

Laura J. Runyen-Janecky
Curriculum Vitae

Address: Gottwald Science Center
University of Richmond Department of Biology
Richmond, VA 23173
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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:

2008-present Associate Professor of Biology
University of Richmond, Richmond, Virginia
2002-2008 Assistant Professor of Biology
University of Richmond, Richmond, Virginia
1999 Assistant Professor of Biology, part-time
Southwestern University, Georgetown, Texas
1998 Assistant Professor of Biology, part-time
Southwestern University, Georgetown, Texas
1995 Teaching Assistant, Prokaryotic Molecular Biology
University of Wisconsin, Madison, Wisconsin
1989-1991 Head Laboratory Teaching Assistant, Department of Biology
Southwestern University, Georgetown, Texas
1988-1989 Laboratory Teaching Assistant, Department of Biology
Southwestern University, Georgetown, Texas

Research experience:

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

Grants and fellowships written and received at UR:

- 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 *Sodalis glossinidius* 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)
- 2007-2010 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 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

Grants and fellowships awarded to mentored UR students:

- 2010 Robert F. Smart Award in Biology to Dana Bartlett: “Role of Kinases in *Shigella flexneri* Intracellular Lifestyle”
- 2009 Gottwald Summer Fellowship and grant to T. Jordan Walter: “The Role of the Two-Component Regulatory System NtrBC in *Shigella* Virulence”
- 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

Laura J. Runyen-Janecky – CV (cont.)

- 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”

Grants and fellowships pre-UR:

- 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

Academic Service:

Internal to UR

- 2008-2009 Department of Biology Assessment Committee
- 2008 Department of Chemistry Organic Chemist Search Committee Member
- 2008 HHMI Research Symposium Coordinator
- 2008 HHMI Scholars Selection Committee
- 2007 Beckman Scholars Selection Committee
- 2006-2009 Program for Enhancing Teaching Effectiveness Committee Member
- 2003-present Academic advisor to ~13 students per year
- 2003-present Coordinator of the University of Richmond Honors Program in Biology
- 2003-2009 Health Professions Advisory Committee Member

Laura J. Runyen-Janecky – CV (cont.)

- 2002-2008 Biochemistry and Molecular Biology Program Committee Member
2006 Family Weekend “Learning Together: Faculty-Student Collaborative Research” Session Panelist
2005 HHMI Scholars Selection/New Collaborations Committee Member
2005-present First-Year Student Orientation “Research Opportunities at UR” Session Leader
2005; 2006 HHMI “Connect with your Future” Session Moderator
2005-2007 HHMI “Research Introductions” presenter to first year science students
2005 “Choosing your major” Session Panelist for students in Freeman Hall
2004 Department of Biology Microbiology Search Committee Member
2004; 2005 Information Session Panelist for potential Oldham Scholars
2003-2005 University Scholars Committee Member
2003-2004 Department of Biology Geneticist and Department of Mathematics and Computer Science Mathematician Search Committee Member
2004 Department of Biology Retreat Committee
2003-2004 Faculty sponsor for Women's Lacrosse Club Team

External to UR

- 2009 Member of National Science Foundation Grant Review Panel
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 in the laboratory of Dr. Ghislaine Mayer at Virginia Commonwealth University
2007 Reviewer for Thomas F. Jeffress and Kate Miller Jeffress Memorial Trust Award
2006 Ad hoc reviewer for Molecular Microbiology and Canadian Journal of Microbiology
2005 Prescriptive reviewer for a new undergraduate level Bacterial Pathogenesis textbook
2003-2005 Mentor for high school students working on science fair projects
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
1998 Reviewer for Chapters 1-4 of An Introduction to Genetic Analysis (7th edition) by Griffiths *et al.*

Miscellaneous

- 1994-1995 Student Representative, Cell and Molecular Biology Training Grant Steering Committee, University of Wisconsin, Madison, Wisconsin

Professional Honors:

- 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-present Alpha Chi National Honor Scholarship Society

Professional Memberships:

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

Publications while at UR: * = undergraduate student

1. Runyen-Janecky, L.J., A.N. Brown*, Ott, B*. Tujuba, H.G. *, 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.
2. 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.
3. 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.
4. 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.
5. 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.
6. Runyen-Janecky. L. J. 2005. Bioinformatics in a Biochemistry and Molecular Biology Curriculum. *Enzymatic.* **2**: 11-13.
7. 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.
8. 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.
9. 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.

Publications pre-UR:

1. 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.
2. 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.
3. 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.
4. 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.
5. 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.
6. 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.

7. 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.
8. 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.

Invited Presentations while at UR:

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

Presentations at Regional/National/International meetings while at UR:

* = undergraduate student

** = undergraduate student presenter

1. 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.
2. 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.
3. 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.
4. 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.

5. 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.
6. 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.
7. 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.
8. 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.
9. 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.
10. 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
11. 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
12. 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.
13. Eskandarian, H**, B. R. Lloyd*, M. J. Segransky*, 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.
14. 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.
15. Wellington, C**, H. Eskandarian*, M. Segransky*, 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.
16. 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.
17. 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
18. 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.
19. 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.

20. 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.
21. 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.

Presentations at Regional/National/International meetings pre-UR:

* = undergraduate student

** = undergraduate student presenter

1. 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.
2. 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.
3. 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.
4. 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.
5. 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.
6. 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.
7. 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.
8. 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.
9. 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.
10. 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.
11. 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⁺:

1. Walter, T. J. and L. Runyen-Janecky. 2010. Role of NtrBC and Nac in *Shigella* Virulence.
2. 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
3. ⁺ 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

4. Bartlett, D. and L. Runyen-Janecky. 2009. Affect of Two Component Regulatory System QseBC on the Invasion of Colon Cells by *Shigella flexneri*.
5. Daugherty, A. and L. J. Runyen-Janecky. 2009. Phenotypic Analysis of Oxidative Stress Response in *Shigella flexneri*.
6. McCormick, J. and L. Runyen-Janecky. 2009. Role of *yfhK*, *yfhA*, and *glnB* in *Shigella flexneri* virulence.
7. Brown, A. and L. J. Runyen-Janecky. 2008. Iron Regulation of *Sodalis* promoters in *Escherichia coli* and *Sodalis glossinidius*.
8. ⁺ McCormick, J. and L. J. Runyen-Janecky. 2008. Role of *yfhK*, *yfhA*, and *glnB* in *Shigella flexneri* virulence.
9. ⁺ Walter, T. J. and L. Runyen-Janecky. 2008. Role of the BaeSR, CreBC, EvgSA and NtrBC Two-Component Regulatory Systems in *Shigella* Virulence.
10. Hawkins, S., K. Miller, J. Gindhart, and L. J. Runyen-Janecky. 2007. Insertion of the Symbiotic Bacterium *Sodalis glossinidius* into *Drosophila melanogaster*.
11. Sagransky, M. and L. J. Runyen-Janecky. 2007. Examining the Regulation of *suf* by Fur and IscR In the Human Pathogen *Shigella flexneri*.
12. Lloyd, B. and L. J. Runyen-Janecky. 2007. Phenotypic Analysis of *suf* and *isc* Deficient *Shigella* Mutants.
13. Wellington, C. and L. J. Runyen-Janecky. 2007. The Role of the *oxyR* region in the Intracellular pathogenesis of *Shigella flexneri*.
14. Daugherty, A. and L. J. Runyen-Janecky. 2007. Induction of the *Shigella flexneri isc* Operon in Intracellular and Extracellular Conditions.
15. Sagransky, M. and L. J. Runyen-Janecky. 2006. Reinstating the Negative Regulation of *suf* by Fur in the Human Pathogen *Shigella flexneri*.
16. 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).
17. Dzenski, E. and L. J. Runyen-Janecky. 2005. The Characteristics of the MntH and Sit Systems in *Shigella flexneri*.
18. Eskandarian, H. and L. J. Runyen-Janecky. 2005. Confirmation of the Presence of a *sufABCDSE* Operon in the Human Pathogen *Shigella flexneri*.
19. Warner, L. and L. J. Runyen-Janecky. 2005. Role and Regulation of the MntH and Sit systems in *Shigella flexneri*.
20. 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
21. 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.
22. Somayaji, K. and L. J. Runyen-Janecky. 2004. Assessment of the Importance of CRP in *Shigella* Growth in Human Cells.
23. Warner, L. and L. J. Runyen-Janecky. 2004. The Construction and Verification of a *mntH:tet* Mutant in *Shigella*.
24. Dzenski, E. and L. J. Runyen-Janecky. 2003. The contribution of the *Shigella* MntH manganese transport system to growth in human cells.
25. 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 students at UR

1. Role of ppk in *Shigella flexneri* Virulence. Smart Award Presentation, Department of Biology Seminar Series. (September 2010).
2. The Role of *NtrBC* and *Nac* in *Shigella* Virulence. T. J. Walter. Honors thesis presentation, Department of Biology Seminar Series. (April 2010).
3. Phenotypic Analysis of Genetic Regulatory Response to Oxidative Stress in *Shigella flexneri*. A. Daugherty. Honors thesis presentation, Department of Biology Seminar Series. (April 2009).
4. 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).
5. 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).

Mentored UR undergraduate student research projects while at UR:

* = co-mentored student

1. William Farmer: Role of TonB iron acquisition in *Sodalis glossinidius* (Summer 2010)
2. Taylor Applebaum: Role and regulation of heme iron acquisition in *Sodalis glossinidius* (Summer 2010)
3. Caitlin Smith: Characterization of Achromobactin Iron Acquisition in *Sodalis glossinidius* and Cell Responses to Heat Shock (Spring 2009* – present; Summer 2009*; Summer 2010)
4. Natalie Omattage*: Cell Responses to Heat Shock (Spring 2009 – Fall 2009; Summer 2009)
5. Jack Shaw*: Cell Responses to Heat Shock (Spring 2009 – Fall 2009; Summer 2009)
6. Garrett Graham*: Cell Responses to Heat Shock (Spring 2009 – Fall 2009; Summer 2009)
7. Dana Bartlett: Role of *Shigella* QseCB two component regulation system in intracellular adaptation (Fall 2008-present; Summer 2010)
8. Haddis Tujuba: Characterization of Iron Regulation in the Tsetse Fly Secondary Endosymbiont *Sodalis glossinidius* (Summer 2008).
9. T. Jordan Walters: Role of *Shigella* two component regulation system in intracellular adaptation (Fall 2008-Spring 2010; Summer 2008; Summer 2009)
10. James McCormick: Role of *Shigella* YdhAK two component regulation system in intracellular adaptation (Fall 2007-Spring 2008; Spring 2009; Summer 2008)
11. Alexandria Brown: Characterization of Iron Regulation and Iron acquisition genes in the Tsetse Fly Secondary Endosymbiont *Sodalis glossinidius* (Fall 2007; Spring 2009-Fall 2009; Summer 2007 and 2008 and 2009).
12. Jamy Borbidge: Characterization of Intracellular Adaptation Genes in the Tsetse Fly Secondary Endosymbiont *Sodalis glossinidius* (Fall 2007 – Spring 2008; Summer 2007).
13. Aaron Daugherty: Regulation of the *Shigella isc* genes and Phenotypic Analysis of Genetic Regulatory Response to Oxidative Stress in *Shigella flexneri*. (Spring 2006-Fall 2007; Fall 2008-Spring 2009; Summer 2006). Honors research and thesis.
14. Matt Sagransky: Examining the regulation of *suf* by Fur and IscR in the human pathogen *Shigella flexneri*. (Fall 2005-Spring 2008; Summer 2006). Honors research and thesis.
15. Ben Lloyd: Exploring the role of *iscSUA* and the *suf* operon in *Shigella flexneri* invasion and resistance to oxidative stress (Fall 2005-Spring 2008; Summer 2006 and 2007). Honors research and thesis.
16. Chris Wellington: Role of the OxyR protein in *Shigella suf* gene regulation (Fall 2005-Spring 2007; Summer 2005 and 2006).
17. Stephanie Hawkins: (1) Study of *Shigella mntH* regulation by MntR in *E. coli* and (2) Infection of *Drosophila* with *Sodalis* (Spring 2005-Fall 2005; Fall 2006-Spring 2007; Summer 2005).

18. AnhTram (Jamon) Nguyen: Construction of a *nagD* mutation in *E. coli* (Fall 2003 – Spring 2005).
19. 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* (Fall 2002-Fall 2005; Fall 2006-Spring 2007; Summer 2004 and 2005).
20. Lisa Warner: The Effect of Mutant Manganese and Iron Transport Systems on Growth of *Shigella* in host cells (Fall 2002-Fall 2004; Summer 2004).
21. Andrea Wilson: The contribution of the *Shigella* PitA phosphate transport protein to growth in human cells (Spring 2003-Fall 2004).
22. Kamila Somayaji: Construction and characterization a *Shigella* CRP mutant (Spring 2003-Fall 2003; Summer 2003).
23. Adriane Boyle: Investigation of the role played by the regulatory function of the Pst phosphate transport system in *Shigella flexneri*'s plaque formation ability. [Spring 2003 (writing research proposal); Fall 2003-Spring 2004; Summer 2003]. Honors research and thesis.
24. Ellyn Dzenski: The contribution of the *Shigella* MntH manganese transport system to growth in human cells (Fall 2002-Spring 2005).
25. Laura 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 (Fall 2002-Spring 2003; Thesis preparation Fall 2004-Spring 2005). Honors research and thesis.

Courses taught at UR:

- BIOL106 – Unseen Life: Microbiology for non-majors (lecture + lab)
- 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 – Undergraduate Research
- BIOL391 – Honors Seminar I
- BIOL395 – Honors Research