# **Conference Schedule:**

# Saturday, March 2<sup>nd</sup>:

11:00 - 1:00	Check-In and Registration (3 <sup>rd</sup> Floor Alfond)	
1:00-2:15	SESSION 1: Biochemistry (Alfond 306)	
	SESSION 2: Marine Biology (Alfond 205)	
2:15 - 2:30	Break	
2:30 - 2:45	Welcome and Introduction (Campus Center, MPRs)	
2:45 - 3:45	Keynote Address by Dr. Barry Costa-Pierce, Director of the Marine Science	
	Center at UNE (Campus Center)	
3:45 - 5:00	Workshops	
5:15 - 6:30	SESSION 3: Neuroscience, Chemistry, Applied Math, and Medical Biology	
	(Alfond 306)	
	SESSION 4: Marine Biology (Alfond 205)	
5:15-6:20	Data Blitz Presentations (Alfond 106)	
6:30 - 8:00	Poster Session 1 (2 <sup>nd</sup> and 3 <sup>rd</sup> floor Alfond)	

# Sunday, March 3<sup>rd</sup>:

8:45 – 9:45	SESSION 5: Social Sciences (Alfond 306)
	SESSION 6: Biology (Alfond 205)
9:45 - 10:00	Break
10:00 - 11:00	SESSION 7: Physics (Alfond 306)
	SESSION 8: Biology (Alfond 205)
11:15 - 1:00	Poster Session II (2 <sup>nd</sup> and 3 <sup>rd</sup> Floor Alfond)
1:00-2:15	SESSION 9: Physics (Alfond 306)
	SESSION 10: Ecology (Alfond 205)
2:30 - 3:00	Closing Remarks and Awards Ceremony (Alfond 306)

# **Saturday March 2<sup>nd</sup>:**

1:00- 1:15	Session 1: Biochemistry <b>Golijanin, Petar, Franco Jimmy;</b> Merrimack College;  North Andover, MA  The Inhibition of DprE1 Protein	Session 2: Marine Biology Clabaugh, Anna R; Sulikowski, James A; University of New England; Biddeford, ME Using stomach content and stable isotope analysis to identify direct and indirect competition by spiny dogfish, <i>Squalus acanthias</i> , on commercially important fish species from Southern New England.
1:15- 1:30	<b>Chiasson, Martin</b> ; Université de Moncton; Moncton, New Brunswick Effect of pressure on the optical, electrochromic and photochromic properties of MoO <sub>3</sub>	<b>Dzaugis, Matthew P.; Altenritter, Matthew E. L.; Zydlewski, Gayle B.</b> ; University of Maine; Orono, ME Prey availability and diet of sturgeon in the Penobscot River, Maine
1:30- 1:45	Paul H. Nguyen, Melani A. Solomon, Gerard G. M. D'Souza; Massachusetts College of Pharmacy and Health Sciences; Boston, MA Towards the development of mitochondria specific liposomes with low cytotoxicity: Assessment of the effect of mitochondrial targeting ligands on the membrane potential of isolated mammalian mitochondria	Ingram, Natalie A; Sulikowski, James A; University of New England; Biddeford, ME Temperature Effect on Gestation and Survivability of the Little Skate ( <i>Leucoraja erinacea</i> )
1:45- 2:00	Dodge, Hailey M; Chang, Kai-Wei; D'Andrea, Melissa; Miwa, Julia H; Suffolk University; Boston, MA Evaluation of the aggregation of synthetic fragments of asynuclein	Jensen, Alexander J; Zydlewski, Gayle; University of Maine (Orono); Orono, ME Assessment of Sea Lice Infestations on Wild Fishes of Cobscook Bay
2:00- 2:15	<b>Daniels, Stephen D; McKenna, Molly; Franco, Jimmy U.</b> ; Merrimack College; Andover, MA Small Molecule Inhibition of Tuberculosis: Application for the Undergraduate Laboratory	<b>Boag, Tara N; Sulikowski, James A.</b> ; University of New England; Biddeford, ME Age and Size at Sexual Maturity of the Black Dogfish, <i>Centroscyllium fabricii</i> .

5:15- 5:20	Data Blitz Session  Pathak, Neil; Xu, Jian; Lombroso, Paul J; Yale University; New Haven, CT The Regulation of Tyrosine Phosphatase STEP by protein Kinase M Zeta	5:50- 5:55	<b>Smalley, Dean;</b> University of New England; Biddeford, ME Early British Tank Development
5:20- 5:25	Crocker, Carly A; Dewar, Eric W.; Suffolk University; Boston, MA Is Skull Shape Related to Aggressive Displays in Seals?	5:55- 6:00	<b>Diorio, Anna M.; Lindholm, Charles;</b> Boston University; Boston, MA Lennie Tristano, Jazz Improvisation, and the Anthropology of Emotion
5:25- 5:30	Dodge, Hailey M, Falce, Alex T, and Dewar, Eric W.; Suffolk University; Boston, MA Evolutionary Morphology of the Scapula and Humerus in Swimming Mammals	6:00- 6:05	Keene, Kevin P; Sandgren, Hayley R; Motz, Livia M; Tuma, Peter C; Liang, Jianyu; DiBiasio, David; Worcester Polytechnic Institute; Worcester, MA Effects of graphene coating on performance of lithium-ion batteries
5:30- 5:35	Grocott, Olivia R; LeClerc, Mari C; and Dewar, Eric W.; Suffolk University; Boston, MA Phenotypic Plasticity in the Limb Skeleton of Artiodactyls	6:05- 6:10	Irving, C.M., and Symington, S.B.; Salve Regina; Newport, RI Micro-transplantation of functional ligand gated ion channels from rat brain neurolemma into Xenopus laevis oocytes
5:35- 5:40	Hartnett, Magen M; Dewar, Eric W.; Suffolk University; Boston, MA Orbital Morphometrics of Visually-dependent Carnivorans and Primates	6:10- 6:15	Calapa, Marie D; Crocker, Alison F.; University of Massachusetts at Amherst; Amherst, MA Potentially Quiescent Molecular Gas in a Recent Merger Remnant
5:40- 5:45	<b>Wing, Harold;</b> University of New England; Biddeford, ME The Asian-American's American Public School Experience in the 20 <sup>th</sup> Century and the Politics that Shaped it	6:15- 6:20	<b>Saunders, Adelle;</b> University of New England; Biddeford, ME 5th Grade American Revolution Unit: Struggle for Independence
5:45- 5:50	Cardinal, Shannon; University of New England; Biddeford, ME Orpheus' Sermon		

5:15- 5:30	Session 3: Neuroscience, Chemistry, and Med. Bio. <b>Gay, Justin C; Bainter, Wayne; and Symington, Steven B</b> ; Salve Regina University; Newport, RI  Pyrethroid modulation of T-type voltage-sensitive calcium channel isoforms
5:30-	Pelletier, R.; Foucher, D.; Bouchard, M.; Surette, C.; Université
5:45	de Moncton; New Brunswick An analysis method for the manganese content of saliva by ICP-MS
5:45-	Phonsom, Chukiat; Brown University; Providence, RI
6:00	From Spots to Target Patterns in the Swift-Hohenberg Equation
6:00-	Wilsey, Claire; Gurka, Jessica; Franco, Jimmy; Merrimack
6:15	College; Andover, MA
- 4 =	Virtual Screening of DprE1 for Tuberculosis Drug Targets
6:15-	Laverty, D.; Franco, J.; Merrimack College; Andover, MA
6:30	Covalent Inhibition of DprE1, an Essential Protein in Mycobacterium Tuberculosis
6:30-	POSTER I
8:00	

## **Session 4: Marine Biology**

Carleton, Liese M; Koester, David M; Sulikowski, James A;

University of New England; Biddeford, ME

Investigating the factors that control shell gland maturation in oviparous elasmobranchs.

Wibisono, Alyssa G S; Hughes, J; Smith, D; Wellesley College; Wellesley, MA

The Secret Lives of the Bluestreak Cleaner Wrasse (*Labroides dimidiatus*) in Hoga Island, Indonesia

**Smith, Kayla M; Sulikowski, James**; University of New England; Biddeford, ME; Evaluating the Saco Bay Estuary System as a Nursery Ground for Commercially Valuable and Ecologically Important Fish Species

# Sunday, March 3<sup>rd</sup>:

	Session 5: Social Sciences and Applied Mathematics	Session 6: Biology
8:45-	Vande Griek, Olivia H; Valsiner, Jaan; Clark University;	Watkinson, Britni M; Kasprak, Kim; Cangialosi, Karen;
9:00	Worcester, MA	Keene State College; Keene, NH
	Dear Diary: Using Semiotic Extractors through Journaling to	Increased Hunger Levels in Neospintharus trigonum May
	Draw Conclusions from Daily Life	Lead to a Shift in Foraging Tactics Utilized
9:00-	Jacobson, Rose E; Kuehl, Maria C; Burman, Michael A;	Lydia Fraughton; Dalhousie University; Halifax, Nova Scotia
9:15	University of New England; Biddeford, ME	Investigation of Callus Cells and Whole Plant Regeneration in
	Understanding the Contribution of Limbic System	the Lace Plant
	Development to Fear and Anxiety in Juvenile Rats through	
	Contextual Fear Conditioning	
9:15-	Hickey, Audrey K; Brown, Benjamin C; University of	Morse, Justin C; Hobai, Ion A; Abbasi, Waffaa; Siwik,
9:30	New Hampshire; Durham, NH	Deborah; Colucci, Wilson S.; Boston University; Boston,
	A Qualitative Examination of University of New Hampshire	MA
	Students' Impact on Life in Durham, New Hampshire	Calcium Handling Deficits Induced by Systemic Inflammatory
		Mediators in Rat Cardiomyocytes
9:30-	Nierenberg, Z; Steurer-Muller, M.; Hampshire College;	Chen-Kraus, Chloe.; Anderson, John.; College of the
9:45	Amherst, MA;	Atlantic; Bar Harbor, ME
	Opinion: Clinical Researchers, Hire Programmers	A Population Study of Snowshoe Hare (Lepus americanus) on
		Great Duck Island, Maine
9:45-	BREAK	
10:00		

10:00- 10:15	Session 7: Physics  Makkinje, Jan A; Zimmerman, George O.; Boston University; Boston, MA Magnetic Measurement Apparatus
10:15- 10:30 10:30-	University of Massachusetts; Amherst, MA Predicting Random Noise
10:45	<b>Ahlen, Steven P</b> ; Boston University; Boston, MA Measurement of Cosmic Ray Neutron Energy Spectra in a He-3 Time Projection Chamber
10:45- 11:00	Randle, Kirsten A; Cadonati, Laura; Pocar, Andrea; University of Massachusetts; Amherst, MA Analyzing Darkside-10: Using a Prototype to Refine Construction and Data Analysis Techniques
11:00- 11:15 11:15- 1:00	POSTER II (posters 44-83)

Session 8: Biology

**Jabre, Loay J; Reekie, Edward G**; Acadia University; Wolfville, Nova Scotia
Positive and Negative Effects of Fungal Endophytes on the Physiology and Porphology of *Picea glauca* (White Spruce)

**Matar, Somer M**; Keene State College; Keene, NH Bioprospecting for Alkane-Degrading Bacteria in a Contaminated Tidal Marsh

Chin, Meghan; Chancellor, Alexander; Smith, Wendy; Rosengaus, Rebeca; Northeastern University; Boston, MA Parental Provisioning in *Manduca sexta* in the Face of Pathogenic Pressures

Acklin, Casey J; Wasko, Kimberly A; Brooks, Ari D; College of the Atlantic; Bar Harbor, ME Natural Environmental Enrichment: Better Housing, Better Research

1:00- 1:15	Session 9: Physics Forster, Gary; Pocar, Andrea; Cadonati, Laura; University of Massachusetts; Amherst, MA Darkside-50: The Search for Dark Matter	Session 10: Ecology <b>Shlepr, K.R.</b> ; College of the Atlantic; Bar Harbor, ME  The Impact of Bald Eagle ( <i>Haliaeetus leucocephalus</i> )  Predation on Herring Gull ( <i>Larus argentatus</i> ) Survivorship in Maine, USA
1:15- 1:30	<b>Karlen, John L</b> ; University of Massachusetts; Amherst, MA Bayesian Inference and Gravitational Waves	Lauren Lynch, Paige Warren; University of Massachusetts,; Amherst, MA Trophic Dynamics of Urban and Rural Arthropod Communities in Massachusetts
1:30- 1:45	Karlen, John L, Clark James, Cadonati Laura; University of Massachusetts; Amherst, MA Optimizing Segment Length and Sampling Rate in Bayesian Algorithms for Gravitational Wave Searches	Smith, Cassandra; Perlut, Noah; University of New England; Biddeford, ME Variation in Home Range Size of the Eastern Gray Squirrel ( <i>Sciurus carolinensis</i> ) on the University of New England's Biddeford Campus
1:45- 2:00	<b>Howard, John M.; Cadonati, Laura.</b> ; University of Massachusetts; Amherst, MA Energy rate fluctuations in the BOREXINO solar neutrino detector	Morrison, Drew N; Rotjan, Randi; Diederich, Casey; Pechenik, Jan; Starks, Phillip; University of Massachusetts; Amherst, MA Move it or Lose it: Shell switching by <i>P. longicarpus</i>

### **Poster Session 1**

#### **Biology:**

- 1. Investigation of Mayfly Microbiome. **Butler, Tristan N.; Maichel, Sarah; Dr.Launen, Loren;** Keene State College; Keene, NH
- 2. Determining Differences in Protein Expression Patterns among Four Different Leishmania Species through Cloning and Sequencing of Unique cDNAs. **Albretsen, Erika L; Davis, Ashley; Shakarian, Dr. Alison M;** Salve Regina University; Newport, RI
- 3. Hydroponic Education within the Community via Outreach Programs. **Bickford, Nicole A.; Kane, Margaret H.; Meschwitz, Susan M.; and Chace, Jameson F.;** Salve Regina University; Newport, RI
- 4. Growing Raspberry Callus and Studying the Effect of Gallic Acid. **Bierce, A.; Stafstrom, K.; Morton, K.; Guarracino, A.; Shea, J.; and Swanson, J-D.;** Salve Regina University; Newport, RI
- 5. Monitoring the Expression and Activity of the DinB Protein in Vivo. **Diamond, Brett H; Godoy, Veronica;** Northeastern University; Boston, MA
- 6. Climactic Influences on Chemical Variation and Growth of Four Asian Botanicals. **Georgaklis, Erica A; Rajakaruna PhD, Nishanta;** College of the Atlantic; Bar Harbor, ME
- 7. The Anti-proliferative Effect the Polyphenol Gallic Acid has on Human Gastric Cancer Cells. Guarracino, Alyssa; Shea, Jessica; Stafstrom, Kelsey; Bierce, Ally; Zhang, Songhua; Moss, Steve. M.D.; Swanson, J.D. M.D.; Salve Regina University; Newport, RI
- 8. Characterization of the Secretory Lipase LdLip3 from the Human Pathogen *Leishmania donovani* Under Various Enzymatic Reaction Conditions. **Hoertz, Lana C.; Shakarian, Alison Ph.D.;** Salve Regina University; Newport, RI
- 9. Optimizing Production and Nutritional Content in Hydroponically Grown Microgreens Towards a Sustainable Future. **Kopin, Olivia M; Chace, Jameson F; Meschwitz, Susan M.;** Salve Regina University; Newport, RI
- 10. Comparison of Iron and β-Carotene levels in Hydroponically Grown Microgreens Under Different Light Regimes. **McCormack, Kenneth W; Chace, Jameson F; Meschwitz, Susan;** Salve Regina University; Newport, RI
- 11. Assessing the Bioremediation Potential of Bacteria from the Great Bay Estuary Using Real-World Mixtures of Contaminants. **McKenzie**, **Crystal M.**; **Launen**, **Loren**; Keene State College; Keene, NH
- 12. Characterizing umuD and umuC in Acinetobacter baumannii. **Nguyen, Linda; Norton, Matthew; Godoy, Veronica;** Northeastern University; Boston, MA
- 13. Comparison of β-carotene Concentrations in Hydroponically Grown and Conventionally Grown Basil under Varying Light Intensities. **Van Orden, Madison C; Meschwitz, Susan M; and Chace, Jameson F.;** Salve Regina University; Newport, RI
- 14. Inducible Compounds in Brown Macroalgae. **Wickramanayake Janithri; Martin. Kyle; Röse, Ursula S.R.;** University of New England; Biddeford, ME
- 15. Effects of Decomposition on δ13C and δ15N of Marine Mammal Tissues. **Yanos, Casey L; Todd, Sean K.;** College of the Atlantic; Bar Harbor, ME
- 16. Exploring Novel Delivery Methods for Systematic Gene Knockdown by RNA Interference in the Milkweed Bug, *Oncopeltus fasciatus*. **Crowley, Laura; Angelini, David R.;** Colby College; Waterville, ME

#### **Ecology:**

- 17. Nutrient Flux, Anoxic Conditions, and E. coli Contamination Across an Urban Watershed: Analysis of a Three Year Study on Aquidneck Island. **Farragher, Caitlyn N; Igo, Alexandra; Chace, Jameson F;** Salve Regina University; Newport, RI
- 18. Portland, ME: Urban Nesting Success in Herring Gulls (*Larus argentatus*). **Kelting, S;. Perlut, N.; Winchenbach, S.; Friar, M.;** University of New England; Biddeford, ME
- 19. Agricultural Land-use Legacies Shape Plant-soil Interactions in Present-day Landscapes. **Mills, Nicholas A; Mattingly, W. Brett**; Eastern Connecticut State; Willimantic, CT

- 20. The Transport of Mercury to Terrestrial Ecosystem through Emerging Aquatic Invertebrates. Shrestha, Jenisha; Boynton, Paul; Slogic, Chelsea; Watson, Caroline; Sherpa, Phurchhoki; Roebuck, Hannah; Chaves-Ullola, Ramsa; Baer, Nicholas A; Chen Celia Y; Colby-Sawyer College; New London, NH
- 21. Terrestrial Invertebrate Abundance Modeling with Respect to Sparrow Territory Size. **Wade J. V. Lyman;** College of the Atlantic; Bar Harbor, ME

#### **Environmental Science:**

- 22. A Comparison of Particulate Exposure from Diesel and Biodiesel Fuel Emissions Using Specific Size Concentrations. **Asmus, Alison; Clement, Brendan; Lombard, Melissa; Traviss, Nora;** Keene State College; Keene, NH
- 23. Comparing Particle Size and Fractal Dimension of Biodiesel vs Diesel Combustion Particles using Transmission Electron Microscopy (TEM). **Clement, Brendan E; Traviss, Nora M.;** Keene State College; Keene, NH

### **Geography:**

24. Is there a Deficit of Basic Geographic Knowledge among Degree Seeking Students? **Wigglesworth, Joey;** Framingham State University; Framingham, MA

#### **Marine Biology:**

- 25. Surficial Zooplankton Densities and Current Patterns around Mount Desert Rock. **Beblowski, Barbara** C; College of the Atlantic; Bar Harbor, ME
- 26. Measuring greenhouse gas fluxes in Sage Lot Pond in Waquoit Bay, Massachusetts. **Egan, K**; **Moseman-Valtierra, S**; **Lima, T**; **Tang, J**; **Kroeger, K**; **Morkeski, K.**; University of Rhode Island; Kingston, RI
- 27. Harbor Seal (*Phoca vitulina*) Behavioral Consistency. **Hunter, Nicole; Ono, Kathryn;** University of New England; Biddeford, ME
- 28. Evaluating the Recreational Discard Mortality of Atlantic Cod (*Gadus morhua*). **Langan, Joseph;** Sulikowski, James; University of New England; Biddeford, ME
- 29. Movement and Diet of the Atlantic Sturgeon (*Acipenser oxyrinchus*) in the Saco River Estuary. **Novak, Ashleigh J; Little, Caitlyn E; Sulikowski, James A.;** University of New England; Biddeford, ME
- 30. The Growing Economic and Ecologic Value of the Saco River Bay and Estuary System. **Reynolds**, **Julia M; Sulikowski, James;** University of New England; Biddeford, ME
- 31. Determining Sex Ratios and Sexual Maturity of Atlantic sturgeon (*Acipenser oxyrinchus*) in the Saco River. **Wheeler, Carolyn R; Sulikowski, James A.;** University of New England; Biddeford, ME
- 32. Effect of Prepared and Macroalgal Diets on Somatic Growth of Juvenile Green Sea Urchins (*Strongylocentrotus droebachiensis*). **Carrier, Tyler;** University of Maine; Orono, ME

#### Molecular Biology:

- 33. Does the Phenomenon of Cytoplasmic Sequestration of p53 Occur in the Acute Myelogenous Cell Line KG-1 and a Clinical Population of AML Cells? **Claxton, Benjamin B; Walker, Charles W.;** University of New Hampshire; Durham, NH
- 34. Verification of Experimentally Derived Optimal Reaction Conditions on the Enzymatic Activity of a Secreted Lipase Expressed by *Leishmania donovani*. **Crowther, Tia; Hoertz, Lana; Shakarian, Alison;** Salve Regina University; Newport, RI
- 35. Detection of mutation in the PAH gene. **Velasquez, Elizabeth; Perez, Tatiana; Vigue, Charles;** University of New Haven; West Haven, CT

#### **Oceanography:**

- 36. Characteristics of Microplastic Fibers in the Intertidal Ecosystem of Halifax Harbour, Nova Scotia. **Mathalon, Alysse S; Hill, Paul S.;** Dalhousie University; Halifax, Nova Scotia
- 37. Plankton Community Phenology around Mount Dessert Rock. **Mathews. Kaitlin P.; Todd, Sean K.;** College of the Atlantic; Bar Harbor, ME

#### **Physiology**

38. Psychological and Autonomic Effects of Art Making in College-aged Students. **Eggleston, D; Lodge, E; French, C; Kuns, G; Grimm, D; Rankin, N; Gorham, S; Sandmire, D.;** University of New England; Biddeford, ME

#### **Psychology:**

- 39. Gendered Challenges in Gay Fatherhood. **Audie, Devon M; Goldberg, Abbie E.;** Clark University; Worcester, MA
- 40. Examining Student Engagement in an Undergraduate Educational Psychology Class. **Eduljee, Nina B.; Pinkham, Kyle;** Saint Joseph's College of Maine; Standish, ME
- 41. When You Need a Hand: A Model of Attachment and Support Seeking in Romantic Relationships. Glasgow, Jillian C S; Hobson, Kristina; Holmberg, Diane; Acadia University; Wolfville, Nova Scotia
- 42. A Preliminary Examination of Statistical Anxiety with Undergraduate College Students. **Lebourdais**, **Pamela**; **Eduljee**, **Nina B.**; Southern Maine Community College; Harpswell, ME
- 43. Mechanisms Contributing to Children's Advantageous Inequity Aversion. **Levitt, Madeline R; Nigro, Georgia;** Bates College; Lewiston, ME

# Poster Session 2 (Sunday)

#### **Biochemistry:**

- 44. Effect of the Small Molecule STF-62247 on the Expression of MicroRNA in Clear Cell Renal Cell Carcinoma. **Bannister**, **Jérémie**; **Cormier**, **Kevin**; **Turcotte**, **Sandra**; Université de Moncton; Moncton, New Brunswick
- 45. Impact of SCD-1 Inhibition on Normal T-Cell Proliferation. **Bernier, Ann Marie D; Robichaud, Philippe-Pierre; Surette, Marc E.;** Université de Moncton; Moncton, New Brunswick
- 46. A Structural Comparative Approach to Identifying Novel Antimalarial Inhibitors. **Fastnacht, Kurt; Capuano, Joe;** Merrimack College; North Andover, MA
- 47. Use of Computational Tools and Cell-Based Assays to Identify Inhibitors of Histoplasma capsulatum Hog1 MAP Kinase. Gurka, Jessica; Genito, Emilia; Laverty, Danny; Jewett, Kayla; Monaghan, Megan; Berkes, Charlotte; Franco, Jimmy; Toth, David; Merrimack College; North Andover, MA
- 48. A Computational Approach to Determine the Binding Site of Pyrethroids to the β-γ Subunit of Heterotrimeric G-proteins. **Diss, Paul B; Symington, Steven;** Salve Regina University; Newport, RI
- 49. Using a Toxoplasma Gondii Mutant to Study the Connections between Infection, Obesity, and Reproductive Hormones. Silva, Eric J; Payne, Amanda; Knoll, Laura; Salem State University; Lynn, MA
- 50. Direct Arylation of Oxazole with an Aromatic Fluorous Sulphonate. Whyte, Meshell; Paskarnis, Corey; Kadam, Asha; Zhang, Wei; University of Massachusetts; Boston, MA
- 51. Study of Palladium Catalyzed N,N-Benzyl Rearrangement. **Zhu, Dianrong; Zhang, ZiJuan;** University of Massachusetts; Boston, MA
- 52. Virtual Screening of DprE1 for Tuberculosis Drug Targets. Wilsey, Claire; Gurka, Jessica; Franco, Jimmy; Merrimack College; North Andover, MA
- 53. The Role of Nicotinic Acetylcholine Receptors in Monocyte Production and Differentiation. **St-Pierre**, **Stéphanie**; Université de Moncton; Moncton, New Brunswick

#### **Biophysics:**

54. Using DNA Origami to Evaluate Motor Protein Binding Patterns. **Hough, Soren; Ross, Jennifer.** University of Massachusetts; Amherst, MA

#### **Chemistry:**

- 55. Isolation and Structural Identification of Compounds from Boxelder Maple (*Acer negundo*) Leaves. Goding, Mallory E; Seeram, Navindra P; Meschwitz, Susan M; Salve Regina University; Newport, RI
- 56. Enhancing DNA Sequencing Recognition Using Parallel Nanopore-based Single Molecule Measurements: A Computational Study. **Ross, Caitlin R; Dwyer, Jason R.;** University of Rhode Island; Kingston, RI
- 57. Studies Directed Toward the Synthesis of N-acyl Cycloserine Derivatives as Potential Quorum Sensing Inhibitors. **Showalter, Sarah G; Meschwitz, Susan; Rowley, David;** Salve Regina University; Newport, RI
- 58. PEG coated Multi-Labeled Magnetic Beads for Ultra-Sensitivity Electrochemical Detection of Cancer Biomarker Proteins. Smith, Morgan C; Lombardo, Kara A; Keras, Gregory F; Munge, Bernard S.; Salve Regina University; Newport, RI
- 59. Multiplex Electrochemical Immunosensor for Protein Cancer Biomarkers using Nanostructured Electrode Arrays. **Somba, Brian K.; Munge, Bernard S.;** Salve Regina University; Newport, RI

- 60. Optimization of Nanofibrillated Celluloses Water Filtration Potential through a Hydrophobic Matrix. Sousa, Bryer C; Gagne, Eliot R; Smallwood, David J; Webber, Anna G; Stewart, Barbara N.; University of Maine; Orono, ME
- 61. A Greener Method: Liquid-Liquid Solvent Extraction of Chloramphenicol in Shrimp using HPLC-UVD and NMR. **Vo, Christine P; Mactaylor, Christine;** Salem State University; Salem, MA
- 62. Antithrombin Native State Aggregation and Inhibition by Heparin. **Zheng, Bingqian; Baykal, Burcu; Dubin, Paul;** University of Massachusetts; Amherst, MA

#### **Genetics:**

- 63. Identification of Polymorphic Microsatellite Markers in *Ulva rigida* and *Ulva compressa*. **Breseman**, **Matthew; Gelin, Shennel; Swanson, JD;** Salve Regina University; Newport, RI
- 64. *Actinomyces Naeslundii* β-galactosidase Gene Expression. **Cook, Caroline M; Kilcullen, Jesse; Bergeron, Lori J.;** New England College; Henniker, NH
- 65. Expression of a Lactose Repressor in *Actinomyces naeslundii*. Fournier, Greg A.; Hatsis, Eleni; Jonasdottir, Lily; Price-Prevot, Morganne M.; Bergeron, Lori; New England College; Henniker, NH
- 66. Identifying Bacteria in *Melibe leonina* Eggs. **Peck, Liam E.; Shute, Adam J.; Glashow, Mackie; Lawlor, Kayla; Bergeron, Lori J.;** New England College; Henniker, NH
- 67. Using Novel TALEN Technology to Engineer Precise Mutations in the Genome of D. melanogaster. **Sierzputowska, Katarzyna; Rieder, Leila E; Reenan, Robert A.;** Brown University; Providence, RI
- 68. Testing the Effect of Gallic Acid Exposure using CDKs on Mammalian Stomach Cancer Cells and Rubus callus. **Stafstrom, Kelsey; Gallipoli, Alexis; Guarracino, Alyssa; Bierce, Alexandria; Shea, Jessica; Morton, Kaitlin; Swanson, JD;** Salve Regina University; Newport, RI

#### **Medical Biology:**

- 69. The Slump Test. Begin, Amie; Merrimack College; North Andover, MA
- 70. Knowledge, Attitudes, and Practices Relating to HPV, Cervical Cancer, and Vaccination against HPV in a Low-income, Un-insured, Urban Population (Olneyville, RI). Chau, J; Yekta, S; Landi, M; Medeiros, T; Reilly, M; De Groot, A.S; University of Rhode Island; Kingston, RI
- 71. Preliminary Annotation of the p53 Pathway in *Mya arenaria*. **Wilson, John J.;** University of Maine; Orono, ME

### **Microbiology:**

72. An Epidemiological Survey of Toothbrush Contamination in Communal Bathrooms. **McAlice, Meghan K; Verdi, Joseph P; Bythrow, Glennon V; Cuchara, Prof. Lisa;** Quinnipiac University; Hamden, CT

#### Nanomedicine:

73. Engineered Nanoparticle Platform for Effective Co-delivery of Therapeutic Molecules. **Udayakumar**, **Nirushan D**; **Swami**, **Archana**; **Farokhzad**, **Omid C**; Brigham and Women's Hospital/Harvard Medical School; Boston, MA

#### **Neuroscience:**

74. Stereospecific and Structural Inhibition of the Human T-type Voltage-Sensitive Calcium Channel Isoforms by Pyrethroids. **Bainter, Wayne; Gay, Justin C; Irving, Craig M; Mutanguha, Edwin M; Symington, Steven B.;** Salve Regina University; Newport, RI

- 75. Developing a MARCM Protocol for Targeting and Testing Mechanosensation in *Drosophila melanogaster*. **DeSimone, Jessica A; Luu, Dan D; Webster, Sarah M.;** College of the Holy Cross; Worcester, MA
- 76. P3-like Auditory Evoked Responses and Gamma-band Activity in Frontal and Parietal Cortex of Behaving Rats. **Dodge, Caroline P; Wiest, Mike C.;** Wellesley College; Wellesley, MA
- 77. Asymmetric Learning in an Asymmetric Bimanual Task. **Ebert, Julia T; Park, Se-Woong; Sternad, Dagmar;** Northeastern University; Boston, MA
- 78. Effects of Expression of FTD-associated Mutant CHMP2B on Circadian Free-running Locomotor Activity Rhythm in *Drosophila melanogaster*. **Liu, Jiebin; Ahmad, S. Tariq**; Colby College; Waterville, ME
- 79. Mutagenesis of *Drosophila melanogaster* to Identify Regions Critical to the Function of the Mechanosensitive Channel NOMPC. **Murphy, Timothy P; Guido, Matthew J; Webster, Sarah M.;** College of the Holy Cross; Worcester, MA

### **Pharmaceutical Sciences:**

- 80. The Order of Addition of Components of a Self-emulsifying Drug Delivery System (SEDDS) Affects its Drug Release Profile. **Kyhos, Claire J; Raut, Shilpa; Atef, Eman;** Massachusetts College of Pharmacy and Health Sciences; Boston, MA
- 81. Evaluation of Biological Activity and Cytotoxicity of PLGA-Encapsulated Interleukin-1 Receptor Antagonist (IL-1ra) for Treatment of Posttraumatic Osteoarthritis (PTOA). **Patel, Chandni P; Khaled, Elsaid;** Massachusetts College of Pharmacy and Health Sciences; Boston, MA

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- 82. Impacts On The Detectability of Gravitational Waves From Intermediate-Mass Binary Black Hole Coalescence From Higher Harmonic Modes In Precessing Systems. **Mangini, Nicholas M; Cadonati, Laura;** University of Massachusetts; Amherst, MA
- 83. Stochastic Simulations of High Density Kinesin-1 Transport. **O'Neill, Andrew M; Tuzel, Erkan;** Worcester Polytechnic Institute; Worcester, MA