

Laura J. Runyen-Janecky
Curriculum Vitae June 2016

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Education:

1996-2002 Postdoctoral fellow (Dr. Shelley Payne's laboratory)
Section of Molecular Genetics & Microbiology, University of Texas, Austin, Texas
1991-1996 Ph.D. in Cellular and Molecular Biology (Dr. Susan West's laboratory)
University of Wisconsin, Madison, Wisconsin
1987-1991 B.S. in Biology and Chemistry, Magna Cum Laude
Southwestern University, Georgetown, Texas

Teaching experience:

2015-present Professor of Biology, University of Richmond, Richmond, VA
2008-2015 Associate Professor of Biology, University of Richmond, Richmond, VA
2002-2008 Assistant Professor of Biology, University of Richmond, Richmond, VA
1999 Assistant Professor of Biology (adjunct), Southwestern University, Georgetown, TX
1998 Assistant Professor of Biology (adjunct), Southwestern University, Georgetown, TX
1995 Teaching Assistant, Prokaryotic Molecular Biology, University of Wisconsin, Madison, WI
1989-1991 Head Laboratory Teaching Assistant, Department of Biology, Southwestern University,
Georgetown, TX
1988-1989 Laboratory Teaching Assistant, Department of Biology, Southwestern University,
Georgetown, TX

Research experience:

2015-present Professor of Biology, University of Richmond, Richmond, VA
2010 Visiting Associate Professor of Epidemiology/Public Health, Yale University,
New Haven, CT
2008-2015 Associate Professor of Biology, University of Richmond, Richmond, VA
2002-2008 Assistant Professor of Biology, University of Richmond, Richmond, VA
1996-2002 Postdoctoral fellow, Dr. Shelley Payne's laboratory
Section of Molecular Genetics & Microbiology, University of Texas, Austin, TX
1991-1996 Graduate Research Assistant, Cellular and Molecular Biology Ph.D. Program,
Dr. Susan West's laboratory, University of Wisconsin, Madison, WI
1990 NSF Summer Undergraduate Research Fellow, Department of Microbiology
University of Texas, Austin, TX
1989 Summer Undergraduate Research Fellow, Department of Biochemistry
University of Texas Health Science Center, San Antonio, TX

Publications (25 total): * = undergraduate studentPublications

- Runyen-Janecky, L. 2016. Microbe Mentor: Career Activities at ASM Microbe 2016. *Microbe*, 11:223-225.
- Hrusa, G*, W. Farmer*, B.L. Weiss, T. Applebaum*, J. Roma*, L. Szeto*, S. Aksoy, and L.J. Runyen-Janecky. 2015. TonB-dependent heme iron acquisition in the tsetse fly symbiont *Sodalis glossinidius*. *App. Environ. Microbiol.* **81**:2900-2909.
- Waddell, C.D., Walter, T.J*, Pacheco, S.A., Purdy, G.E., and L.J. Runyen-Janecky. 2014. NtrBC and Nac contribute to efficient *Shigella flexneri* intracellular replication. *J. Bacteriol.* **196**:2578-2586.
- Runyen-Janecky, L. 2014. Transduction of Environmental Signals by Prokaryotic Two Component Regulatory Systems. *In: Bell E., Bond J., Klinman J., Masters B., Wells R.(Ed.) Molecular Life Sciences: An Encyclopedic Reference: Springer Reference (www.springerreference.com). Springer-Verlag Berlin Heidelberg*
- Runyen-Janecky, L.J. 2013. Role and regulation of heme iron acquisition in gram-negative pathogens. *Front. Cell. Infect. Microbiol.*, **3**:55. doi: 10.3389/fcimb.2013.00055
- Smith, C*, B. Weiss, S. Aksoy, and L.J. Runyen-Janecky. 2013. Characterization of the Achromobactin Iron Acquisition Operon in *Sodalis glossinidius*. *App. Environ. Microbiol.* **79**:2872-2881.
- Richardson, C*, M. Hill, C. Marks, L. Runyen-Janecky, and A. Hill. 2012. Experimental manipulation of sponge:bacterial symbiont community composition with antibiotics: sponge cell aggregates as a unique tool to study animal:microbe symbiosis. *FEMS Microb. Ecol.* **81**:407-418.
- Daugherty, A. *, A. E. Suvarnapunya, and L.J. Runyen-Janecky. 2012. The Role of OxyR and SoxRS in oxidative stress survival in *Shigella flexneri*. *Microbiol. Res.* **167**: 238-245.
- Runyen-Janecky, L.J., A.N. Brown*, B. Ott,* and H.G. Tujuba*, and R.V.M. Rio. 2010. Regulation of high-affinity iron acquisition homologues in the tsetse fly symbiont, *Sodalis glossinidius*. *J. Bacteriol.***192**:3780-3787.
- Snyder, A.K., J.W. DeBerry*, L. Runyen-Janecky and R.V.M. Rio. 2010. Nutrient provisioning facilitates homeostasis between tsetse fly (Diptera: Glossinidae) symbionts. *Proc. R. Soc. B.* **277**:2389-2397.
- Runyen-Janecky, L. J., A. Daugherty*, B. Lloyd*, C. Wellington*, H. Eskandarian*, and M. Segransky*. 2008. Role and regulation of iron-sulfur cluster biosynthesis genes in *Shigella flexneri* virulence. *Infect. Immun.* **76**: 1083-1092.
- Runyen-Janecky, L. J., E. Dzenski*, S. Hawkins*, and L. Warner*. 2006. Role and Regulation of the *Shigella flexneri* Sit and MntH Systems. *Infect. Immun.* **74**: 4666-4672.
- Kanack, K. J., L. J. Runyen-Janecky, E. P. Ferrell, S-J. Suh, and S. E. H. West. 2006. Characterization of DNA binding specificity and analysis of binding sites of the *Pseudomonas aeruginosa* global regulator, Vfr, a homologue of the *Escherichia coli* cAMP receptor protein. *Microbiology.* 152:3485-3496.
- Runyen-Janecky, L. J. 2005. Bioinformatics in a Biochemistry and Molecular Biology Curriculum. *Enzymatic.* **2**: 11-13.
- Runyen-Janecky, L. J., A. M. Boyle*, A. Kizzee*, L. Liefer*, and S. M. Payne. 2005. Role of the Pst System in Plaque Formation by the Intracellular Pathogen *Shigella flexneri*. *Infect. Immun.* **73**: 1404-1410.

- Runyen-Janecky, L. J., S. A. Reeves, E. G. Gonzales and S. M. Payne. 2003. Contribution of the *Shigella flexneri* Sit, Iuc, and Feo iron acquisition systems to iron acquisition in vitro and in cultured cells. *Infect. Immun.* **71**:1919-1928.
- Wei, J. M. B. Goldberg, V. Burland, M. M. Venkatesan, W. Deng, G. Fournier, G. F. Mayhew, G. Plunkett III, D. J. Rose, A. Darling, B. Mau, N. T. Perna, S. M. Payne, L. J. Runyen-Janecky, S. Zhou, D. C. Schwartz, and F. R. Blattner. 2003. Complete Genome Sequence and Comparative Genomics of *Shigella flexneri* Serotype 2a Strain 2457T. *Infect. Immun.* **71**:2775-2786.
- Runyen-Janecky, L. J. and S. M. Payne. 2002. Identification of chromosomal *Shigella flexneri* genes induced by the eukaryotic intracellular environment. *Infect. Immun.* **70**: 4379-4388.
- Suh, S-J., L. J. Runyen-Janecky, T. C. Maleniak, P. Hager, C. H. MacGregor, N. A. Zielinski-Monzy, P. V. Phibbs, and S. E. H. West. 2002. Effect of *vfr* mutation on global gene expression and catabolite repression control of *Pseudomonas aeruginosa*. *Microbiol.* **148**:1561-1569.
- Mogull, S. A., L. J. Runyen-Janecky, M. Hong, and S. M. Payne. 2001. DksA is required for intercellular spread of *Shigella flexneri* via an RpoS-independent mechanism. *Infect. Immun.* **69**:5742-5741.
- Runyen-Janecky, L. J., M. Hong, and S. M. Payne. 1999. The virulence plasmid-encoded *impCAB* operon in *Shigella flexneri* enhances survival and induced mutagenesis after exposure to UV irradiation. *Infect. Immun.* **67**:1415-1423.
- Runyen-Janecky, L. J., A. K. Sample, T. C. Maleniak, and S. E. H. West. 1997. A divergently transcribed open reading frame is located upstream of the *Pseudomonas aeruginosa vfr* gene, a homolog of *Escherichia coli crp*. *J. Bacteriol.* **179**:2802-2809.
- Albus, A. M., E. C. Pesci, L. J. Runyen-Janecky, S. E. H. West, and B. H. Iglewski. 1997. Vfr controls quorum sensing in *Pseudomonas aeruginosa*. *J. Bacteriol.* **179**:3928-3935.
- West, S. E. H., A. K. Sample, and L. J. Runyen-Janecky. 1994. The *vfr* gene product, required for *Pseudomonas aeruginosa* exotoxin A and protease production, belongs to the cyclic AMP receptor protein family. *J. Bacteriol.* **176**:7532-7542.
- West, S. E. H., H. P. Schweizer, C. Dall, A. K. Sample, and L. J. Runyen-Janecky. 1994. Construction of improved *Escherichia-Pseudomonas* shuttle vectors derived from pUC18/19 and sequence of the region required for their replication in *Pseudomonas aeruginosa*. *Gene* **128**:81-86.

Grants and fellowships:

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| 2016-2019 | National Institutes of Health Academic Research Enhancement Award (R15): “Identifying and Characterizing Heme Tolerance Genes in the Tsetse Symbiont <i>Sodalis glossinidius</i> ” |
| 2012-2016 | National Institutes of Health Academic Research Enhancement Award (R15): “ <i>Sodalis glossinidius</i> Iron Acquisition” |
| 2012 | University of Richmond Faculty Summer Research Fellowship: Identification of unique genes in <i>Sodalis glossinidius</i> . |
| 2011 | University of Richmond Faculty Seminar Abroad |
| 2010 | University of Richmond Program for Enhancing Teaching Effectiveness Teaching Enhancement Grant |
| 2009-2010 | National Research Service Awards for Individual Senior Fellows (F33): “Investigation of iron acquisition genes in <i>Sodalis glossinidius</i> using new tools” |
| 2009-2010 | University of Richmond School of Arts and Science Enhanced-Salary Sabbatical Leave Award |

- 2009 University of Richmond Faculty Research Grant “Investigation of Iron Acquisitions Genes in *Sodalis Glossinidius* Using New Tools”
- 2008-2011 National Science Foundation UBM-Group: “Studying Cell Response to Input Signals as the Basis for Interdisciplinary Training for Undergraduates in Biological and Mathematical Sciences” (Co-PI)
- 2008-2009 Thomas F. Jeffress and Kate Miller Jeffress Memorial Trust Award Renewal: “Characterization of Intracellular Adaptation Genes in the Tsetse Fly Secondary Endosymbiont *Sodalis glossinidius*”
- 2007-2011 National Institutes of Health Academic Research Enhancement Award (R15): “Role of *Shigella* two component regulation systems in intracellular adaptation”
- 2007-2009 Commonwealth Health Research Board Research Award: “Investigating the role of two component regulatory systems in *Shigella* virulence” Grant was funded but declined.
- 2007-2008 Thomas F. Jeffress and Kate Miller Jeffress Memorial Trust Award: “Characterization of Intracellular Adaptation Genes in the Tsetse Fly Secondary Endosymbiont *Sodalis glossinidius*”
- 2004-2007 National Institutes of Health Academic Research Enhancement Award (R15): “Virulence role and regulation of the *Shigella* *suf* genes”
- 2004 University of Richmond Arts and Sciences Dean’s Office Summer Fellowship
- 2003 University of Richmond Arts and Sciences Faculty Summer Research Fellowship
- 1997-2000 National Institutes of Health National Research Service Award Individual Postdoctoral Fellowship
- 1992-1995 National Institutes of Health Cell and Molecular Biology Training Grant
- 1992 National Science Foundation Predoctoral Graduate Fellowship Honorable Mention
- 1991 National Defense Science & Engineering Graduate Fellowship Honorable Mention

Professional Honors:

- 2013 University of Richmond International Education Award
- 2009 University of Richmond Distinguished Educator Award
- 1996 Pseudomonas Club - Cystic Fibrosis Foundation Graduate Student Award
- 1996 American Society for Microbiology Sustaining Member Student Travel Grant
- 1991 Outstanding Southwestern University Senior Biology Student
- 1989 Alpha Chi National Honor Scholarship Society

Academic Service:

Internal service (service with significant leadership component in bold)

- 2016 Biology Search Procedure Working Group Leader
- 2015 Chair of the Search Committee for Department of Biology Director of Biological Instruction**
- 2014-2015 University Faculty Council**
- 2014-2016 Prospective Student Advising Committee
- 2013-2016 Head of Peer Observation of Teaching Initiative in Department of Biology**
- 2013-2016 Coordinator of Biology Pedagogy Lunch series
- 2013-2016 Biology Curriculum Committee
- 2013, 2014 URISE “Decoding Your Professor” session Presenter
- 2013 Department of Chemistry Biochemist Search Committee Member
- 2013 Osher Lifelong Learning Institute Guest Lecturer
- 2013 Guest speaker (twice) for Carol Summers FYS Empires and Epidemics
- 2013 Focus group participant for consultants working on classroom master plan

2013 Focus group participant for the Science brochure for the School of Arts & Sciences
2012-2014 Coordinator of the School of Arts and Sciences Student Symposium
2012, 2013 Presenter at Diversity Advocate Workshop and to various campus departments
2012 Biology Web site committee
2012 Panelist for From Cells to Cures: The Importance of Cell Culture and Genetics to Research and Medicine
2012 Panelist for New Faculty Orientation
2012 Speaker for Cultural Connections Series
2011-present Mentor to junior faculty in formal mentoring programs through Biology
2011-2014 Biology representative for various admissions events (Fall Preview, Spring Preview, Experience Richmond)
2011-2012 HHMI grant working group
2011 Chair of the Search Committee for Department of Biology Physiologist
2010-2013 International Education Committee
2010 Department of Biology Molecular Geneticist & Cell Biologist Search Committee Member
2009 Chair HHMI Scholars Selection Committee
2009 Beckman Scholars grant working group
2008-2009 Department of Biology Assessment Committee
2008 Department of Chemistry Organic Chemist Search Committee Member
2008 Coordinator of the HHMI Research Symposium
2007,12-14 Beckman Scholars Selection Committee
2006-2009 Program for Enhancing Teaching Effectiveness Committee Member
2006 Family Weekend “Learning Together: Faculty-Student Collaborative Research” Panelist
2005-2007 HHMI “Research Introductions” presenter to first year science students
2005; 2006 HHMI “Connect with your Future” Session Moderator
2004; 2005 Information Session Panelist for potential Oldham Scholars
2005-present First-Year Student Orientation “Research Opportunities at UR” Session Leader
2005 HHMI Scholars Selection/New Collaborations Committee Member
2005 “Choosing your major” Session Panelist for students in Freeman Hall
2004 Department of Biology Microbiology Search Committee Member
2004 Department of Biology Retreat Committee
2004 Department of Mathematics and Computer Science Mathematician Search Committee Member
2003-2009 Health Professions Advisory Committee Member
2003-2005 University Scholars Committee Member
2003-2004 Faculty sponsor for Women's Lacrosse Club Team
2003 Department of Biology Geneticist Search Committee Member
2003-present Academic advisor to undeclared students, Biology majors, and BMB majors
2003-2014 Coordinator of the University of Richmond Honors Program in Biology
2002-2008 Biochemistry and Molecular Biology Program Committee Member

External service (service with significant leadership component in bold)

2016 Convener for Microbiology Career Choices Workshop at American Society for Microbiology Microbe Meeting 2016
2016 Reviewer for American Society for Microbiology Microbe Meeting 2016 Abstracts
2013-present Alternate Councilor, Virginia Branch of the American Society for Microbiology

- 2013-present Member of American Society for Microbiology Education Board's Committee on Graduate and Postdoctoral Education**
- 2013-2015 Faculty facilitator for the American Society for Microbiology Science Teaching Fellows Program**
- 2013-2015 Mentor to two Richmond area high school student (via MSI/Dupont program)
- 2013, 2015 Member of NIH Special Emphasis Panel/Scientific Review Group
- 2012-2013 President, Virginia Branch of the American Society for Microbiology**
- 2011-2012 President elect, Virginia Branch of the American Society for Microbiology**
- 2010 Reviewer for Thomas F. Jeffress and Kate Miller Jeffress Memorial Trust Award
- 2010 American Society for Microbiology Student Lounge Volunteer
- 2009 Member of National Science Foundation Grant Review Panel (MCB/IOS Stress Biology)
- 2009 Ad hoc reviewer for National Science Foundation
- 2007 Coordinated the Virginia Meeting of the American Society for Microbiology
- 2007 Thesis Committee Member for Julie Farley (Dr. Ghislaine Mayer's lab) at VCU
- 2007 Reviewer for Thomas F. Jeffress and Kate Miller Jeffress Memorial Trust Award
- 2006-present Ad hoc reviewer for various journal: BMC Genomics, Canadian Journal of Microbiology, Infection and Immunity, Molecular Microbiology, PLOS One, Frontiers in Cellular and Infection Microbiology
- 2003-2005, 2008, 2015 Mentor for Richmond metro area high school students working on science fair projects
- 2005 Prescriptive reviewer for a new undergraduate level Bacterial Pathogenesis textbook
- 2004 Reviewer for two chapters of Concepts of Genetics (8th edition) by Klug and Cummings
- 2003 Final reviewer for Essential of Genetics (5th edition) by Klug and Cummings
- 2002 Prescriptive reviewer for Essentials of Genetics (5th edition) by Klug and Cummings

Miscellaneous

- 2011 University of Richmond Faculty Seminar Abroad Participant
- 1994-1995 Student Representative, Cell and Molecular Biology Training Grant Steering Committee, University of Wisconsin, Madison, Wisconsin

Professional Memberships:

American Society for Microbiology; American Association for the Advancement of Science; International Symbiosis Society; International Biometals Society; Council for Undergraduate Research

Invited Presentations since 2002:

- Characterization of *Sodalis glossinidius* heme iron acquisition and homeostasis genes. Biometals Conference 2016, Dresden, Germany. (July 2016, selected from abstracts submitted).
- Characterization of *Sodalis glossinidius* heme iron acquisition and homeostasis genes. Eighth International Symbiosis Society Congress, Lisbon, Portugal. (13 July 2015).
- Integrated and Interdisciplinary 1st year course models: Partnering with other STEM disciplines to transform your life science department's curriculum. Invited speaker with A. Hill. A., W. Case, and K. Hoke. Workshop, Southeast Regional PULSE (Partnership for Life Sciences Education) Institute, Richmond, VA. (19 June 2014)

- Iron Acquisition in bacteria: A tale of two symbionts. The University of West Indies, St. Augustine, Trinidad, College of Tropical Medicine - Infectious Diseases Cluster (11 May 2011).
- Iron Acquisition in bacteria: A tale of two symbionts. University of Richmond, Department of Biology. Richmond, VA. (24 January 2011).
- The Antibiotic Paradox: Antibiotics and Antibiotic Resistance. Science Museum of Virginia Lunch Break Science Series. Richmond, VA. (18 November 2009).
- The Inside Story: Bacterial iron acquisition and utilization in the eukaryotic cell. Auburn University, Department of Biological Sciences. Auburn, AL. (25 April 2008).
- The Inside Story: Bacterial life in the eukaryotic cell. University of Richmond, Department of Biology. Richmond, VA. (29 January 2007).
- The Inside Story: *Shigella flexneri's* life in the eukaryotic cell. Bacterial Gastroenteritis International Meeting. The Gambia, Africa. (5 May 2006).
- Using intracellular gene expression profiles to probe the lifestyles of intracellular bacteria: *Shigella* as a model system. International Symposium on the Comparative Biology of Alpha-Proteobacteria. Blacksburg, VA. (27 April 2006).
- The Role and Regulation of High Affinity Manganese and Iron Acquisition in the Intracellular Pathogen *Shigella flexneri*. Walter Reed Army Institute of Research/Naval Medical Research Center, Enteric Disease Group. Silver Spring, MD. (15 June 2005).
- The Role of Phosphate Acquisition and Regulation in the Growth of the Intracellular Pathogen *Shigella flexneri*. Old Dominion University, Department Of Biology. Norfolk, VA. (07 December 2004).
- The regulatory function of the *Shigella flexneri* Pst system is required for normal growth within the eukaryotic cytoplasm. The College of William and Mary, Department Of Biology. Williamsburg, VA. (14 November 2003).
- The inside story: *Shigella's* life in the eukaryotic cell. Virginia Commonwealth University, Department Of Biology. Richmond, VA. (14 October 2002).

Presentations at Regional/National/International meetings (53 total):

* = undergraduate student + = postbac student

** = undergraduate student presenter ++ = postbac student

- Runyen-Janecky, L.J., Caudill, L., Barnett, L. Gilfoyle, G., Lipan, O. and Stevenson, S. 2016. Assessing interdisciplinary thinking in a first-year integrated science course. Poster Presentation, Howard Hughes Medical Institute Constellation Studio A (Assessing Interdisciplinary Concepts and Competencies Introductory Science Courses), Chevy Chase, MD.
- Szeto, L. ** and L. J. Runyen-Janecky. 2015. Analysis of *Sodalis glossinidius* membrane proteins for heme-iron transport. Poster presentation, Virginia Meeting of the American Society for Microbiology Richmond, VA.
- Hill, A., K. Hoke, C. Parish, and L. Runyen-Janecky. 2015. University of Richmond Integrated Science Experience (URISE): A Comprehensive Model for Inclusion and Persistence. Poster presentation, HHMI Constellation Studio for Science Education: Adapting Promising Practices and Promoting Institutional Change, Chevy Chase, MD.
- Chen, B** and L.J. Runyen-Janecky. 2014. Characterizing the Role of the *Sodalis glossinidius* HemR Protein in Iron Acquisition. Poster presentation, Virginia Meeting of the American Society for Microbiology Harrisonburg, VA.

- Durante, D.** and L.J. Runyen-Janecky. 2014. Characterization of a Putative Hemolysin Gene from a Tsetse Fly Bacterial Symbiont. Poster presentation, Virginia Meeting of the American Society for Microbiology Harrisonburg, VA.
- Somers, P**, B, J. Roma*, and L.J. Runyen-Janecky. 2014. How *Sodalis glossinidius* Manages Heat Stress. Poster presentation, Virginia Meeting of the American Society for Microbiology Harrisonburg, VA.
- Hrusa, G*, W. Farmer*, B.L. Weiss, T. Applebaum*, Jose Roma*, S. Aksoy, and L.J. Runyen-Janecky. 2014. TonB-dependent heme iron acquisition in the tsetse fly symbiont *Sodalis glossinidius*. Poster presentation, Mechanisms and Consequences of Invertebrate-Microbe Interactions Keystone Conference, Tahoe City, CA.
- Farmer, W.** and L. J. Runyen-Janecky. 2013. *Sodalis glossinidius* TonB-mediated iron acquisition. Poster presentation, Annual Meeting of the American Society for Microbiology, Denver, CO.
- Roma, J.** and L. J. Runyen-Janecky. 2013. The *dnaK* Gene And Survival Of *Sodalis glossinidius* During Thermal Stress And Heat Shock. Poster presentation, Annual Meeting of the American Society for Microbiology, Denver, CO.
- Frey, T.A., L. J. Runyen-Janecky, and O.A. Quintero. 2012. The flip-side of integrating research and teaching: The research laboratory as a classroom. Poster and oral presentation, American Society for Cell Biology, San Diego, CA.
- Smith, C.* , B. Weiss, S. Aksoy, and L. J. Runyen-Janecky. 2012. Characterization of the *Sodalis glossinidius* Achromobactin Siderophore System. Poster presentation, American Society for Microbiology Beneficial Microbes Meeting, San Antonio, TX.
- Roma, J.** and L. J. Runyen-Janecky. 2012. Analyzing the Importance of the *dnaK* gene in the survival of *Sodalis glossinidius* during Heat Shock. Poster presentation, Virginia Meeting of the American Society for Microbiology Virginia Beach, VA.
- Hrusa, G.** and L. J. Runyen-Janecky. 2012. Investigation of use of Heme as an Iron Source for *Sodalis glossinidius* via HemR. Poster presentation, Virginia Meeting of the American Society for Microbiology Virginia Beach, VA.
- Smith, C.* , B. Weiss, S. Aksoy, and L. J. Runyen-Janecky. 2012. Characterization of the *Sodalis glossinidius* Achromobactin Siderophore System. Poster presentation, International Symbiosis Society Congress, Krakow, Poland.
- Smith, C.* , B. Weiss, S. Aksoy, and L. J. Runyen-Janecky. 2012. Characterization of the *Sodalis glossinidius* Achromobactin Siderophore System. Poster presentation, International Biometals Symposium, Brussels, Belgium
- Smith, C.** , B. Weiss, S. Aksoy, and L. J. Runyen-Janecky. 2012. Characterization of the *Sodalis glossinidius* Achromobactin Siderophore System. Poster presentation, Annual Meeting of the American Society for Microbiology, San Francisco, CA.
- Farmer, W.** and L. J. Runyen-Janecky. 2011. Role and Regulation of TonB Iron Acquisition in *Sodalis glossinidius*. Poster presentation, Virginia Meeting of the American Society for Microbiology Blacksburg, VA.
- Markoja, K.** and L. J. Runyen-Janecky. 2011. Examining the Role of *sit* Genes in Iron Acquisition in *Sodalis glossinidius*. Poster presentation, Virginia Meeting of the American Society for Microbiology Blacksburg, VA.
- Smith, C.** and L. J. Runyen-Janecky. 2011. Regulation of achromobactin iron acquisition in *Sodalis glossinidius*. Poster presentation, Virginia Meeting of the American Society for Microbiology Blacksburg, VA.
- Hake, A.** , L. Runyen-Janecky, and O. Lipan. 2011. The Dynamics of Iron Homeostasis in *E. coli*. Poster presentation, Joint Mathematics Meeting, New Orleans, LA.

- Applebaum, T** and L. J. Runyen-Janecky. 2010. The Role and Regulation of Heme Iron Acquisition in *Sodalis*. Virginia Meeting of the American Society for Microbiology, Lynchburg, VA.
- Brown, A. N.**, H. G. Tujuba*, and L. J. Runyen-Janecky. 2009. Iron regulation of *Sodalis glossinidius* Gene Expression by Fur. Poster presentation, Virginia Meeting of the American Society for Microbiology, Richmond, VA.
- Bartlett, D.** and L. J. Runyen-Janecky. 2009. Role of the QseC and YegV kinases in the Virulence of *Shigella flexneri*. Poster presentation, Virginia Meeting of the American Society for Microbiology, Richmond, VA.
- Richardson, C**, M. Hill, L. Runyen-Janecky, and A. Hill. 2009. Sponge-associated Bacterial Communities Change in Response to Antibiotic Selection in a Sponge Stem Cell Aggregate System: Implications for Enriching Minority Bacterial Species. Poster presentations, Annual Biomedical Research Conference for Minority Students, Phoenix, AZ.
- Graham, G**, Omattage, N*, Shaw, J*, Smith, C*, Runyen-Janecky, L. and O. Lipan. 2009. The Transfer Function for the Heat Stress Detector in Mammalian Cells. Poster presentation, Undergraduate Research Conference at the Interface of Biology and Mathematics, Knoxville, TN.
- Brown, A. N.*, H. G. Tujuba*, and L. J. Runyen-Janecky. 2009. Iron regulation of Gene Expression in *Sodalis glossinidius*, a Secondary Symbiont of the Tsetse Fly. Poster presentation, Sixth International Symbiosis Society Congress, Madison, WI.
- Brown, A. N**, H. G. Tujuba*, and L. J. Runyen-Janecky. 2009. Iron regulation of Gene Expression in *Sodalis glossinidius*, a Secondary Symbiont of the Tsetse Fly. Poster presentation, Annual Meeting of the American Society for Microbiology, Philadelphia, PA.
- Daugherty, A** and L. J. Runyen-Janecky. 2009. Phenotypic Analysis of Oxidative Stress Response in *Shigella flexneri*. Poster presentation, Annual Meeting of the American Society for Microbiology, Philadelphia, PA.
- Richardson, C**, M. Hill, L. Runyen-Janecky, and A. Hill. 2009. Sponge-associated Bacterial Communities Change in Response to Antibiotic Selection in a Sponge Stem Cell Aggregate System: Implications for Enriching Minority Bacterial Species. Poster presentation, Annual Meeting of the American Society for Microbiology, Philadelphia, PA.
- Walter, T. J.** and L. J. Runyen-Janecky. 2009. Role of the BaeSR, CreBC, EvgSA and NtrBC Two-Component Regulatory Systems in *Shigella* Virulence. Poster presentation, Annual Meeting of the American Society for Microbiology, Philadelphia, PA.
- Daugherty, A** and L. J. Runyen-Janecky. 2008. Phenotypic Analysis of Oxidative Stress Response in *Shigella flexneri*. Virginia Meeting of the American Society for Microbiology, Harrisonburg, VA
- Walter, T. J.** and L. J. Runyen-Janecky. 2008. Role of the BaeSR, CreBC, EvgSA and NtrBC Two-Component Regulatory Systems in *Shigella* Virulence. Virginia Meeting of the American Society for Microbiology, Harrisonburg, VA
- Daugherty, A** and L. J. Runyen-Janecky. 2007. Induction of the *Shigella flexneri* *isc* Operon in Intracellular and Extracellular Conditions. Poster presentation, Annual Meeting of the American Society for Microbiology, Toronto, Canada.
- Eskandarian, H**, B. R. Lloyd*, M. J. Sagransky*, C. R. Wellington*, and L. J. Runyen-Janecky. 2007. Role and Regulation of the *Shigella flexneri* *suf* Operon. Poster presentation, Annual Meeting of the American Society for Microbiology, Toronto, Canada.
- Wellington, C** and L. J. Runyen-Janecky. 2007. The Role of the *oxyR* region in the Intracellular pathogenesis of *Shigella flexneri*. Poster presentation, Annual Meeting of the American Society for Microbiology, Toronto, Canada.

- Wellington, C**, H. Eskandarian*, M. Sagransky*, and L. J. Runyen-Janecky. 2006. Intracellular and extracellular Regulation of the *Shigella flexneri* *suf* Operon. Poster presentation, Annual Meeting of the American Society for Microbiology, Orlando, FL.
- Runyen-Janecky, L. J., E. A. Dzenski*, L. R. Warner*. 2005. Role and Regulation of the MntH and Sit Genes in the Intracellular Pathogen *Shigella flexneri*. Poster presentation, Annual Meeting of the American Society for Microbiology, Atlanta, GA.
- Warner, L**, E. Dzenski*, and L. J. Runyen-Janecky. 2004. The Role and Regulation of the MntH and Sit systems in *Shigella flexneri*. Virginia Meeting of the American Society for Microbiology, Bridgewater, VA
- Boyle, A**, A. Kizzee*, L. Liefer*, S. M. Payne, and L. J. Runyen-Janecky. 2004. The Role of Phosphate Acquisition and Regulation in the Growth of the Intracellular Pathogen *Shigella flexneri*. Poster presentation, Annual Meeting of the American Society for Microbiology, New Orleans, LA.
- Dzenski, E**, and L. J. Runyen-Janecky. 2004. The Contribution of the *Shigella flexneri* MntH and Sit Systems to Oxidative Stress Survival and Growth in Human Cells. Poster presentation, Annual Meeting of the American Society for Microbiology, New Orleans, LA.
- Runyen-Janecky, L. J., A. Kizzee*, S. M. Payne, and L. Liefer*. 2003. Role of the *Shigella flexneri* *pstS* gene in intracellular growth and phosphate transport. Poster presentation, Annual Meeting of the American Society for Microbiology, Washington, D.C.
- Kizzee, A*, S. M. Payne, and L. J. Runyen-Janecky. 2003. Role of the *Shigella flexneri* *pstS* gene in intracellular growth and phosphate transport. MidAtlantic Pathogenesis Meeting. Oral presentation. Wintergreen, VA.
- Runyen-Janecky, L. J., S. A. Reeves, E. Gonzales and S. M. Payne. 2002. Identification and characterization of the *Shigella sit* genes. Abstr. Ann. Mtg. American Soc. Microbiol.
- Runyen-Janecky, L. J. and S. M. Payne. 2001. Identification of *Shigella flexneri* genes induced by the eukaryotic intracellular environment. Abstr. Ann. Mtg. American Soc. Microbiol.
- Gordon, J. L. **, S. A. Reeves, L. J. Runyen-Janecky, and S. M. Payne. 2000. Identification of large plasmid-encoded colicin synthesis and immunity genes in *Shigella flexneri*. Abstr. Ann. Mtg. American Soc. Microbiol.
- Kanack, K. J., E. P. Ferrell, L. J. Runyen-Janecky, and S. E. H. West. 2000. Identification of the *Pseudomonas aeruginosa* Vfr DNA binding site. Abstr. Ann. Mtg. American Soc. Microbiol.
- Runyen-Janecky, L. J., M. Hong, and S. M. Payne. 1998. Identification of a virulence plasmid-encoded *impB* homologue in *Shigella flexneri* which confers UV resistance. Abstr. Ann. Mtg. American Soc. Microbiol.
- West, S. and L. Runyen-Janecky. 1998. Structure-function analysis of Vfr, a global regulator in *Pseudomonas aeruginosa*. Proc. 12th Ann. N. American Cystic Fibrosis Conf. Abstr.168.
- Runyen-Janecky, L. J., A. M. Albus, B. H. Iglewski, and S. E. H. West. 1996. The transcriptional activator Vfr binds to two apparently different binding sites in the promoters of *P. aeruginosa* virulence genes. Abstr. Ann. Mtg. American Soc. Microbiol.
- Runyen-Janecky, L. J., and S. E. H. West. 1995. Molecular studies of exotoxin A expression in *Pseudomonas aeruginosa*. Abstr. Ann. Mtg. American Soc. Microbiol.
- MacGregor, C. H., L. J. Runyen-Janecky, N. A. Zielinski, P. V. Phibbs, Jr., and S. E. H. West. 1995. The *vfr* gene, a member of the *crp* family, is not required for catabolite repression control in *Pseudomonas aeruginosa*. Abstr. Ann. Mtg. American Soc. Microbiol.
- Runyen-Janecky, L. J., A. K. Sample, T. C. Maleniak, and S. E. H. West. 1995. *Pseudomonas aeruginosa* *vfr* and an upstream ORF are transcribed from divergent promoters. Abstr. 2nd Ann. Bacterial Pathogenesis Mtg.

- Runyen-Janecky, L. J., A. K. Sample, and S. E. H. West. 1994. A Crp-like gene is involved in the regulation of exotoxin A, RegA, and protease expression in *Pseudomonas aeruginosa*. Abstr. Ann. Mtg. American Soc. Microbiol.

Posters by students at the UR School of Arts and Sciences Research Symposium or HHMI Science Symposium⁺ (44 total):

- Arena, T. 2015. CRISPR interference of the *acsD* gene in *Sodalis glossinidius*
- Szeto, L. 2015. Biochemical analysis of heme binding in a tsetse fly symbiont
- Somers, P. 2015. How *Sodalis* Manages Heat Stress
- Chen, B. 2014. Characterization of the role of the *Sodalis glossinidius* HemR transporter protein in iron acquisition
- Somers, P. 2014. How *Sodalis* Manages Heat Stress
- Walsh, T. 2014. Further Establishing the Role of *hemR* in *Sodalis glossinidius*
- Durante, D. 2013. Characterization of Hemolysin Gene from Tsetse Fly Bacterial Symbiont
- Farmer, W. 2013. Role and regulation of *tonB* Iron Acquisition in *Sodalis glossinidius*.
- ⁺Roma, J. and L. J. Runyen-Janecky. 2012. Analyzing the Importance of the *dnaK* gene in the survival of *Sodalis glossinidius* during Heat Shock.
- Smith, Caitlin. 2012. Characterization of Achromobactin Iron Acquisition in *Sodalis glossinidius*.
- Markoja, Kaitlin. 2012. Examining the role of the *sitABCD* gene system in iron acquisition in *Sodalis glossinidius*.
- ⁺Farmer, W. and L. J. Runyen-Janecky. 2011. Role and Regulation of TonB Iron Acquisition in *Sodalis glossinidius*.
- Bartlett, D. and L. J. Runyen-Janecky. 2011. Fimbrial Genes are Potentially Antivirulent to *Shigella flexneri*.
- Hake, A., L. Runyen-Janecky, and O. Lipan. 2011. The Dynamics of Iron Homeostasis in *E. coli*.
- Smith, C., and L. J. Runyen-Janecky. 2011. Functionality of Achromobactin Iron Acquisition in *Sodalis glossinidius* Biology.
- ⁺Applebaum, T.* and L. J. Runyen-Janecky. 2010. The Role and Regulation of Heme Iron Acquisition in *Sodalis*.
- ⁺Hake, A., L. Runyen-Janecky, and O. Lipan. 2010. The Dynamics of Iron Homeostasis in *E. coli*.
- ⁺Bartlett, D, and L. J. Runyen-Janecky. 2010. Role of Potential Avirulence Genes *fimD* and *fimI* in *Shigella flexneri* Pathogenicity.
- ⁺Smith, C. and L. J. Runyen-Janecky. 2010. Characterization of Achromobactin Iron Acquisition in *Sodalis glossinidius*.
- Walter, T. J. and L. Runyen-Janecky. 2010. Role of NtrBC and Nac in *Shigella* Virulence.
- Graham, G. Omattage, N., Shaw, J. Smith, C. Runyen-Janecky, L. and O. Lipan. 2010. The Transfer Function for the Heat Stress Detector in Mammalian Cells.
- ⁺ Graham, G. Omattage, N., Shaw, J. Smith, C. Runyen-Janecky, L. and O. Lipan. 2009. The Transfer Function for the Heat Stress Detector in Mammalian Cells.
- Bartlett, D. and L. Runyen-Janecky. 2009. Affect of Two Component Regulatory System QseBC on the Invasion of Colon Cells by *Shigella flexneri*.
- Daugherty, A. and L. J. Runyen-Janecky. 2009. Phenotypic Analysis of Oxidative Stress Response in *Shigella flexneri*.
- McCormick, J. and L. Runyen-Janecky. 2009. Role of *yfhK*, *yfhA*, and *glnB* in *Shigella flexneri* virulence.

- Brown, A. and L. J. Runyen-Janecky. 2008. Iron Regulation of *Sodalis* promoters in *Escherichia coli* and *Sodalis glossinidius*.
- + McCormick, J. and L. J. Runyen-Janecky. 2008. Role of *yfhK*, *yfhA*, and *glnB* in *Shigella flexneri* virulence.
- + Walter, T. J. and L. Runyen-Janecky. 2008. Role of the BaeSR, CreBC, EvgSA and NtrBC Two-Component Regulatory Systems in *Shigella* Virulence.
- Hawkins, S., K. Miller, J. Gindhart, and L. J. Runyen-Janecky. 2007. Insertion of the Symbiotic Bacterium *Sodalis glossinidius* into *Drosophila melanogaster*.
- Sagransky, M. and L. J. Runyen-Janecky. 2007. Examining the Regulation of *suf* by Fur and IscR In the Human Pathogen *Shigella flexneri*.
- Lloyd, B. and L. J. Runyen-Janecky. 2007. Phenotypic Analysis of *suf* and *isc* Deficient *Shigella* Mutants.
- Wellington, C. and L. J. Runyen-Janecky. 2007. The Role of the *oxyR* region in the Intracellular pathogenesis of *Shigella flexneri*.
- Daugherty, A. and L. J. Runyen-Janecky. 2007. Induction of the *Shigella flexneri* *isc* Operon in Intracellular and Extracellular Conditions.
- Sagransky, M. and L. J. Runyen-Janecky. 2006. Reinstating the Negative Regulation of *suf* by Fur in the Human Pathogen *Shigella flexneri*.
- Wellington, C. and L. J. Runyen-Janecky. 2006. Life Inside Human Cells: The Stress-Response Mechanisms of the Intracellular Pathogen *Shigella flexneri* (Intracellular and extracellular regulation of the *S. flexneri* *suf* operon).
- Dzenski, E. and L. J. Runyen-Janecky. 2005. The Characteristics of the MntH and Sit Systems in *Shigella flexneri*.
- Eskandarian, H. and L. J. Runyen-Janecky. 2005. Confirmation of the Presence of a *sufABCDSE* Operon in the Human Pathogen *Shigella flexneri*.
- Warner, L. and L. J. Runyen-Janecky. 2005. Role and Regulation of the MntH and Sit systems in *Shigella flexneri*.
- Boyle, A. and L. J. Runyen-Janecky. 2004. Investigation of the role played by the regulatory function of the Pst phosphate transport system in *Shigella flexneri*'s plaque formation ability
- Dzenski, E. and L. J. Runyen-Janecky. 2004. The contribution of the *Shigella* MntH manganese transport system to growth in low metal media, growth in human cells, and survival to oxidative stress.
- Somayaji, K. and L. J. Runyen-Janecky. 2004. Assessment of the Importance of CRP in *Shigella* Growth in Human Cells.
- Warner, L. and L. J. Runyen-Janecky. 2004. The Construction and Verification of a *mntH:tet* Mutant in *Shigella*.
- Dzenski, E. and L. J. Runyen-Janecky. 2003. The contribution of the *Shigella* MntH manganese transport system to growth in human cells.
- Liefer, L. and L. J. Runyen-Janecky. 2003. Discerning the Role of the *Shigella flexneri* *pstS* Gene in Phosphate-Regulated Gene Expression.

Oral Presentations by mentored UR students at UR (10 total)

- *HemS* significance and function in *Sodalis glossinidius* Sara Kube. Biochemistry and Molecular Biology Seminar Series. (March 2016).

- The DnaK Gene and Survival of *Sodalis glossinidius* During Thermal Stress. Jose Roma. Department of Biology Seminar Series. (April 2014).
- Characterizing the role of high affinity iron acquisition system HemR/HemTUV in *Sodalis glossinidius*. Hrusa, Gili. Honors thesis Presentation, Department of Biology Seminar Series. (April 2013).
- Characterizing the Role of Sit and Hemolysin Proteins in High Affinity Iron Acquisition in the Tsetse Fly Symbiont *Sodalis glossinidius*. Markoja, Kaitlin. Honors thesis Presentation, Department of Biology Seminar Series. (March 2012).
- Regulation of Achromobactin in *Sodalis*. Caitlin Smith. Smart Award and honors thesis Presentation, Department of Biology Seminar Series. (September 2011).
- Role of ppk in *Shigella flexneri* Virulence. Dana Bartlett. Smart Award Presentation, Department of Biology Seminar Series. (September 2010).
- The Role of *NtrBC* and *Nac* in *Shigella* Virulence. T. J. Walter. Honors thesis presentation, Department of Biology Seminar Series. (April 2010).
- Phenotypic Analysis of Genetic Regulatory Response to Oxidative Stress in *Shigella flexneri*. A. Daugherty. Honors thesis presentation, Department of Biology Seminar Series. (April 2009).
- Exploring the role of *iscSUA* and the *suf* operon in *Shigella flexneri* invasion and resistance to oxidative stress B. Lloyd. UR School of Arts and Sciences Research Symposium. (April 2008).
- Examining the regulation of *suf* by Fur and IscR in the human pathogen *Shigella flexneri*. M. SAGRANSKY. UR School of Arts and Sciences Research Symposium. (April 2008).

Grants and fellowships (32 total) awarded to mentored UR students:

2016	UR Arts and Sciences Undergraduate Research Fellowship to Patrick Somers: “Effect of Hemoglobin and Low Oxygen Levels on combating thermal stress in <i>Sodalis glossinidius</i> ”
2016	UR Arts and Sciences Undergraduate Research Fellowship to Shaina D’Souza and Leah Cabo “Role of <i>dnaK</i> gene in thermal tolerance in <i>Sodalis glossinidius</i> ”
2013	UR Arts and Sciences Undergraduate Research (Grainger) Award to Thomas Walsh: “Role of TonB in HemR-mediated Heme-Iron Acquisition in <i>Sodalis glossinidius</i> ”
2012	HHMI-funded STEM Summer Research Fellowship to Jose Roma: “Analyzing the Importance of <i>dnaK</i> gene in the survival of <i>Sodalis glossinidius</i> during Heat Shock”
2012	UR Arts and Sciences Undergraduate Research (Grainger) Award to Dominique Durante: “Characterization of Hemolysin Iron Acquisition in <i>Sodalis glossinidius</i> ”
2012	UR Arts and Sciences Undergraduate Research (Grainger) Award to William Farmer: “Role of TonB iron acquisition in <i>Sodalis glossinidius</i> ”
2011	Robert F. Smart Award in Biology to Caitlin Smith: “Characterization of Achromobactin Iron Acquisition in <i>Sodalis glossinidius</i> ”
2011	HHMI-funded STEM Summer Research Fellowship to William Farmer: “Role of TonB iron acquisition in <i>Sodalis glossinidius</i> ”
2011	UR Arts and Sciences Undergraduate Research (Grainger) Award to Kaitlin Markoja: “Examining the Role of sit Genes in <i>Sodalis glossinidius</i> ”
2010	Robert F. Smart Award in Biology to Dana Bartlett: “Role of Kinases in <i>Shigella flexneri</i> Intracellular Lifestyle”
2009	Gottwald Summer Fellowship and grant to T. Jordan Walter: “The Role of the Two-Component Regulatory System NtrBC in <i>Shigella</i> Virulence”
2008/9	Virginia Foundation for Independent Colleges Undergraduate Summer Science Research fellowship and stipend to Alexandria Brown

- 2007 UR Arts and Sciences Undergraduate Summer Research Fellowship to Ben Lloyd: “Examining the Role of the *isc* Gene System in the Ability of *Shigella flexneri* to Successfully Invade Eukaryotic Cells”
- 2007 UR School of Arts and Sciences Undergraduate Research Program Travel Grant to Aaron Daugherty to present research at the American Society for Microbiology General Meeting
- 2007 UR School of Arts and Sciences Undergraduate Research Program Travel Grant to Haig Eskandarian to present research at the American Society for Microbiology General Meeting
- 2006 UR Arts and Sciences Undergraduate Research Award and Fellowship to Matt Sagransky: “Examination of Fur Mediated Repression of *suf* Gene Expression in Human Cells”
- 2006 UR Arts and Sciences Undergraduate Research Award and Fellowship to Ben Lloyd: “Evaluation of the Ability for the *suf* Mutant of *Shigella flexneri* to Infect and Kill Human Cells and Survive in Low Iron Conditions”
- 2006 UR Arts and Sciences Undergraduate Research Award and Fellowship to Aaron Daugherty: “Regulation of the *isc* operon in *Shigella*”
- 2006 UR Arts and Sciences Undergraduate Research Award to Chris Wellington: “The role of OxyR in *Shigella* survival of the Human Immune Response”
- 2006 American Society for Microbiology Undergraduate Research Fellowship to Chris Wellington
- 2006 UR School of Arts and Sciences Undergraduate Research Program Travel Grant to Chris Wellington to present research at the American Society for Microbiology General Meeting
- 2006 American Society for Microbiology Corporate Activities Program Student Travel Grant to Chris Wellington
- 2004-2005 Richmond Quest Grant awarded to Ellyn Dzenski “Using phenotypic microarrays to study the manganese metal transport systems in *Shigella flexneri*”
- 2004 Virginia Foundation for Independent Colleges Undergraduate Summer Science Research fellowship and stipend to Lisa Warner: “The Effect of Mutant Manganese and Iron Transport Systems on Growth of *Shigella* in host cells”
- 2004 UR Arts and Sciences Undergraduate Research Award to Lisa Warner: “The Effect of Mutant Manganese and Iron Transport Systems on Growth of *Shigella* in host cells”
- 2004 UR Arts and Sciences Undergraduate Research Award and Summer Fellowship to Haig Eskandarian: “Evaluation of the Ability for the Constitutive PhoB Mutant of *Shigella* to Infect, Survive and Grow in a Eukaryotic Cell”
- 2004 UR School of Arts and Sciences Undergraduate Research Program Travel Grant to Ellyn Dzenski to present research at the American Society for Microbiology General Meeting
- 2004 UR School of Arts and Sciences Undergraduate Research Program Travel Grant to Adriane Boyle to present research at the American Society for Microbiology General Meeting
- 2003 UR Arts and Sciences Undergraduate Research Award and Fellowship to Kamala Somyaji: “Assessment of the importance of CRP in *Shigella* growth in human cells”
- 2003 Robert F. Smart Award in Biology (Summer Fellowship) to Adriane Boyle: “Assessment of the importance of the phosphate transport and regulatory functions of the *Shigella* Pst phosphate transport system for *Shigella*’s growth in human cells”
- 2003 UR Arts and Sciences Undergraduate Research Award to Adriane Boyle: “Assessment of the importance of the phosphate transport and regulatory functions of the *Shigella* Pst phosphate transport system for *Shigella*’s growth in human cells”
- 2003 UR Arts and Sciences Undergraduate Research Award to Ellyn Dzenski: “The contribution of the *Shigella* MntH manganese transport system to growth in human cells”

Mentored UR undergraduate student research projects (40 total from Fall 2002 – Summer 2016):

+ = current student; H = honors thesis; * = co-mentored student;

average duration = 3.2 semesters and 1.3 summers

- +Ruhan Farsin: Role of *dnaK* and *grpE* genes in thermal tolerance in *Sodalis glossinidius*
- +Leah Cabo: Role of *dnaK* and *dnaJ* genes in thermal tolerance in *Sodalis glossinidius*
- +Shaina D'Souza: Role of *dnaK* and *dnaJ* genes in thermal tolerance in *Sodalis glossinidius*
- +Eric Jedel: Characterization of *Sodalis glossinidius* HemTUV+: Role of *dnaK* gene in thermal tolerance in *Sodalis glossinidius*
- +Sarah Kube: Cloning of the *Sodalis glossinidius* *hemS* gene
- +Thomas Arena: Development of CRISPRi for knocking down gene expression in *Sodalis glossinidius*
- +Patrick Somers: Characterization of the heat shock response in *Sodalis glossinidius*
- +Lauren Szeto: Biochemical analysis of Heme binding to *Sodalis* HemR and Characterization of HemTUV
- +Becky Chen: Examining the role of the HemR transporter in iron or heme uptake of *Sodalis glossinidius*
- Thomas P. Walsh: Characterization of Heme Iron Acquisition in *Sodalis glossinidius* (1 summer).
- ^HGili Hrusa: Characterizing the role of the high affinity iron acquisition system HemR/HemTUV in *Sodalis glossinidius*
- Jose Santinni Roma: Heat shock in *Sodalis glossinidius*
- Dominique Durante: Building tools for *Sodalis* Molecular Genetics & Investigating a putative hemolysin gene in *Sodalis glossinidius*
- ^HKaitlin Markoja: Characterizing the Role of Sit and Hemolysin Proteins in High Affinity Iron Acquisition in the Tsetse Fly Symbiont *Sodalis glossinidius*
- William Farmer: Role of TonB iron acquisition in *Sodalis glossinidius*
- Taylor Applebaum: Role and regulation of heme iron acquisition in *Sodalis glossinidius*
- *Adam Hake: The Dynamics of Iron Homeostasis in bacteria
- ^HCaitlin Smith: Characterization of Achromobactin Iron Acquisition in *Sodalis glossinidius* and Cell Responses to Heat Shock
- *Natalie Omattage: Cell Responses to Heat Shock
- *Jack Shaw: Cell Responses to Heat Shock
- *Garrett Graham: Cell Responses to Heat Shock
- ^HDana Bartlett: Role of Potential Virulence and Antivirulence Genes in *Shigella flexneri* Pathogenicity
- Haddis Tujuba: Characterization of Iron Regulation in the Tsetse Fly Secondary Endosymbiont *Sodalis glossinidius*
- ^HT. Jordan Walters: Role of *Shigella* two component regulation system in intracellular adaptation
- James McCormick: Role of *Shigella* YdhAK two component regulation system in intracellular adaptation
- Alexandria Brown: Characterization of Iron Regulation and Iron acquisition genes in the Tsetse Fly Secondary Endosymbiont *Sodalis glossinidius*
- Jamy Borbidge: Characterization of Intracellular Adaptation Genes in the Tsetse Fly Secondary Endosymbiont *Sodalis glossinidius*
- ^HAaron Daugherty: Regulation of the *Shigella* *isc* genes and Phenotypic Analysis of Genetic Regulatory Response to Oxidative Stress in *Shigella flexneri*.
- ^HMatt Sagransky: Examining the regulation of *suf* by Fur and IscR in the human pathogen *Shigella flexneri*.

- ^HBen Lloyd: Exploring the role of *iscSUA* and the *suf* operon in *Shigella flexneri* invasion and resistance to oxidative stress
- Chris Wellington: Role of the OxyR protein in *Shigella suf* gene regulation
- Stephanie Hawkins: (1) Study of *Shigella mntH* regulation by MntR in *E. coli* and (2) Infection of *Drosophila* with *Sodalis*
- AnhTram (Jamon) Nguyen: Construction of a *nagD* mutation in *E. coli*
- Haig Eskandarian: (1) Evaluation of the Ability for the Constitutive PhoB Mutant of *Shigella* to Infect, Survive and Grow in a Eukaryotic Cell and (2) Investigation of the *sufABCDSE* Operon in the Human Pathogen *Shigella flexneri*
- Lisa Warner: The Effect of Mutant Manganese and Iron Transport Systems on Growth of *Shigella* in host cells
- Andrea Wilson: The contribution of the *Shigella* PitA phosphate transport protein to growth in human cells
- Kamila Somayaji: Construction and characterization a *Shigella* CRP mutant
- ^HAdriane Boyle: Investigation of the role played by the regulatory function of the Pst phosphate transport system in *Shigella flexneri*'s plaque formation ability
- Ellyn Dzenski: The contribution of the *Shigella* MntH manganese transport system to growth in human cells
- ^HLaura Liefer: Discerning the roles of PstS and PhoB in phosphate-mediated gene regulation and the ability of *Shigella flexneri* to survive and multiply in human epithelial cells

Courses taught at UR:

BIOL106 – Unseen Life: Microbiology for non-majors (lecture + lab)

BIOL190 – Integrative and Quantitative Science (lecture + lab; team taught)

BIOL199 – Introduction to Biological Thinking: Microbial stress (lecture + lab)

BIOL201 – Introduction to Genetics (lecture + lab)

BIOL229 – Microbiology (lecture + lab)

BIOL313 – Microbial Pathogenesis (lecture + lab)

BIOL350/395 – Undergraduate Research/ Honors Research

BIOL391 – Honors Seminar I