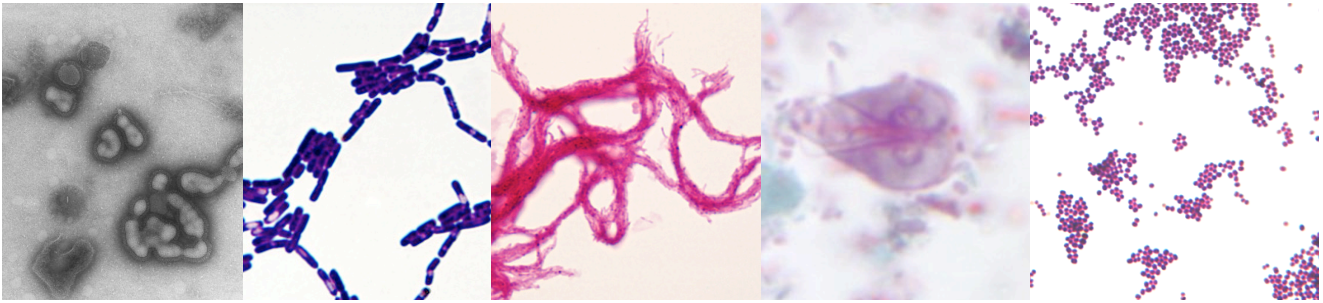




American Society for Microbiology 45th Annual Regional Meeting

**Eastern New York, Connecticut Valley,
New York City and Northeast Branches**



November 9-10, 2010

**Albany Marriott Hotel
198 Wolf Road
Albany, New York**

Sponsored by:

Eastern New York Branch

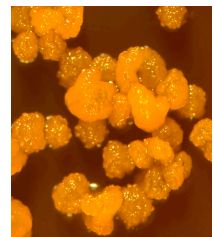
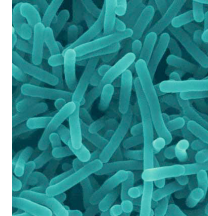
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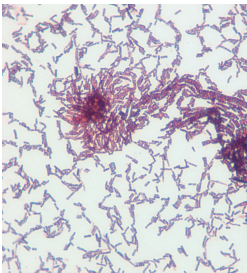
Symposium and Workshop Support:

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Additional Program Committee Members:

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A list of meeting attendees and contact information will be made available following the conference
on the ENY ASM Branch website:

<http://www.asm.org/branch/breny/index.html>

Tuesday November 9, 2010

<u>Registration</u>	7:30-8:30 am	Foyer
<u>Continental Breakfast</u>	7:30-8:30 am	Foyer
<u>Exhibitors</u>	9:00-6:30 pm	Foyer

Workshop- Select Agents and Risk Assessment 8:30-12:00 pm Salon F

Session conveners- Wadsworth Center Staff

This workshop will also include a breakout session in which participants will perform risk assessment scenarios for microbes that may be encountered in the clinical laboratory. Information will be provided to enable participants to recognize convener agents at the lab bench.

- 8:30-8:45 am Welcome and Introduction
- 8:45-9:15 am Mr. David Hill- Director, Safety and Security -
The risk assessment process
- 9:15-9:45 am Ms. Nellie Dumas- Associate Director, Bacteriology Laboratory-
Risk assessment in the microbiology laboratory
- 9:45-10:15 am Dr. Steven Zink-Supervisor, Biodefense Laboratory-
Select agents in the microbiology laboratory

BREAK 10:10 -10:40 am

- 10:40-11:10 am Dr. Christina Egan- Director, Biodefense Laboratory-
Case study of the identification of a biothreat agent in the clinical microbiology laboratory
- 11:10-12:00 pm Breakout session
-

Session B Morning Symposium

New Frontiers in Genomics 8:30-12:00 pm Salon G/H

Session conveners- Dr. Joseph Wade and Dr. Marlene Belfort

- 8:30-9:30 am **Genome plasticity and the evolution of Salmonella host-specificity**
Dr. Stanley Maloy, San Diego State University
ASM Branch Lecturer
- 9:30-10:10 **Culture independent approaches for the discovery of new bacterial metabolites**
Dr. Sean Brady, Rockefeller University

BREAK 10:10 -10:40 am

- 10:40- 11:20 am **Reconsidering the host-pathogen relationship in human tuberculosis through bacterial genome sequencing**
Dr. Joel Ernst, New York University
- 11:20-12:00 pm **Mapping determinants of DNA transfer in mycobacteria**
Dr. Keith Derbyshire, Wadsworth Center

Tuesday November 9, 2010

<u>Lunch</u>	12:00-1:00 pm	Salon E
<u>Break</u>	2:20-2:50 pm	Foyer

Session A- Afternoon Symposia

<u>Emerging Infections</u>	1:00-4:00 pm	Salon F
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Session conveners- Ms. Nellie Dumas and Dr. Kimberlee Musser

1:00-1:40 pm **Challenges of non-O157 STEC testing**
Ms. Dianna Bopp, Wadsworth Center

1:40-2:20 pm **Detection and surveillance of KPCs: What the clinical laboratory needs to know**
Dr. Susan Harrington, Albany Medical Center

BREAK 2:20-2:40 pm

2:40-3:20 pm **Tuberculosis: Re-emergence of an age-old killer**
Dr. Vincent Escuyer, Wadsworth Center

3:20-4:00 pm **Update: 2010 Laboratory Reporting and Specimen Submission Requirements of Communicable Diseases**
Ms. Nellie Dumas, Wadsworth Center

Session B- Afternoon Symposia

<u>The sRNA Revolution in Gene Regulation</u>	1:00-4:00 pm	Salon G/H
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Session conveners- Dr. Marlene Belfort and Dr. Joseph Wade

1:00-1:40 pm **5' -terminal control of bacterial RNA degradation**
Dr. Joel G. Belasco, New York University

1:40-2:20 pm **A central role for sRNA in bacterial iron homeostasis**
Dr. John D. Helmann, Cornell University

BREAK 2:20-2:40 pm

2:40-3:20 pm **Pervasive transcription in *Escherichia coli***
Dr. Joseph Wade, Wadsworth Center

3:20-4:00 pm **Fishing in the deep: using high-throughput cDNA sequencing to identify and characterize regulatory RNAs in diverse bacteria**
Dr. Jonathan Livny, Broad Institute

Tuesday November 9, 2010

<u>Poster Session</u>	4:30-6:30 pm	Foyer
<u>Wine and Cheese Reception</u>	4:30-6:30 pm	Foyer

<u>Session for Teachers</u>	5:00-6:00 pm	Salon F
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5:00-5:30 pm	Foodborne Disease Outbreaks Timothy Root, Supervisor- Enteric Bacteriology Wadsworth Center Bacteriology Laboratory
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5:30-6:00 pm	Antibiotic Resistance: History, Current Issues, and New Diagnostic Technologies Elizabeth Nazarian, Supervisor- Molecular Bacteriology Wadsworth Center Bacteriology Laboratory
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<u>Poster Session</u>	4:30- 6:30 pm	Foyer
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<u>Wine and Cheese Reception</u>	4:30-6:30 pm	Foyer
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Dinner

7:00-9:00 pm
Salon E

75th Anniversary Tribute to Eastern New York Branch



Celebrating its 75th Anniversary



Dr. Lawrence Sturman, Director -Wadsworth Center
(ENY ASM Branch President 1983-1985)

After Dinner Speaker:

Dr. Laura Kramer

Director-Wadsworth Center Arbovirus Laboratory
Global Emergence of Mosquito-borne Diseases
(ENY ASM Branch President 2005-2007)



Wednesday November 10, 2010

<u>Registration</u>	7:30-8:30 am	Foyer
<u>Continental Breakfast</u>	7:30-8:30 am	Foyer
<u>Exhibitors</u>	9:00-4:00 pm	Foyer

Workshop- Validation of Laboratory-developed Tests 8:30-12:00 pm Salon F
Session conveners- Wadsworth Center Staff

This session will also include mock validation design during a breakout workgroup period and a 'Question and Answer' period involving the panel of presenters.

8:30-8:40 am	Dr. Ron Limberger, Director, Division of Infectious Diseases- Welcome and Introduction
8:40-9:00 am	Dr. Michael Ryan, Director, Division of Laboratory Quality Certification- Regulation of laboratory-developed tests (LDTs)
9:00- 9:20 am	Dr. Christina Egan, Director, Biodefense Laboratory- Nucleic acid amplification test submission guidelines
9:20-9:45 am	Dr. Kimberlee Musser, Chief, Laboratory of Bacterial Diseases- Validation of molecular assays for bacteria
9:45-10:10 am	Dr. Amy Dean, Director Molecular Method Development - Viral Diseases- Validation of molecular assays for viruses

BREAK 10:10 -10:40 am

10:40-11:00 am	Q & A
11:20-12:00 pm	Breakout Session

Session B- Morning Symposia

Host Pathogen Interactions 8:30-12:00 pm Salon G/H
Session conveners- Dr. Timothy Sellati and Dr. Kathleen McDonough

8:30- 9:30 am	Secretion and Function of <i>Bordetella</i> Filamentous hemagglutinin Dr. Peggy Cotter, Univ. of N. Carolina, Chapel Hill ASM Branch Lecturer
9:30- 10:10 am	Role of <i>Yersinia</i> Yops in animal infections Dr. Joan Meccas, Tufts University
BREAK 10:10 -10:40 am	
10:40- 11:20 am	Relevance to human health of the balance between host protection and inflammation in different species' Dr. H. Shaw Warren, Mass. General Hospital
11:20-12:00 pm	Effects of host adaptation on innate defense against <i>Francisella tularensis</i> Dr. Timothy Sellati, Albany Medical College

Wednesday November 10, 2010

<u>Lunch</u>	12:00-1:00 pm	Salon E
<u>Break</u>	2:20-2:50 pm	Foyer

Session A- Afternoon Symposia

Vaccine Development

Sponsored by Connecticut Valley Branch of ASM **1:00-4:00 pm** **Salon F**
Session convener- Dr. Barbara J. Kamicker

1:00-1:40 pm **Approaches for designing a *S. aureus* vaccine**
Dr. Annaliesa S. Anderson, Pfizer - Pearl River, NY

1:40-2:20 pm **Antigen selection for a beta-hemolytic streptococcal vaccine**
Dr. Ingrid Dodge, Pfizer - Pearl River, NY

BREAK 2:20-2:40 pm

2:40-3:20 pm **Foot and Mouth Disease and Classical Swine Fever vaccines**
Dr. Elizabeth Rieder, Plum Island Animal Disease Center, Greenport, NY

3:20-4:00 pm **Computer-aided rational design of live attenuated viral vaccines**
Dr. Steffen Mueller, Stony Brook Univ.

Session B- Afternoon Symposia

Environmental Sensing and Gene Regulation **1:00-4:00 pm** **Salon G/H**
Session conveners- Dr. Karsten Hazlett and Dr. Kathleen McDonough

1:00-1:40 pm **Host-adaptation of *Francisella tularensis***
Dr. Karsten Hazlett, Albany Medical College

1:40-2:20 pm **Environmental regulation of *Pseudomonas* LPS structure**
Dr. Robert K Ernst, University of Maryland

BREAK 2:20-2:40 pm

2:40-3:20 pm **Contribution of two-component systems during the Lyme disease spirochete's enzootic cycle**
Dr. Melissa Caimano, University of Connecticut

3:20-4:00 pm **Signal transduction across the *M. tuberculosis* cell envelope via regulated intramembrane proteolysis**
Dr. Michael Glickman, Sloan-Kettering Institute

45th REGIONAL ASM MEETING: LIST OF POSTER PRESENTERS

- 1. Microbial Surveys and Analysis of Disinfection Protocols in a Complimentary Health Care Setting** Rob Arciuolo and Caroline Du Vernoy. Biology Department, The College of Saint Rose 432 Western Ave. Albany, NY 12203
- 2. Characterization of violacein hyperproducing *Janthinobacterium sp.* isolated from the Hudson River Valley** Alexandra M. Bettina and Brooke A. Jude. Bard College, Biology Program, Annandale-on-Hudson, NY 12504
- 3. The Role of Glycerol Metabolism and Hydrogen Peroxide Production in the Virulence of *Mycoplasma gallisepticum*** Boccaccio M., Szczepanek SM, Liao X, Frasca Jr. S, and Geary SJ. ¹Center of Excellence for Vaccine Research, University of Connecticut, Storrs, CT 06269
- 4. Regulation of Chaperone/Effector Complex Synthesis in a Type III Secretion System** Julie E. Button and Jorge E. Galán. Section of Microbial Pathogenesis, Yale University School of Medicine, New Haven, CT 06511
- 5. Engineering the Type III Secretion Machinery in a Non-Replicating Vehicle for Antigen Delivery.** Heather A. Carleton and Jorge E. Galán. Section of Microbial Pathogenesis, Yale University School of Medicine, New Haven, CT 06511
- 6. Heterologous Rabies Virus Infection in New York State Bats** April D. Davis, Robert J. Rudd, Carmen M. Fagnani, and Charles V. Trimarchi. Wadsworth Center, New York State Department of Health, Albany 12208
- 7. Loss of NADH Oxidase Results in Increased Resistance to Environmental Stress in *Streptococcus mutans*** A. M. Derr, R. C. Faustoferri and R. G. Quivey, Jr. Dept. of Microbiology and Immunology, University of Rochester, Rochester, NY 14627
- 8. Antibacterial and Antifungal Effects of the Sauce from Cassava** Brahmadeo Dewprashad¹; Malik Zulqarnain², Owen Meyers¹, Nilank C. Shah², Monique Breeland¹, Sheuli Zakia², and Richard Hendrix¹. ¹Dept. of Science, Borough of Manhattan Community College, New York, NY 1007, ²Department of Biology, New York City College of Technology, Brooklyn, NY 11201
- 9. Multiple small RNAs identified in *Mycobacterium bovis* BCG, *M. tuberculosis*, and *M. smegmatis*** Jeanne M. DiChiara¹, Lydia M. Contreras-Martinez¹, Jonathan Livny^{2,3}, Dorie Smith¹, Kathleen A. McDonough⁴, and Marlene Belfort^{1,4}. ¹Division of Genetics and ⁴Division of Infectious Diseases, Wadsworth Center, Albany, NY 12208, ²Broad Institute of MIT and Harvard, Cambridge, MA 02142, ³Channing Laboratory, Brigham and Women's Hospital, Harvard Medical School, Boston, MA 02115
- 10. Preparation and Antibacterial Evaluation of New Decarboxylated Fluoroquinolones** Xiaoyuan Ding, Son T. Nguyen, Michelle M. Butler, Norton P. Peet, and Terry L. Bowlin. Microbiotix, Inc., One Innovation Drive, Worcester, MA 01605
- 11. Intrahost Dynamics of West Nile Virus** Dylan J. Ehrbar¹, Alexander T. Ciota^{1,2}, Graham G. Willsey¹, Greta V.S. Jerzak¹, Anne F. Payne¹, and Laura D. Kramer^{1,3}. ¹The Arbovirus Laboratories, Wadsworth Center, New York State Department of Health. Slingerlands, NY 12159, ²Department of Biological Sciences, State University of New York at Albany, Albany, NY 12222, ³School of Public Health, State University of New York at Albany, Albany, NY 12222
- 12. Characterization of Antibiotic Resistance Patterns in 250 *Staphylococcus aureus* Isolates Obtained from a Healthy Population** Jillian Giguere, Joelle Jacobsen, and Lisa Cuchara¹. Biomedical Sciences, Quinnipiac University, 275 Mount Carmel Ave. Hamden CT 06518
- 13. Characterization of Arginine Deiminase System in Pathogenesis of Pneumococcal Otitis Media** Radha Gupta, Jun Yang, Huaiqing Chen, Jing-Ren Zhang, Dennis Metzger, and Guangchun Bai. Center for Immunology and Microbial Disease, Albany Medical College, Albany, NY 12208
- 14. Comparison of Dry and Hydrated Skin's Ability to Shed *Escherichia coli*** Thomas J. Hafner. Biology Department, The College of Saint Rose 432 Western Ave. Albany, NY 12203

15. **Development of a Subunit Vaccine against Respiratory Tularemia** Anthony J. Hickey, and Dennis W. Metzger. Center for Immunology and Microbial Disease, Albany Medical College, Albany NY 12208
16. **The Use Of Real Time RT-PCR To Confirm A Modified Protocol for Rabies Direct Fluorescent antibody Diagnostics** Jodie Jarvis, Michelle Dupuis, and Robert Rudd Wadsworth Center, Albany, NY 12208
17. **Microarray Analysis of $\Delta clpP$ and $\Delta clpX$ Strains Provides Insights into Mechanisms of Stress Tolerance, Survival, and Virulence in *Streptococcus mutans*** Jessica K. Kajfasz, Isamar Rivera-Ramos, and José A. Lemos. University of Rochester School of Medicine and Dentistry, Rochester, NY 14642
18. **The Role of CRP_{MT} in Regulating the Succinate to Fumarate Step of the TCA Cycle in *Mycobacterium tuberculosis*** Gwendolyn S. Knapp¹, Guangchun Bai¹, and Kathleen A. McDonough^{1,2}. ¹Division of Infectious Diseases, Wadsworth Center, Albany, NY 12208, ²Department of Biomedical Sciences, School of Public Health, University at Albany 12222
19. ***Mycoplasma gallisepticum* Infection Causes Up-Regulation of Inflammatory Mediators, Cytolytic Molecules and Pro-Apoptotic genes in Chickens** Majumder S.^{1,2,+}, Mohammed J.^{1,2,5+}, Rood D.^{2,3}, Szczepanek S.M.^{2,3}, Geary S.J.^{2,4}, Frasca Jr S. Jr.^{2,4}, and Silbart L.K.^{1,2,3}. ¹Department of Animal Science, ²Center of Excellence for Vaccine Research, ³Department of Allied Health Sciences, ⁴Department of Pathobiology and Veterinary Science. The University of Connecticut, Storrs, CT, 06268; Department of Veterinary and Biomedical Sciences, The Pennsylvania State University, University Park, PA 16802
20. **Immunofocusing Vaccines for Biodefense: Lessons from Ricin Toxin** Joanne M. O'Hara^{1,2}, Lori M. Neal², Elizabeth A. McCarthy², Jane A. Kasten-Jolly², Robert N. Brey³, and Nicholas J. Mantis^{1,2}. ¹Department of Biomedical Science, School of Public Health, State University of New York at Albany, Albany, NY 12222, ²Wadsworth Center, New York State Department of Health, Albany, NY 12208, ³Soligenix, Inc, Princeton, NJ 08540
21. **Stercomata: Micro-mudballs as evidence of ancient rhizarian protists?** Sandra Patrucco. Biology Department, The College of Saint Rose 432 Western Ave. Albany, NY 12203
22. **Characterizing Different Roles of the General Transcription Machinery at ABF1 AND RAP1 Targets in Budding Yeast** Emily L. Paul¹ and Randall H. Morse^{1,2}. ¹Department of Biomedical Sciences, School of Public Health, State University of New York at Albany, NY 12222, ²Wadsworth Center, New York State Department of Health, Albany, NY 12208
23. **Effects of Surfactants and Fatty Acids on *Bacillus anthracis* Spore Germination** V. Rivera, L. Yoon, A. Swartz, M.A. Butkus, and M.P. Labare. Department of Chemistry and Life Science, US Military Academy, West Point, NY 10996
24. **Structure-Function Analysis of *Candida albicans* Ess1 Protein** D. P. Samaranayake¹, P. Ren², P. Van Roey², S. Chaturvedi^{1,2}, V. Chaturvedi^{1,2}, and S.D. Hanes^{1,2}. ¹State University of New York at Albany, Wadsworth Center, ²Division of Infectious Diseases, Wadsworth Center, New York State Department of Health, Albany, NY 12208
25. **Directed Evolution of Quorum-Sensing Repressors for Increased Signal Sensitivity** Jasmine Shong and Cynthia H. Collins. Department of Chemical and Biological Engineering, Center for Biotechnology and Interdisciplinary Studies, Rensselaer Polytechnic Institute, Troy, NY 12180
26. **MMP-9 mediated neutrophil migration – Broad spectrum immune based therapeutic target in respiratory tularemia** Anju Singh and Timothy J. Sellati. Center for Immunology and Microbial Disease, Albany Medical College, Albany NY 12208-3479
27. **The *Yersinia pestis* RNA Chaperone Hfq Is an Essential Component for Surviving Changing Environmental Conditions.** Kris E. Spaeth, Guangchun Bai, Eric Smith, and Kathleen A. McDonough*. Division of Infectious Diseases, Wadsworth Center, Albany, NY 12208
28. **Antibiotic Resistant Bacteria in Chicken Feces** S. Szabo, M. Labare, L. Takacs, H. Butler, E. Yess, C. Butler, D. Riegner, and M.P. Labare. Department of Chemistry and Life Science, US Military Academy, West Point, NY 10996

- 29. Xeno-epitopes Incorporated into FMDV VP1 G-H Loop-based Peptide Vaccines Induce Humoral Immune Refocusing** R. W. Barrette¹, *S. M. Szczepanek^{2,3}, D. Rood², L. K. Silbart² ¹Foreign Animal Disease Diagnostic Laboratory, National Veterinary Services Laboratories, Animal and Plant Health Inspection Services, United States Department of Agriculture, Plum Island Animal Disease Center, Greenport, NY 11944, ²Center of Excellence for Vaccine Research, Department of Allied Health Sciences, University of Connecticut, Storrs, CT 06269, ³Agricultural Research Services, United States Department of Agriculture, Plum Island Animal Disease Center, Greenport, NY 11944
- 30. Gravitational Effects on Biofilm Formation During Spaceflight** Woo Seong Kim, Farah K. Tengra, Zachary Young, Jasmine Shong, Ravindra Pangule, Joel L. Plawsky, Jonathan S. Dordick, and Cynthia H. Collins. Department of Chemical and Biological Engineering, Center for Biotechnology and Interdisciplinary Studies, Rensselaer Polytechnic Institute, Troy, NY 12180
- 31. Bacterial Biodiversity of Lassen Volcanic National Park** Yvonne Visnick and Sarmad Saman. Mass Bay Community College, Wellesley, MA. 02481.
- 32. Biodiversity of Microorganisms at Different Ocean Depths** Yvonne Visnick and Sarmad Saman. Mass Bay Community College, Wellesley, MA 02481
- 33. Mutation of the WNV RdRp Gene Affects Viral Growth *In Vitro* and *In Vivo*** G.G. Willsey¹, G.V.S. Jerzak¹, A.T. Ciota¹, J. Jaeger^{1,2}, and L.D. Kramer^{1,2}. ¹The Arbovirus Laboratories, Wadsworth Center, New York State Department of Health. Slingerlands, NY 12159, ²School of Public Health, State University of New York at Albany, Albany, NY 12222
- 34. When Function Meets Homology: A Comparative Analysis of ABC Transporter Family in *Myxococcus xanthus*** Jinyuan Yan, Michael Bradley, and Roy D. Welch. Syracuse University, Syracuse, NY 13244
- 35. Identification and Characterization of an RTB-Specific Monoclonal Antibody that Protects Mice Against Ricin Intoxication** Anastasiya Yermakova¹ and Nicholas J. Mantis^{1,2}. ¹Department of Biomedical Sciences, University at Albany School of Public Health, and ²Division of Infectious Diseases, Wadsworth Center, New York State Department of Health, Albany, NY 12208
- 36. P38 Inhibition of *B. burgdorferi*-stimulated Human U937 Macrophages Alters Pro-inflammatory Cytokine Production** Kathleen Bashant¹ and Timothy J. Sellati². ¹Burnt Hills Ballston Lake High School, Burnt Hills, NY 12027, ²Center for Immunology and Microbial Disease, Albany Medical Center, Albany, NY 12208
- 37. The effect of activated protein kinase CaMKII on Endothelial Cell Migration** Mariam Gawdat^{1,2}, Harold S. Singer^{2,3}, Zhen Wang², ¹Shaker High School, Latham, NY 12110, ²Albany Medical College, Center of Cardiovascular Sciences, Albany, NY 12208, ³ University of Virginia Department of Pharmacology, Charlottesville, VA 22904
- 38. Kinesin-Like Proteins in Spindle Assembly** Laura Patrick^{1,2,3}, Janet L. Paluh^{2,3}, Leilani Cruz², and Lonnie Seo². ¹Columbia High School, East Greenbush, NY 12061, ²Rensselaer Polytechnic Institute, Troy, NY 12180, ³College of Nanoscale Science and Engineering University at Albany-SUNY, Albany, NY 12222
- 39. Analysis of the Bacterial Heat Shock Response to Photodynamic Therapy-Mediated Oxidative Stress** Tyler G. St. Denis^{1,2}, Liyi Huang^{2,3}, Tianhong Dai^{2,3,4}, and Michael R. Hamblin^{2,3,4}. ¹John Jay High School, Cross River, NY 10518, ²The Wellman Center for Photomedicine, Massachusetts General Hospital, Boston, MA 02114, ³Harvard Department of Dermatology, Harvard Medical School, Boston, MA, 02115, ⁴Harvard-MIT Division of Health Sciences and Technology, Cambridge, MA 02139
- 40. The Effect of the Presence of Normal Mouse Serum on the Ability of *Francisella tularensis* to Elicit a Cytokine Response from B57/BL6 BMDMs.** Kaylee Traver¹ and Timothy J. Sellati². ¹Burnt Hills Ballston Lake High School, Burnt Hills, NY 12027, ²Center for Immunology and Microbial Disease, Albany Medical Center, Albany, NY 12208

Full abstracts are available on the ENY Branch website:

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