE DEVELOPMENT OF A BIOADHESION-RESISTANT SELF-ASSEMBLED SCAFFOLD FOR THE CHEMICAL ATTACHMENT OF ENZYMES TO GOLD SURFACES.**  
Jim Duchesneau, Brian Gregory, *Wells College, Samford University*

### Session II – Ecology I

Room: ISHS 118

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- 9:00 – 9:15 a.m.**      **CLIMATE CHANGE AND ENDANGERED MUTUALISMS: THE IMPACT OF INCREASED TEMPERATURES ON POLLINATOR ACTIVITY.**  
Stephanie Facchine, *State University of New York Oswego*
- 9:15 – 9:30 a.m.**      ***Spiranthes ovalis* var. *erostellata* - A NATIVE ORCHID NEW TO NEW YORK.**  
Steven Daniel, Anne Johnson, *Monroe Community College; Botanical Consultant*
- 9:30 – 9:45 a.m.**      **INVESTIGATION OF NEST PREDATION AS A CAUSE OF TURTLE CAPTURE RATE DECLINES ON THE SEQUOYAH NATIONAL WILDLIFE REFUGE, OK.**  
Alexandra Shipman, Dr. Paul Shipman, *Rochester Institute of Technology*
- 9:45 – 10:00 a.m.**      **THE ECOLOGY OF ALPINE SNOWBANK COMMUNITIES OF MT. WASHINGTON, NH.**  
Kevin Berend, Kathryn Amatangelo, *The College at Brockport, SUNY*
- 10:00 – 10:15 a.m.**      **EFFECTS OF INVASIVE PALE SWALLOWWORT ON NATIVE SOIL BACTERIA**  
Michael Szarowski, *Wells College*

## Session III – Cellular & molecular biology I

Room: WSOP 129

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- 9:00 – 9:15 a.m.**      **FUNCTIONAL CHARACTERIZATION OF A MEMBER OF THE NUDIX HYDROLASES**  
Zane Wetzel, Katie Wilson, Jeffrey Mills, Suzanne O'Handley, *Rochester Institute of Technology*
- 9:15 – 9:30 a.m.**      **FUNCTIONAL CHARACTERIZATION OF THE NUDIX HYDROLASE 3QSI**  
Katherine Wilson, Zane Wetzel, Jeffrey Mills, Suzanne O'Handley, *Rochester Institute of Technology*
- 9:30 – 9:45 a.m.**      **IDENTIFICATION AND CHARACTERIZATION OF DNA REGULATORY ELEMENTS VIA THE COMBINATION OF GENETICS AND BIOINFORMATICS.**  
Samantha J. Terhaar, Douglas J. Guarnieri, *Saint Bonaventure University*
- 9:45 – 10:00 a.m.**      **STRUCTURE AND FUNCTIONAL ANALYSIS OF REGULATORY ELEMENTS INVOLVED IN THE MAINTENANCE OF GERM LINE STEM CELLS.**  
Dallas Fonseca, Vandita Bhat, Zachary Campbell, Te-Wen Lo, *Ithaca College*
- 10:00 – 10:15 a.m.**      **ENCAPSULATION AND DELIVERY OF TRASTUZUMAB INTO HUMAN BREAST CANCER CELLS USING CHOLESTOSOMES™**  
T. Huynh<sup>1</sup>, J. Cubello<sup>1</sup>, J. F. McArthur<sup>2</sup>, M. Q. Irving<sup>3</sup>, J. Hughes<sup>1</sup>, J. Schentag<sup>2,3,4</sup>, L. M. Mielnicki<sup>1,3</sup>, M. P. McCourt<sup>1,3</sup>, <sup>1</sup>*Niagara University Department of Chemistry, Biochemistry and Physics- Niagara University*, <sup>2</sup>*State University of New York at Buffalo, Department of Pharmacy and Pharmaceutical Sciences*, <sup>3</sup>*CPL Associates*, <sup>4</sup>*TheraHoldings AG*

## Session IV – Animal physiology & behavior

Room: WSOP 132

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- 9:00 – 9:15 a.m.**      **EMBRYONIC EXPOSURE OF CHICKEN CHICKS (*Gallus gallus domesticus*) LEADS TO HEIGHTENED SENSITIVITIES TOWARDS THE EXPOSED SCENT**  
Hughes Ryan, Gregory B. Cunningham, *St. John Fisher College*
- 9:15 – 9:30 a.m.**      **TESTING TERATOGENICITY OF PENICILLIN ON PLANARIAN REGENERATION**  
Asya Kadic and Poongodi Geetha-Loganathan, *SUNY Oswego*
- 9:30 – 9:45 a.m.**      **SPRINT TRAINING IMPROVES ENDURANCE PERFORMANCE BUT NOT SPRINT PERFORMANCE IN AGED ZEBRAFISH, OR DOES IT?**  
Brian Tran, Dr. Kathleen Savage, *St. John Fisher College*
- 9:45 – 10:00 a.m.**      **DO NON-NATIVE ANTS EAT THEMSELVES TO CARRYING CAPACITY**  
Kazz Archibald, Robert Warren, *State University of New York College at Buffalo*
- 10:00 – 10:15 a.m.**      **THIAMINE CONCENTRATION AND LIPID CONTENT OF PREY FISH FROM THE GREAT LAKES REGION.**  
Nicholas Farese, Matthew Futia, Jacques Rinchar, *The College at Brockport - State University of New York*

## Session V – Microbiology & biotechnology

Room: WSOP 133

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- 9:00 – 9:15 a.m.**      **MICROBIOTA OF THE INVASIVE CROP PEST, SPOTTED WING DROSOPHILA.**  
Gabrielle Solomon, Peter Newell, *SUNY Oswego*
- 9:15 – 9:30 a.m.**      **GROWTH OF *Shewanella oneidensis* IN THE PRESENCE OF TOXIC METALS: A BASIS FOR SUSTAINABLE SEMICONDUCTING NANOPARTICLE BIOSYNTHESIS.**  
Alexis Bell, Sanela Lampa-Pastirk, *Nazareth College*
- 9:30 – 9:45 a.m.**      **NOREPINEPHRINE'S EFFECT ON THE ABILITY OF ENTEROBACTERIACEAE TO COMMUNICATE WITH EACH OTHER**  
Shanique Service, Mark Gallo, Ph.D., *Niagara University*
- 9:45 – 10:00 a.m.**      **INVESTIGATION INTO SLFN11 MEDIATED INHIBITION OF INFLUENZA VIRAL PROTEIN PRODUCTION.**  
Alex Freedenberg<sup>1</sup>, Stephen Dewhurst<sup>2</sup>, and Jonelle Mattiaccio<sup>1</sup>, <sup>1</sup>*St. John Fisher College*,  
<sup>2</sup>*University of Rochester*

## Session VI – Ecology & biotechnology

Room: Skalny 141

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- 10:30 – 10:45 a.m.**      **NONLINEAR MECHANICS AND CRACK PROPAGATION IN ARTICULAR CARTILAGE MODELED AS A DOUBLE NETWORK GEL**  
Leo Sutter, Andrew Sindermann, Moumita Das, *Rochester Institute of Technology*
- 10:45 – 11:00 a.m.**      **POPULATION GENETICS OF SCAEVOLA ON CULEBRA, PUERTO RICO.**  
Lauren Hodkinson, Susan Witherup, *Ithaca College*
- 11:00 – 11:15 a.m.**      **DETERMINATION OF BIOFOULING MECHANISMS OF SINGLE AND BINARY PROTEIN SOLUTIONS OF BSA AND HEMOGLOBIN UNDER VARYING pH AND SALINITY CONDITIONS.**  
Shivam Tewari, Elana Stennett, *Hobart and William Smith Colleges*
- 11:15 – 11:30 a.m.**      **CONSUMER ADAPTATION MEDIATES TOP-DOWN REGULATION OF ECOSYSTEMS ACROSS A PRODUCTIVITY GRADIENT.**  
Michael F. Chislock, Alan E. Wilson, Ash Abebe, Orlando Sarnelle, *The College at Brockport, Auburn University, Michigan State University*

## Session VII – Ecology II

Room: ISHS 118

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- 10:30 – 10:45 a.m. BREEDING BIOLOGY OF RED-WINGED BLACKBIRDS (*Agelaius phoeniceus*) IN STORMWATER RETENTION PONDS ON THE COLLEGE AT BROCKPORT CAMPUS.**  
*Abigail Butler, The College at Brockport*
- 10:45 – 11:00 a.m. IDENTIFYING THE SOURCE OF INFECTION IN SNAPPING TURTLE (*Chelydra serpentina*) EGGS**  
*Jerome Job, Poongodi Geetha-Loganathan, SUNY Oswego*
- 11:00 – 11:15 a.m. VEGETATION AND SMALL MAMMAL INTERACTIONS DETERMINING TICK ABUNDANCE ACROSS SPATIAL SCALES.**  
*Claire Hartl, Kathryn Amatangelo, SUNY Brockport*
- 11:15 – 11:30 a.m. VEGETATION HEIGHT INFLUENCES NEST BOX PREFERENCE AND PRODUCTIVITY OF EASTERN BLUEBIRDS (*Sialia sialis*).**  
*Zac Falconer, Oscar Pecci Perez, and Andie Graham, SUNY Brockport*

## Session VIII – Cellular & molecular biology II

Room: WSOP 129

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- 10:30 – 10:45 a.m. STUDYING THE HUMAN CANCER GENE, ERH, WITHIN THE FRUIT FLY, *Drosophila melanogaster***  
*Stuart Tsubota, Theodore Ryan, Nicholas Rizzo, The College at Brockport*
- 10:45 – 11:00 a.m. A METHODOICAL ANYLYSIS FOR PURIFYING PRIMARY CILIA FROM DIFFERENTIATING 3T3-L1 PRE-ADIPOCYTES.**  
*Tameciah N. Browne, Brett Henderson and Laurie B. Cook, The College at Brockport*
- 11:00 – 11:15 a.m. TARGETED MUTAGENESIS IN *Drosophila* USING CRISPR-CAS9.**  
*Timothy Rooney, Steven Stowers, Douglas J. Guarnieri, Saint Bonaventure University*
- 11:15 – 11:30 a.m. ROLE OF CONFINEMENT ON TWO-STATE TRANSPORT OF A MOTOR-DRIVEN CARGO IN CYTOSKELETAL NETWORKS**  
*Supravat dey, Kevin Ching, Moumita Das, Rochester Institute of Technology*
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## Session IX – Cellular & molecular biology III

Room: WSOP 132

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- 10:30 – 10:45 a.m.**    **DISCOVERY OF CONCURRENT DIRECT AND INDIRECT CHANNEL POLARIZATION TRANSFER IN DYNAMIC NUCLEAR POLARIZATION EXPERIMENTS WITH NONIONIC SURFACTANTS.**  
Markus M. Hoffmann, Sarah Bothe, Torsten Gutmann, Gerd Buntkowsky, *The College at Brockport, SUNY*
- 10:45 – 11:00 a.m.**    **MODELING THE BIOPHYSICS OF TRANSPORT OF CARGOS IN CROWDED CELLULAR ENVIRONMENTS**  
Kevin Ching, Moumita Das, *Rochester Institute of Technology*
- 11:00 – 11:15 a.m.**    **EFFECTS OF S-NITROSATION ON PEROXIDASE PATHWAYS IN *Brassica rapa*.**  
Aaliyah W. Grandy, Alexander S. Milliken, Lindsay S. Burwell, *Wells College*
- 11:15 – 11:30 a.m.**    **FATTY ACID SIGNATURES OF SALMONINE FISH FROM LAKE MICHIGAN.**  
Christopher Maier, Nathan Barker, Michelle Edwards, Sergiusz Czesny, and Jacques Rinchard, *The College at Brockport- State University of New York*

## Session X – Geology, ethnography, and education

Room: WSOP 133

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- 10:30 – 10:45 a.m.**    **ARROWS IN BIOLOGY: POINTING TO CONFUSION FOR LEARNERS**  
Jordan J. Cardenas, Dina L. Newman, L. Kate Wrights, *Rochester Institute of Technology*
- 10:45 – 11:00 a.m.**    **PRODUCING INTERACTIVE VIDEO VIGNETTES: AN ONLINE, LIVE-ACTION-BASED APPROACH TO SUPPLEMENTAL LEARNING.**  
Patrick Rynkiewicz, Dina L. Newman, L. Kate Wright, *Rochester Institute of Technology*
- 11:00 – 11:15 a.m.**    **NI UNA MENOS: A NEW MOVEMENT AGAINST GENDER VIOLENCE IN LATIN AMERICA.**  
Samantha Martin, *SUNY Geneseo*
- 11:15 – 11:30 a.m.**    **STUDY OF HISTORIC QUARRIES IN ERIE AND NIAGARA COUNTIES, NEW YORK, 1820-1930**  
Mariana L. Rhoades, *Stone Industry Research*
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## Poster Presentations

Grouped by subject (Sorted alphabetically by the last name of the first author)

### Education

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#### **1. FACILITATING EARTH SCIENCE EDUCATION THROUGH A PARTNERSHIP OF TEACHERS AND AMATEUR PALEONTOLOGISTS.**

Daniel Krisher

*Rochester Academy of Science*

### Ecology

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#### **2. LIFE ON THE EDGE: THE CREATION OF, AND CONSERVATION IN, HIGHWAY ROADSIDES.**

Kaitlin Stack Whitney

*Rochester Institute of Technology*

#### **3. MACROINVERTEBRATE COMMUNITIES ASSOCIATED WITH THREE AQUATIC PLANT SPECIES (*Trapa natans*, *Elodea canadensis*, AND *Vallisneria americana*).**

Benjamin Ecker, Congcong Wang, Yongli Gao

*University of Rochester, Department of Physics and Astronomy*

#### **4. MACROPHYTE RAKE SURVEYS IN CANANDAIGUA LAKE, 2016-2017, WITH MAPPED SPATIAL PATTERNS FOR AQUATIC INVASIVE SPECIES.**

Kim McGarry, Bruce Gilman

*Finger Lakes Community College*

#### **5. MITIGATION OF ORGANIC WASTEWATER CONTAMINANTS FROM THE LAKE ONTARIO EMBAYMENT (MONROE COUNTY) VIA EMULSIONS AND BIOREMEDIATION TECHNOLOGIES.**

Erika Bravo, Maryann Herman, Ph.D, Fernando Ontiveros, Ph.D., and Anju Gupta, Ph.D.

*St. John Fisher College*

#### **6. POPULATION GENETICS IN DAPHNIA TOWED FROM ROUND POND.**

Dr. Kaitlin Bonner, Bartelli Sara, Cotugno Gabriella

*St. John Fisher College*

#### **7. POPULATION GENETICS OF THE COMMON RAVEN IN MEXICO**

Sally Yraitia, Nandadevi Cortes Rodriguez

*Ithaca College*

#### **8. POTENTIAL EUTROPHICATION OF BUCK POND, GREECE, NY? A TROPHIC PROFILING AND WATER QUALITY TO ADDRESS THE CONCERNS OF THE LOCAL COMMUNITY.**

Faith Downes, Ivan Gergi, Jacob Murphy, Gannon Connors, Sarah Izzo, Emiliee Hyde, Brooke Zeller, Nini Doan-Nguyen, Rachael Pacella, Jessica Losee, Sabrina Joseph, Dani Painter, Ashley Harford, Barsha Biswa, Jack Wessel, Alyssa Merrill, Julia Widmer, Rachael Moyles, Padmini Das, David Giacherio,

Stephanie Zamule  
*Nazareth College*

**9. RATES OF AGGRESSION IN CAPTIVE BELUGA WHALES FOLLOWING POOL MERGERS**

Jay Cooney, Michael Noonan  
*Canisius College*

**10. RATES OF BROWN-HEADED COWBIRD PARASITISM AND FLEDGING SUCCESS DEPEND ON SIZE OF HOST SPECIES.**

W.P. Brown  
*Keuka College*

**11. REACTIONS TO ENRICHMENT OBJECTS IN CAPTIVE BELUGA WHALES (DELPHINAPTERUS LEUCAS)**

Emily Began, Michael Noonan  
*Canisius College*

**12. SEX-SPECIFIC SOCIAL AFFILIATION IN CAPTIVE BELUGA WHALES (DELPHINAPTERUS LEUCAS).**

Samuel J. Cieurca, Jr.  
*Rochester Academy of Science - Fossil Section*

**13. SPOTTED SALAMANDER (AMBYSTOMA MACULATUM) CONSERVATION STRATEGIES DURING SPRING MIGRATION.**

Ben Knowlton, Bruce Gilman  
*Finger Lakes Community College*

**14. THE EFFECT OF URBANIZATION ON MONARCH BUTTERFLY HABITAT.**

Laura A.B. Smith, Tara Cornelisse PhD  
*Canisius College*

**15. THE EFFECTS OF PALE SWALLOWWORT (CYNANCHUM ROSSICUM) ON NATIVE MOTH COMMUNITIES.**

Wyatt Jackson, Kathryn Amatangelo  
*SUNY Brockport*

**16. THE USE OF A BATESIAN MIMICRY LEARNING MODEL TO REDUCE TURTLE NEST PREDATION RATES.**

Paul Shipman, Nicole Dergosits, Elijah Hall, Gretchen Horst, Christina Ideman, Taylor Kovar, Teresa Leon, Michael Litman, Charles Parr, Ryan Pluck, Emily Waller, Collin Zelli  
*Rochester Institute of Technology*

**17. THE USE OF ARTIFICIAL NEST BOXES TO DETERMINE PREFERENCE AND PRODUCTIVITY OF HOUSE WRENS AT THE SUNY BROCKPORT CAMPUS**

Emily Jackson  
*SUNY Brockport*

**18. USING STABLE HYDROGEN ISOTOPES TO REVEAL MIGRATORY PATTERNS IN COMMON YELLOWTHROATS**

Veronica Schabert, Kelly Roberts, and Kristen Covino  
*Canisius College*

**19. USE OF DRONES IN MONITORING THE EXTENT OF INVASIVE SPECIES IN THE FINGER LAKES.**

Joshua Andrews, Ileana Dumitriu, Ph.D., Peter Spacher, Ph.D.  
*Hobart and William Smith Colleges,*

**20. MARMOSSET CALL RECOGNITION USING NEURAL NETWORKS.**

Elizabeth Moore, Ross Snider, Ph.D.  
*Montana State University, Electrical and Computer Engineering Department, Hobart and William Smith Colleges, Physics Department*

**21. A COMPARISON OF THREE METHODS OF POST-MORTEM TOOTH ANALYSIS TO AGE WHITE-TAILED DEER.**

Noah Seabrook, C. Eric Hellquist  
*SUNY Oswego*

**22. A NUTRITIONAL EXPLORATION OF COMMON BUCKTHORN FRUIT AND ITS VALUE FOR MIGRATORY BIRDS.**

Molly Border, Gretchen Horst, Susan Smith Pagano  
*Rochester Institute of Technology*

**23. ABUNDANCE OF MICROPLASTICS IN STOMACH CONTENTS OF LAKE ONTARIO CHINOOK SALMON (*ONCORHYNCHUS TSHAWYTSCHA*) AND ALEWIFE (*ALOSA PSEUDOHARENGUS*).**

Julia Stephens, Alinda Dygert  
*SUNY Oswego*

**24. ADAPTIVE MANAGEMENT OF PALE SWALLOW-WORT.**

Jackie Schnurr, Tessa Hopt, Jiali Liu, Caitlyn Smith, Mike Szarowski  
*Wells College*

**25. ALLOMOTHERING OF A NEWBORN BELUGA CALF**

Leanne Walker, Michael Noonan  
*Canisius College*

**26. AN INVESTIGATION OF NUTRITIONAL EFFECTS ON BEECH BARK DISEASE CAUSAL ORGANISMS.**

Gretchen Lasser, Mariann Johnston, Mike Mahoney, Vizma Leimanis, Jason Stoodley  
*SUNY-ESF*

**27. ANALYSIS OF SOUNDSCAPES AND VEGETATIVE DIVERSITY IN LETCHWORTH STATE PARK.**

Abigail Bobbette, Jennifer Rowan, Faculty: Kristina Hannam  
*SUNY Geneseo*

**28. ANALYZING THE FACTORS THAT PLAY A ROLE IN NEST BOX SELECTION AND NEST SUCCESS OF TREE SWALLOWS (TACHYGINETA BICOLOR).**

Oscar Pecci Perez, Zac Falconer, Emily Jackson, and Andie Graham  
*SUNY Brockport*

**29. ASSESSMENT OF TWO VERNAL POOLS IN AURORA, NY, FALL 2017.**

Shania Dauphinais, Niamh O'Leary  
*Wells College*

**30. CHARACTERIZATION OF GUT BACTERIA DIVERSITY IN MIGRATORY SONGBIRDS**

David Held, Lexie Haley, Ashlyn Kornetz, Allison Rehm, Kelly Roberts, Veronica Schabert, Kristen Covino, Daniel P. Haeusser  
*Canisius College*

**31. CHLORIDE AND HEAVY METALS IN NATURAL AND IMPOUNDED WATER BODIES OF ALLEGANY COUNTY, NY.**

James Wolfe, Alison Apgar, Natalia Cabrera-Febres, Hawa-Dorcas Coulibaly, Alyson DeMerchant, Daniel Hammers, Andrew Hutton, and Evan Stern. Biology Department, Houghton College, Houghton. NY 14744  
*Biology Department, Houghton College*

**32. DECADAL CHANGES IN SALT MARSH PRODUCTION AND CARBON STORAGE: A TEST OF THE SPACE-FOR-TIME SUBSTITUTION APPROACH.**

Sarah Goldsmith, Ryan Brett, Charles Bachmann, David Osgood, Christy Tyler  
*Rochester Institute of Technology*

**33. DISTRIBUTION OF MACROINVERTEBRATE ASSEMBLAGES OF IRRIGATION DITCHES AND STREAMS IN WESTERN MONTANA, IN RELATION TO PHYSIOCHEMICAL CHARACTERISTICS.**

Meredith Kadjeski  
*Trent University*

**34. DOES BIOFILM NUTRIENT RECYCLING MATTER AT THE ECOSYSTEM SCALE?**

Maria Butler, Mansi Chhina, Michelle Baskins, and Jonathan O'Brien  
*Canisius College*

**35. EFFECT OF HABITAT TYPE ON WASP ABUNDANCE AND DIVERSITY ON THE SUNY GENESEO CAMPUS.**

Jason Lang, Jennifer Apple  
*Department of Biology, SUNY Geneseo*

**36. EFFECTS OF ATRAZINE ON FRESHWATER MUSSELS**

Manna Job, Poongodi Geetha-Loganathan  
*SUNY Oswego*

**37. EFFECTS OF CLIMATE WARMING IN SHALLOW, LARGE NEW YORK STATE LAKES.**

Teryl R. Gronwall

*Honeoye Lake Watershed Task Force*

**38. EFFECTS OF FULLERENES ON A FRESHWATER BENTHIC COMMUNITY: TOXICITY AND IMPLICATIONS FOR ENVIRONMENTAL PROCESSES AND FUNCTIONS.**

Sarah Ponte Cabral, Charles Border, Callie Babbitt, Christy Tyler, and Elizabeth Wronko

*Rochester Institute of Technology*

**39. EFFECTS OF GRAZING ON CARBON STORAGE IN CREATED WETLANDS**

Delanie Spangler, Evan Squire

*RIT Environmental Science BS/MS*

**40. FISH SURVEY OF LETCHWORTH STATE PARK**

Steven Anderson, Alyson DeMerchant, Halie Smith, Annemarie Ranger, Rebecca Williams

*Houghton College*

**41. IF YOU CAN'T TAKE THE HEAT... SEASONAL PATTERNS IN TEMPERATURE SENSITIVITY OF MICROBIAL EXOENZYMES IN RIVER BIOFILMS**

Sameer Jhaveri, Jonathan O'Brien

*Canisius College*

**42. EFFECTS OF PLASTIC POLYMER COMPOSITION ON EARLY MICROBIAL ASSOCIATION IN A FRESHWATER ENVIRONMENT**

Renee Hoover, Carley McMullen, Mark Gallo, Ph.D.

*Niagara University, Dept of Biology*

**43. ENVIRONMENTAL CONTEXT INFLUENCE ON THE COMMON MUDPUPPY (NECTURUS MACULOSUS).**

Adam Haines, Christopher Pennuto

*Buffalo State College*

**44. FATTY ACID SIGNATURES OF PREY FISH FROM LAKE MICHIGAN**

Nathan Barker, Sergiusz Czesny, Jacques Rinchar

*SUNY College at Brockport*

**45. FULLERENE EXPOSURE INCREASES BLUEGILL PREDATION ON DAPHNIA PULEX.**

Emily Bush, Truc-Nhi Do, George Rogalskyj, Elizabeth Moore, Sandra Connelly, Callie Babbitt, Christy Tyler

*RIT- Environmental Science*

**46. GALLUS GALLUS DOMESTICUS (BANTAMS) AS AN EXPERIMENTAL MODEL TO STUDY LONG-TERM SURVIVAL OF ALLORHIZOBIUM VITIS ON THE FEET OF AVIAN SPECIES.**

Luciana Cursino<sup>1</sup>, Rory Doremus<sup>1</sup>, Paulo Cursino-Santos<sup>2</sup>, Barbara Demjanec<sup>1</sup> and William Brown<sup>1</sup>

*Keuka College*

**47. GREEN MACHINES: DO RIVER BIOFILMS LEARN TO RECYCLE AS THEY AGE?**

Mansi Chhina, Sophia Miracle, and Jonathan O'Brien

*Canisius College*

**48. HISTOLOGICAL ANALYSIS OF THE EFFECTS OF ESTROGEN MIMICS ON BLACKNOSE DACE IN THE FINGER LAKES REGION**

Nhung Nguyen, Penelope Murphy, Susan Cushman, Walter Bowyer

*Hobart and William Smith Colleges*

**49. IMPACT OF JAPANESE BARBERRY ON THE PHYSIOLOGICAL CONDITION OF BREEDING OVENBIRDS.**

Abigail Frawley, Katherine Hensel, Chad Seewagen, and Susan Smith Pagano

*Rochester Institute of Technology*

**50. CHANGES IN FREQUENCY, CALL LENGTH, AND NOTE INTERVALS IN WINTER VOCALIZATIONS OF SPECIES EXPOSED TO VARYING LEVELS OF ANTHROPOGENIC NOISE.**

Leeann Bruetsch, Kayla Schum, Dr. Kristina Hannam

*Department of Biology at SUNY Geneseo*

**51. EFFECT OF BIOAVAILABLE LEAD PHOSPHATE IN GLYCINE MAX GROWN IN SOIL INOCULATED WITH RHIZOBIUM.**

Tilor Hallquist, Kelsey Lawton, Amanda Van, Olivia Lopatofsky, Gregory Fox, Dr. Seema Thomas

*Rochester Institute of Technology*

**52. IDENTIFYING REPRODUCIBLE METHODS FOR MICROALGAE BIODIESEL PRODUCTION.**

Colleen Steward, Shannon Murphy, Dr. Barnabas Gikonyo

*SUNY Geneseo*

## **Botany & Agriculture**

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**53. ISOLATION OF BACTERIAL ENDOPHYTES FROM GARLIC: PRODUCTION OF QUORUM-SENSING SIGNALS IN THE ACYL-HOMOSERINE LACTONE CLASS**

Janelle Fancher, Maria Kajdasz, Isaac Cowan Shania van Nuland, Mark Gallo, Ph.D.

*Niagara University, Dept of Biology*

**54. INVESTIGATING THE ALLELOPATHIC EFFECTS OF PALE SWALLOWWORT (*CYNANCHUM ROSSICUM*) ON THE GROWTH SUCCESS OF COMMON MILKWEED (*ASCLEPIAS SYRIACA*) AND PALE SWALLOWWORT.**

Jessica DeToy, Dr. Kathryn Amatangelo

*SUNY Brockport*

**55. PRESENCE OF ALLORHIZOBIUM VITIS IN THE GUT OF WILD HOUSE SPARROWS (*PASSER DOMESTICUS*) SAMPLED FROM FINGER LAKES VINEYARDS.**

Luciana Cursino, Rory Doremus, and William Brown

*Keuka College*

**56. SOIL NUTRIENTS AFFECT ON FALL LEAF RETENTION IN NORTHERN HARDWOOD FORESTS.**

Madison S. Morley, Griffin E. Walsh, Ruth D. Yanai

*SUNY College of Environmental Science and Forestry*

**57. SPECIFIC LEAF AREA AND AMINO ACIDS VARY WITHIN SUGAR MAPLE CANOPIES AND ACROSS A N\*P FERTILIZATION EXPERIMENT**

Alex Young, Ruth Yanai, Rakesh Minocha, Stephanie Long

*SUNY ESF*

**58. SYNERGY BETWEEN SIMULTANEOUS AND SEQUENTIALLY APPLIED LACCASE AND XYLANASE IN THE DEGRADATION OF WOOD INTO BIOFUELS**

Zachary Augustyn, Dr. Robyn Goacher

*Niagara University*

**59. THE EFFECT OF COMPOST ADDITION ON BIOGEOCHEMICAL CYCLES IN CREATED WETLANDS**

Michael McGowan, Benjamin Hamilton, Thulfiqar Al-graiti, Taylor Williams, Sonia Huang, Carrie McCalley, Christy Tyler

*Rochester Institute of Technology*

**60. THE POLLINATION BIOLOGY OF *SCAEVOLA PLUMIERI* IN VIEQUES, PUERTO RICO ISLAND.**

Ngawang Chime

*Ithaca college*

**61. THE STATUS OF WESTERN BEAN CUTWORM, *STRIACOSTA ALBICOSTA* (SMITH), IN NEW YORK STATE.**

Marion Zuefle, Ken Wise, Keith Waldron and Carol MacNeil

*NYS IPM Program*

**62. TWO YEARS OF INVASIVE CATTAIL MANAGEMENT VIA MANUAL REMOVAL.**

Sarita Charap, Stephanie Facchine, Joe McCarthy, Alexander Steiner, Faith Page, Eric Hellquist

*State University of New York Oswego*

**63. BATTLE OF THE BABIES: BEECH INTERFERENCE WITH MAPLE REGENERATION**

Daniel S. Hong, Adam D. Wild, Mariann Johnston, Melany C. Fisk, Ruth D. Yanai

*SUNY-ESF*

**64. CHOLESTEROL OXIDASE ACTIVITY IN THE SUBCELLULAR MEMBRANE FRACTIONS OF TRANSGENIC TOBACCO.**

Daniel Nguyen#, John Cleary#, Robert Grebenok

*Canisius College*

**65. DETERMINATION OF STEROL SPECIES AND LEVELS THAT PROVIDE LOCALIZED ENHANCEMENT OF ELECTRON TRANSPORT RATES IN TOBACCO THYLAKOID MEMBRANES.**

Shivam Tewari, Elana Stennett

*Hobart and William Smith Colleges*

**66. EFFECTS OF LONG-TERM NUTRIENT ADDITION ON ACER SACCHARUM SAP FLOW.**

Alexandrea Rice  
*SUNY ESF*

**67. EVALUATION OF PESTICIDE RESIDUE CONTENTS IN FRUITS AND VEGETABLES AFTER DIFFERENT WASHING TREATMENTS.**

Ilayda Kelley, Kyle Harbour  
*SUNY Oswego*

**68. GETTING BACK IN THE FIELD: UNDERGRADUATE RESEARCH PROJECTS ON ASIAN PEARS.**

Taylor Herrmann, Morgan Pimm, Brianna Lees, Daniel Stein, Maryann Herman  
*St. John Fisher College*

**69. IN PLANTA DETECTION OF CURTOBACTERIUM SP. BIOCONTROL STRAIN BY MOLECULAR TECHNIQUES**

Luciana Cursino and Amanda Magilton  
*Keuka College*

## **Zoology & Physiology**

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**70. INVESTIGATING ELECTRICAL STIMULATION AS A THERAPEUTIC MODALITY FOR SMOOTH MUSCLE RECOVERY AFTER INJURY.**

Jung Hyun Ahn, Samuel H. Pyo, Ransom H. Poythress  
*Houghton College*

**71. INVESTIGATING POTENTIAL TRANSGENERATIONAL EFFECTS OF BISPHENOL A ON OBESITY IN DROSOPHILA MELANOGASTER.**

Jung Hyun Ahn, Samuel H. Pyo, Ransom H. Poythress  
*Houghton College*

**72. INVESTIGATING THE IMPACT OF VARIOUS BISPHENOLS ON OBESITY IN DROSOPHILA MELANOGASTER.**

Erik Baim, Edward Freeman  
*St. John Fisher College*

**73. INVESTIGATING THE POTENTIAL IMPACT OF BISPHENOL F ON ZEBRAFISH (DANIO RERIO) LARVAL SWIMMING BEHAVIOR.**

Meghan Connor, Edward Freeman  
*St. John Fisher College*

**74. MEASURING IMMUNE RESPONSE IN RELATION TO PREVALENCE OF CHYTRIDIOMYCOSIS IN LITHOBATES CLAMITANS (GREEN FROG) POPULATIONS IN OSWEGO COUNTY NEW YORK.**

Jason Lowery, Nathan McKean  
*SUNY Oswego*

**75. ORGANOGENESIS AFFECTED BY HARD ROCK MUSIC DURING CHICK EMBRYO DEVELOPMENT**

Cliff-Simon Vital, Poongodi Geetha-Loganathan  
*SUNY Oswego Biological Sciences*

**76. PHENOTYPIC PLASTICITY IN *D. MELANOGASTER*: INVESTIGATING THE EFFECTS OF TEMPERATURE ON BODY SIZE.**

Lota Ofodile, Judith Appenteng, Mubeen Jaffri, & Andrew D. Stewart  
*Canisius College*

**77. VALIDATION OF ANO1Δ7 TRANSGENIC ZEBRAFISH**

Veronica Schabert, Kelly Roberts, and Kristen Covino  
*Canisius College*

**78. BREAST TISSUE MORPHOLOGY IN A HUMAN CADAVER POPULATION.**

Stacy Amico-Ruvio, Nicole McGuire, John Fischer, and Megan Gervasi  
*D'Youville College*

**79. CRITICAL BONE FRACTURE REPAIRS: A COMPARISON OF THE MECHANICAL PROPERTIES OF CALCIUM PHOSPHATE BIOACTIVE CEMENT AND PIG BONE.**

Barnabas Gikonyo, Sabrina Medina, Mark Soto  
*SUNY Geneseo*

**80. DETERMINING THE REQUIREMENT OF ANOCTAMIN 1 IN RHEOTAXIS USING ZEBRAFISH LARVAE.**

Meghan Denny, Emily Amato, Seth Kirnie, Jessica Mayer, and dam Rich  
*The College at Brockport, SUNY*

**81. EFFECTS OF DISINFECTION BYPRODUCTS ON THE EARLY DEVELOPMENT IN ZEBRAFISH.**

Shannon Keller, Rachel Pelsang, Sean Ryan  
*St. Bonaventure University*

**82. EVALUATING THE EFFECTS OF BISPHENOLS A, F, AND S ON PRIMORDIAL GERM CELL MIGRATION IN ZEBRAFISH (*DANIO RERIO*) EMBRYOS USING FLUORESCENT MICROSCOPY.**

Adam Haines, Christopher Pennuto  
*Buffalo State College*

**83. EFFECT OF DIFFERENT MAGNESIUM SUPPLEMENTS ON MOUSE MAGNESIUM BALANCE**

Tricia Cooke, Conner Kobus, Christopher Carlson, Gabriela Mercurio, Taylor Thompson, Bernardo Ortega  
*The College at Brockport, SUNY*

**84. GLUCOSE METABOLISM IN THE ANOCTAMIN 1 TRANSGENIC ZEBRAFISH**

Bianca Camillaci, Gabriella Mercurio, Kaitlyn Niedermeier, Ryan Peters, Paola Severino, Adam Rich.  
*The College at Brockport, SUNY*

**85. IDENTIFICATION OF TRANSPOSABLE ELEMENTS IN THE GENOME OF THE TERRESTRIAL ISOPOD, TRACHELIPUS RATHKEI.**

Rose Fontana, Christopher Chandler  
*SUNY Oswego*

**86. IDENTIFYING PROMOTER REGIONS OF GENES ESSENTIAL TO NOTOCHORD DEVELOPMENT IN ZEBRAFISH.**

Rachel Pelsang, Shannon Keller, Sean Ryan, PhD.  
*St. Bonaventure University*

**87. INEXPENSIVE METHOD TO PERFORM GENOTYPING OF THE CANINE GENOME USING RFLP'S.**

Armon Panahi, Samantha Terhaar, Kristy Richards, Douglas J. Guarnieri  
*Saint Bonaventure University*

## **Microbiology & Infectious Disease**

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**88. INFLUENCE OF ORAL PROBIOTICS ON THE ACCUMULATION OF ORAL PATHOGENS ON AN ARTIFICIAL SURFACE.**

Irina Ardelean  
*St. John Fisher College*

**89. INHIBITION OF *BACILLUS SUBTILIS* CELL DIVISION BY THE SP01 BACTERIOPHAGE PEPTIDE GP56**

Amit Bhambhani, Max Belfatto, Daniel P. Haeusser  
*Canisius College*

**90. INVESTIGATION INTO THE ANTIVIRAL ACTIVITY OF KALANCHOE PLANT EXTRACTS AGAINST INFLUENZA A VIRUS.**

Xayathed Somoulay, Anand Sridhar, Ph.D., Maryann Herman, Ph.D., and Jonelle Mattiaccio, Ph.D.  
*St. John Fisher College*

**91. ISOLATION OF BACTERIOPHAGE FROM *STAPHYLOCOCCUS* SPECIES**

Janelle Fancher, Maria Kajdasz, Isaac Cowan Shania van Nuland, Mark Gallo, Ph.D.  
*Niagara University, Dept of Biology*

**92. NAGD FROM *YERSINIA PESTIS***

Minh Le, Lucinda Dass, Isreal Moreno, and Suzanne F. O'Handley  
*Rochester Institute of Technology*

**93. PREVALENCE OF BETA LACTAMASE ANTIBIOTIC RESISTANCE IN *STAPHYLOCOCCUS* SPECIES ISOLATED FROM WHITE-TAILED DEER IN WESTERN NEW YORK**

Abigail E. Salter, Mark Gallo, Ph.D.  
*Niagara University Dept of Biology*

**94. PREVALENCE OF METHICILLIN RESISTANCE GENE VARIANTS IN A DAIRY HERD IN WESTERN NEW YORK**

Emily E. Forrester, Rachisan G. Djiake, Mark Gallo, Ph.D.  
*Niagara University Dept of Biology*

**95. SUCCESSFUL CONSTRUCTION OF A PA1006/C-TERMINAL GFP FUSION PROTEIN TO INVESTIGATE MOLYBDENUM COFACTOR BIOSYNTHESIS IN *PSEUDOMONAS AERUGINOSA*.**

Andrea Yamutuale, Nyshidha Gurijala, Shradha Mamidi, and Johanna Schwingel, PhD  
*St. Bonaventure University*

**96. SULFUR CYLCING BY MEMBERS OF THE *ACIDITHIOBACILLUS* GENUS IN THE ACIDIC SPRINGS OF THE IROQUOIS NATIONAL WILDLIFE REFUGE.**

Haley V. Parker, and Cassandra L. Marnocha  
*Niagara University*

**97. SWIMMING VELOCITY ANALYSIS IN *CHLAMYDOMONAS REINHARDTII***

Renaë Bronakoski, Noveera Ahmed Ph.D.  
*St. John Fisher College*

**98. TARGETING DXP SYNTHASE USING THDP MIMICS TO DEVELOP NEWER ANTIOTIOTICS**

Peter Girardi, Amera Alsalahi, Dr. Kevin Callahan  
*St. John Fisher College*

**99. TESTING FOR MYCOPLASMA CONTAMINANTS BY POLYMERASE CHAIN REACTION (PCR).**

Siti Nor Syahirah Zainuddin, Tyler C. Anderson, Noor Masleina Dahalan, Brianna Bonanni, Elizabeth Pattie, and Irene M. Evans  
*Rochester Institute of Technology*

**100. TRANSLATIONAL USE OF HOST-CELL STRESS GRANULES BY REOVIRUS.**

Megan Worth, Dr. Emily Ledgerwood, Michael M. Lutz IV  
*Le Moyne College*

**101. UNTANGLING METABOLIC COOPERATION: INVESTIGATING SYNERGISTIC GROWTH OF *ACETOBACTER* AND *LACTOBACILLUS* BACTERIA IN CO-CULTURE.**

Sarita Charap, Stephanie Facchine, Joe McCarthy, Alexander Steiner, Faith Page, Eric Hellquist  
*State University of New York Oswego*

**102. ANTIMUTATOR ACTIVITY OF NUDIX HYDROLASES FROM *E. COLI*.**

Thomas Hynes and Suzanne O'Handley  
*Rochester Institute of Technology*

**103. ARAL PHOSPHATASE FROM *BACILLUS SUBTILIS*, A MEMBER OF THE HAD SUPERFAMILY**

Thomas Hynes and Suzanne O'Handley  
*Rochester Institute of Technology*

**104. CHROMOSOME SPATIAL DISTRIBUTION IN THE LARGE BACTERIUM *EPULOPISCIVUM* SP. TYPE B.**

Bayley Zubler, Kirk Anne, Elizabeth Hutchison, and Anne Pellerin.

*SUNY Geneseo*

**105. CONCENTRATIONS OF HEAVY METALS AND BACTERIAL COMMUNITIES IN BOTTLED AND TAP WATER.**

Emily Cooley, Jacqueline Epp, Abigail Leahey, C. Eric Hellquist

*SUNY Oswego*

**106. EXAMINING THE IMPACT OF MU BACTERIOPHAGE KIL PEPTIDE ON MREB & FTSZ IN *E. COLI***

Samantha Weiss, Laura Cavallari, Allyson Corigliano, Daniel Haeusser

*Canisius College*

## **Cellular Biology, Molecular Biology, & Genetics**

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**107. INHIBITION OF NF-KB ACTIVATION AND SUPPRESSION OF THE IFN RESPONSE ARE INDEPENDENT FUNCTIONS OF THE VESICULAR STOMATITIS VIRUS MATRIX PROTEIN.**

Amit Bhambhani, Max Belfatto, Daniel P. Haeusser

*Canisius College*

**108. ISOLATION OF GLYCOSYL HYDROLASES TOWARDS GOAL OF UNIVERSAL BLOOD**

Mia Byrd, Elaine Militello, Rafay Tariq, Mark Gallo, Ph.D.

*Niagara University, Dept of Biology*

**109. MCH TREATMENT MAY DECREASE OVERALL MCHR1 LEVELS IN CILIATED AND FULLY DIFFERENTIATED 3T3-L1 CELLS.**

Iesha DeLesline, Dr. Laurie Cook

*The College at Brockport State University of New York*

**110. MEASURING APOPTOSIS IN HELA CERVICAL CANCER CELLS AND CAL-27 ORAL CANCER CELLS FOLLOWING TREATMENT WITH CURCUMIN AND PHOTODYNAMIC THERAPY**

Christian Domin, Dr. Robert Greene

*Niagara University*

**111. NOVEL SELENORHODAMINE DYES AS PHOTOSENSITIZERS IN EXTRACORPOREAL PHOTOPHERESIS.**

Jacqueline Hill, Mark Kryman, Gregory Schamerhorn, Michael Detty, Zachariah McIver

*University at Buffalo*

**112. OPTIMIZATION OF PARAMETERS FOR CARBENE LABELLING OF GAS PHASE PEPTIDE IONS: A NOVEL TECHNIQUE FOR STUDYING PROTEIN TOPOGRAPHY.**

Jennifer Pond, Paul Martino

*Houghton College*

**113. PROTEIN CATALYSTS FOR ENERGY STORAGE.**

Jennifer Le, Vincenzo Firpo, Banu Kandemir, Saikat Chakraborty, and Kara L. Bren  
*University of Rochester*

**114. THE ANALYSIS OF PHOSPHORYLATION AND UBIQUITINATION OF AMINO ACIDS IN THE ENHANCER OF RUDIMENTARY PROTEIN, ERH: CREATION OF MUTANT GENES**

Amber Voyer  
*The College at Brockport, State University of New York*

**115. THE EVOLUTION OF DOSAGE COMPENSATION: WHAT HAPPENS WHEN YOU HAVE TWO X CHROMOSOMES INSTEAD OF ONE.**

Jacqueline Alexander, Jihye Lee, Barbara J. Meyer, Eric S. Haag, and Te-Wen Lo  
*Ithaca College*

**116. THE ROLE OF FILAMIN IN RESPONSE TO BRIEF MECHANICAL STIMULATION.**

Jack Marcucci  
*SUNY Oswego*

**117. THE ROLE OF INTEGRIN A1B1 (VLA-1) IN CD8+ T CELL MOTILITY.**

Patrick Buckley, Emma Reilly, Ph.D., David Topham, Ph.D.  
*SUNY Geneseo*

**118. THERMOBACILLUS COMPOSTI: PRODUCTION OF A GLYCOSIDE HYDROLASE FOR UNIVERSAL BLOOD?**

Nadine Husami, Mark Gallo, Ph.D.  
*Niagara University, Dept. of Biology*

**119. TRANSCRIPTIONAL ANALYSIS OF BIPOLAR CANDIDATE GENES SUGGEST A ROLE FOR ENDOPLASMIC RETICULUM STRESS.**

Madilyn M. Wiles, Maria Fernanda Juarez Anaya, Douglas J. Guarnieri  
*Saint Bonaventure University*

**120. USING BIOINFORMATICS AND STRUCTURAL BIOLOGY TO BETTER UNDERSTAND SKIN DISEASE.**

Sakina Ahmed, Dr. Martha Skerrett  
*Buffalo State College*

**121. A NEW MODELING ACTIVITY FOR COMPREHENSIVE PCR INSTRUCTION**

Callie Donahue, Ashley Adair  
*Rochester Institute of Technology*

**122. ALTERNATIVE SPLICING DURING ADIPOCYTE DIFFERENTIATION.**

Peter Giangrosso, Dr. Laurie Cook, Dr. Rongkun Shen  
*The College at Brockport*

**123. ALTERATION OF AMINO ACIDS WITHIN N-TERMINUS, A-HELIX, B-STRANDS, AND LOOPS TO DETERMINE ERH FUNCTION.**

Lily Southivongnorath, Stuart I. Tsubota, Ph.D.

*SUNY The College at Brockport*

**124. CAPTURE OF NANOPARTICLES USING ULTRA-THIN MICROFLUIDICS AND MEMBRANES**

Anthony Emanuel, Fernando Ontiveros, James McGrath

*St. John Fisher College*

**125. CELL GROWTH OF *CHLAMYDOMONAS REINHARDTII* IN RESPONSE TO ANTIOXIDANTS.**

Andriana Guzelak, Dr. Noveera Ahmed

*St. John Fisher College*

**126. CHOLESTOSOMETM MEDIATED DELIVERY OF NUCLEIC ACIDS INTO MCF7 CELLS**

Daniel Nguyen#, John Cleary#, Robert Grebenok

*Canisius College*

**127. DETECTION OF A NON-CANONICAL SPLICE SITE THROUGH COMPARATIVE ANNOTATION OF THE DROSOPHILA FICUSPHILA MULLER D ELEMENT**

Jonathon F. Fleming, Matthew R. Skerritt, PhD

*Corning Community College*

**128. DILUTION OF THE MATRIGEL MATRIX AFFECTS THE FORMATION OF 3D SPHEROIDS IN PROSTATE AND LUNG CANCER CELL LINES.**

Nur Hidayah Mohd Rasid<sup>1</sup>, Tyler C. Anderson<sup>1</sup>, Jessica Fung<sup>1</sup>, Rebecca Walden<sup>1</sup>, Friedrich Griessel<sup>1</sup>, Hans Schmitthenner<sup>2</sup>, Irene M. Evans<sup>1</sup>

*Rochester Institute of Technology*

**129. EFFECT OF GENISTEIN AND ICI ON HISTONE MODIFYING ENZYMES IN OVARIAN CANCER CELLS**

Jenna Sauter, Victoria Granger, Lisa Morey

*Canisius College*

**130. EFFECT OF GENISTEIN ON HISTONE MODIFYING ENZYMES IN PROSTATE CANCER CELLS**

Jenna Sauter, Victoria Granger, Lisa Morey

*Canisius College*

**131. IDENTIFYING NOVEL COMPONENTS OF FIBROBLAST GROWTH FACTOR RECEPTOR SIGNALING**

Eric Eichelberger<sup>1</sup>, Jason C. Webb<sup>1</sup>, Mariya Stefinko<sup>2</sup>, Michael J. Stern<sup>2</sup>, Cindy Voisine<sup>2</sup>, and Te-Wen Lo<sup>1</sup>

*Ithaca College*

**132. IDENTIFICATION OF LNCRNA DIFFERENTIAL EXPRESSION DURING ADIPOCYTE DIFFERENTIATION.**

Rachel Soeder, Laurie Cook, and Rongkun Shen

*SUNY College at Brockport*

**133. EFFECTS OF MACROMOLECULAR CROWDING ON ENZYME KINETICS.**

Alexandrea Rice

*SUNY ESF*

**134. EXPRESSION AND PURIFICATION OF FULL-LENGTH LGN FOR X-RAY CRYSTALLOGRAPHY**

Justin Galardi, Kyle Cohen, Brandy Sreenilayam

*The College at Brockport, State University of New York*

## **Organic Chemistry and Biochemistry**

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**135. KINETIC STUDY OF ALKYL SUBSTITUTED ACETOACETIC ACIDS IN AQUEOUS SOLUTIONS.**

Morgan Springer, William W. Brennessel, and Alexey V. Ignatchenko

*St. John Fisher College*

**136. PICOLINAMIDE AND N-PHENYL-N-PYRIDINYLUREA DERIVATIVES AS LIGANDS FOR ARYL C-N BOND FORMATION.**

Mahemuti Xiadiman

*SUNY Oswego*

**137. PRODUCTION OF A SYMMETRICAL KETONE VIA NUCLEOPHILIC CARBONYLATION OF AN ARYL COPPER.**

Jennifer A. Ebert, Dr. Gregory Ebert

*State University of New York College at Buffalo State*

**138. SYNTHESIS AND CHARACTERIZATION OF NOVEL ORGANOSILICON COMPLEXES BEARING THE 8-HYDROXYQUINOLINE N-OXIDE LIGAND.**

Kathleen I. Lowry, Bradley M. Kraft, William W. Brennessel

*St. John Fisher College*

**139. SYNTHESIS OF CHALCOGENOPYRYLIUM DYE BASED SERS REPORTERS.**

Lauren E. Rosch, Michael R. Detty

*University at Buffalo*

**140. VIBRATIONAL SOLVATOCHROMISM OF PHARMACEUTICAL DRUGS TO INVESTIGATE THE INTERMOLECULAR INTERACTIONS.**

Krista Hirsch, Andrea Bills

*St. John Fisher College*

**141. ALLADIUM CATALYZED OXIDATION REACTIONS, USING SULFOLANE AS A GREEN SOLVENT**

Eliza Burdick-Risser, Frances Quigley and Karen E. Torraca

*Houghton College*

**142. ANALYSIS OF DRUG FACILITATED CRIMINAL ACTS USING SOLID PHASE EXTRACTION AND LIQUID CHROMATOGRAPHY-MASS SPECTROMETRY.**

Kimberly LaGatta, Kerina Heard, Shokouh Haddadi, Vadoud Niri  
*SUNY Oswego Chemistry Dept.*

**143. ANALYSIS OF HIGHER ALCOHOLS IN SCOTCH USING GAS CHROMATOGRAPHY.**

Shaun Henderson  
*SUNY Oswego Chemistry*

**144. DEGRADATION OF CH<sub>3</sub>NH<sub>3</sub>PBBR<sub>3</sub> SINGLE CRYSTAL.**

Congcong Wang<sup>1</sup>, Benjamin Ecker<sup>1</sup>, Haotong Wei<sup>2</sup>, Jinsong Huang<sup>2</sup>, Yongli Gao<sup>1</sup>  
*University of Rochester*

**145. EXPRESSION AND PURIFICATION OF FULL-LENGTH LGN FOR X-RAY CRYSTALLOGRAPHY**

Justin Galardi, Kyle Cohen, Brandy Sreenilayam  
*The College at Brockport, State University of New York*

**146. HEAVY CHALCOGENORHODAMINE DYES FOR VISIBLE-LIGHT-DRIVEN PHOTOREDOX TRANSFORMATIONS.**

Jennifer Clark, Dr. Michael Detty  
*University at Buffalo*

**147. IDENTIFICATION OF IN SITU IRON SPECIES IN C-H ACTIVATION REACTIONS.**

Annie Stevens, Azwana Sadique, Theresa Iannuzzi, Michael Neidig  
*University of Rochester*

## **Inorganic Chemistry**

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**148. LIGHT INDUCED CHEMICAL DEGRADATION AND STRUCTURAL POROSITY OBSERVED IN CH<sub>3</sub>NH<sub>3</sub>PBI<sub>3</sub> SINGLE CRYSTALS.**

Benjamin Ecker, Congcong Wang, Yongli Gao  
*University of Rochester, Department of Physics and Astronomy*

**149. MICROWAVE SURFACTANT-THERMAL SYNTHESIS AND CATALYTIC ABILITY OF [CU<sub>3</sub>(BTC)<sub>2</sub>] MOFS.**

Tyler Taras and Carly R. Reed  
*The College at Brockport, SUNY*

**150. NOVEL SOLAR CELLS: THE INKJET PRINTED NANOCRYSTALLINE INORGANIC PEROVSKITE FILMS**

Benjamin Swanson<sup>1</sup>, Ian Evans<sup>1</sup>, Carolina Ilie<sup>1</sup>, Andrew J. Yost<sup>2\*</sup>, F. Guzman<sup>3</sup>, M. Shekhirev<sup>4</sup>, N. Benker<sup>2</sup>, S. Sikich<sup>5</sup>, A. Enders<sup>6</sup>, P. Dowben<sup>2</sup>, A. Sinitskii<sup>4</sup>  
*SUNY Oswego*

**151. PHOTOCATALYTIC HYDROGEN PRODUCTION USING BIOMOLECULAR CATALYSTS.**

Saikat Chakraborty, Banu Kandemir, Rebeckah Burke, Todd D. Krauss, Kara L. Bren  
*University of Rochester*

**152. A CONVENIENT SYNTHESIS OF BIODEGRADABLE GLYCOPOLYMERS VIA THIOL-ENE CLICK CHEMISTRY.**

Samuel Gerardi, Michael Hardy, John M. Rowley  
*Houghton College*

**153. CHELATION AND DYNAMIC BEHAVIOR IN NEUTRAL HYPERCOORDINATE ORGANOSILICON COMPLEXES OF 1-HYDROXY-2-PYRIDINETHIONE.**

Erin R. Tiede, William W. Brennessel, Bradley M. Kraft  
*St. John Fisher College*

**154. DEVELOPING A SYNTHETIC PATHWAY FOR PRODUCTION OF FLUORESCHEIN-LABELED PEPTIDES.**

Jack Sherwood, Elana Stennett  
*Hobart and William Smith Colleges*

**155. CATALYTIC AND AUTO-OXIDATION OF IRON.**

Matthew Michienzi, Alyssa Ryan, Nicholas Burdett, Christopher S. Stoj  
*Niagara University*

## **Physics & Technology**

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**156. INTERDIGITATED GOLD ELECTRODES COATED WITH GRAPHENE QUANTUM DOTS FOR SENSING CIPROFLOXACIN ANTIBIOTIC**

N.N.N. Ahamed<sup>1</sup>, M. Schrlau<sup>2</sup> and K.S.V. Santhanam<sup>1</sup>  
*Rochester Institute of Technology*

**157. HIGH ALTITUDE MUON FLUX, RADIATION SHIELDING, AND SPECTROSCOPY.**

We will present 3 posters. The abstracts for the posters are uploaded below  
*Hobart and William Smith Colleges*

**158. DEVELOPMENT OF A LOW-COST PLATFORM FOR 3D BIOPRINTING APPLICATIONS.**

Connor Jensen, Frenando Ontiveros PhD.  
*St. John Fisher College*

**159. INFORMATION CAPACITIES OF LINEAR TIME-INVARIANT BOSONIC CHANNELS WITH ADDITIVE GAUSSIAN NOISE**

Bhaskar Roy Bardhan, Mohammed Raihan Hossain  
*SUNY Geneseo*

## **Paleontology**

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**160. SALVAGE PALEONTOLOGY - SILURIAN ROCKS OF UPSTATE NEW YORK**

Supravat dey, Kevin Ching, Moumita Das  
*Roschester Institute of Technology*

## ***Acknowledgements***

### **Conference Co-Chairs**

Chris Collins, Biology Department  
Maryann Herman, Biology Department  
Noveera Ahmed, Biology Department  
Jonelle Mattiaccio, Biology Department  
Kaitlin Bonner, Biology Department  
Michael Boller, Biology Department

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