CURRICULUM VITAE

Eric V. Stabb
Professor and Associate Head
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Education

1997 Ph.D. in Bacteriology
University of Wisconsin-Madison

1990 B.S. with distinction; majors in Molecular Biology and Philosophy
University of Wisconsin-Madison

Professional Experience

2012-present Professor, Department of Microbiology, University of Georgia (UGA). Research Focus: The bioluminescent marine bacterium *Vibrio fischeri*. Research topics include symbiotic interactions between *V. fischeri* and the Hawaiian bobtail squid, *Euprymna scolopes*, inter- and intraspecies signaling, regulation of bioluminescence, and development of genetic techniques in *V. fischeri* and other marine bacteria.

2014-2015 Visiting Professor, Department of Molecular, Cellular, and Developmental Biology, Yale University. Taught one course and mentored personnel in Professor Jo Handelsman's lab during her service at the White House Office of Science and Technology Policy.

2007-2012 Associate Professor, Department of Microbiology, UGA

2001-2007 Assistant Professor, Department of Microbiology, UGA

1997-2001 Postdoctoral Fellow with Professor Edward G. Ruby, Kewalo Marine Laboratory, University of Hawai'i. Focus: *V. fischeri-Euprymna scolopes* symbiotic interactions.

1991-1997 Graduate Research Assistant with Professor Jo Handelsman. Elucidated mechanisms of resistance to zwittermicin A in *Escherichia coli*, and discovered populations of genetically diverse zwittermicin A-producing *Bacillus* strains in soils and on plant roots.

1988-1990 Undergraduate Researcher with Professor Timothy J. Donohue. Examined maturation of c-type cytochromes. Developed molecular genetic tools in *Rhodobacter sphaeroides*.

Other Positions

- Associate Head, UGA Microbiology Department (2012-2014, 2015-present)
- Academic Program Coordinator, UGA Microbiology Department (2017-present)
- Editor, *Applied and Environmental Microbiology* (2016-present)
- Co-Chair, 5th and 6th American Society for Microbiology (ASM) Conference on Cell-Cell Communication in Bacteria (2011-2018)
- UGA Microbiology Graduate Program Coordinator (2011-2014)
- Councilor (2014), Chair (2013), and Chair elect (2012), ASM General Microbiology Division (Div I)
- Program Coordinator and PI, National Science Foundation (NSF)-Funded Research Experience for Undergraduates (REU) site program, UGA, 2008-2011 (also Co-PI 2011-2014)
- President (2009-2010) and Senator (2007-2009), UGA College of Arts and Sciences Faculty Senate

Memberships

- American Society for Microbiology (ASM)
- International Symbiosis Society (ISS)
- American Association for the Advancement of Science (AAAS)

Awards and Honors

2018 Elected as a Fellow of AAAS
2015 (also 2006, 2012, 2013) Acknowledged by UGA alumni in "Thank a Teacher" Program
2014 Margaret Green Award for outstanding teaching of microbiology, Southeast Branch ASM
2011 UGA Master Award for Excellence in Undergraduate Research Mentoring
2009 Finalist, UGA Graduate School Outstanding Graduate Student Mentoring Award
2008 Accepted UGA Embracing Diversity Award on behalf of Microbiology Department
2004 NSF CAREER early investigator award
1999 National Institutes of Health, Postdoctoral National Research Service Award
1996 Gamma Sigma Delta inductee
1991 Howard Hughes Medical Institute Predoctoral Fellow (five-year fellowship)
1991 NSF Predoctoral Fellowship (awarded but declined)
1990 GTE NCAA Academic All American (3rd team)
1989 Phi Beta Kappa inductee
1988 NSF Research Experience for Undergraduates Award

Professional Workshops and Training

- Certificate in Diversity and Inclusion (CDI), UGA, completed May 2018
  CDI courses taken
  -An LGBTQ Primer, Creating an Inclusive Community
  -Institutional Diversity in a Digital Transformation Era
  -Cultural Competency for Recruitment & Retention
  -Supporting UGA's Veterans
  -UGA Diversity: Beyond the Numbers
  -UGA's Non-Discrimination Anti-Harassment Policy
- STEM Institute workshop on Teaching and Learning: How Businesses Can Measure the Return on STEM Education Investments, Carl Vinson Institute of Government, UGA, April 18, 2018
- UGA Academic Affairs Faculty Symposium: The Teaching/Research Nexus: Building Effective Bridges, Unicoi State Park, Helen GA, March 23-24, 2012
- Biology Research Experience for Undergraduates Workshop, NSF, Arlington VA, March 18-20, 2010
- NSF/AAAS Workshop on Transforming Undergraduate Biology Education: Mobilizing the Community for Change, Washington DC, July 15-17, 2009 (see *Science*, 2009, 325:527)
- REU site-program Workshop, Working together: Deaf and Hearing People, led by the National Technical Institute for the Deaf and Rochester Institute of Technology, Athens GA, May 29, 2008 (participated again May 30, 2012).
- UGA Faculty Learning Series 2-hour Workshops attended:
  -Taking Mentoring to the Next Level
  -Faculty Performance Evaluation and Mentoring

Service (in addition to "Other Positions" page 1)

University Service
- Chair (2016) and member (2015, 2017) UGA Life Sciences Promotion & Tenure Review Committee
- University Council - Arts & Sciences Representative, 2011-2014
- *Ad hoc* committee on Graduate Admissions and Recruitment (Graduate school), 2014
- *Ad hoc* committee to evaluate Presidential Fellows Program (Office of VP for Research), 2013
- Search Committee, tenure-track Biology Educator (college-level search), 2012-2013
- Awards Committee, Center for Undergraduate Research Opportunities, 2012
- UGA Faculty Research Grant Review Committee, 2007-2009 (also wrote guide for proposers)

Departmental Service
- Space Committee (Chair), 2018-present
- Post-tenure Review Committee, 2016
- Search Committee (Chair), Lecturer, 2016
- Faculty Mentoring Committee, Dr. Zack Lewis, 2011-2016
- Faculty Mentoring Committee, Dr. Vinny Starai, 2010-2015
- Committee to review Departmental Promotion & Tenure criteria, 2014
- Search Committee, Graduate Program Assistant, 2013
- Website Redesign, one of three faculty/staff responsible for overhaul of website, 2012-2013
- Search Committee, Microbiology tenure-track Assistant Professor, 2011-2012
- Graduate Affairs Committee, 2002-2004 & 2006-2014
- Coordinated preparation and presentation of Microbiology Department vision and plan, 2010
- Graduate Student Recruitment Committee, 2002-2005
- Audrey N. Best Scholarship Committee, 2002
- Chair, Plant Pathology Departmental Safety Committee, as grad student, U. Wisconsin, 1994-1996

Peer Review
- Editorial board, *Journal of Bacteriology* (2016-present)
- Editorial board, *Applied and Environmental Microbiology* (2005-2016) (~250 manuscripts reviewed)
- Grant Review Panelist, National Science Foundation, 2006, 2009, 2013, and 2017
- Grant Review Panelist, National Institutes of Health SCORE program, 2008 and 2009
- Promotion & Tenure external reviewer: fifteen candidates, eleven research universities (2007-2018)
- Contributing Member, Faculty of 1000, Cellular Microbiology and Pathogenesis, 2005-2010
- *Ad hoc* reviewer for forty journals (2001-present) including *Science*, *PNAS*, *mBio*, *eLife*, *ISME journa*l, *PLoS Pathogens*, *Molecular Microbiology*, and *Environmental Microbiology*
- *Ad hoc* reviewer for sixteen NSF programs (2004-present)
- *Ad hoc* reviewer Graduate Women in Science fellowship program
- *Ad hoc* reviewer for international funding agencies: Research Foundation-Flanders 2011, INSERM (French Institute for Medical Research) 2009, the Singapore National Medical Research Council 2006, and the US-Israel Binational Science Foundation 2005

Meeting and Seminar Organization
- Co-organizer, 30th annual *Vibrio fischeri-Euprymna scolopes* Symbiosis Symposium, Scripps Institute of Oceanography, 2018
- ASM Microbe (formerly ASM General Meeting) abstract review and session design, 2015 and 2016
- Proposed and chaired session "Behavior Modification in Bacteria" at ASM General Meeting, 2014
- ASM General Meeting abstract review and session design, as ASM Division I officer, 2012-2014
- Co-organizer, 16th annual *Vibrio fischeri-Euprymna scolopes* Symbiosis Symposium, Hawai'i Institute of Marine Biology, Kaneohe Hawai'i, 2004
- Co-organizer, W.J. Payne Memorial Symposium, UGA, 2004
- Robert Kane Memorial Lecture Committee, U. Hawai'i, 1998
- Initiated Bacteriology student-selected speaker seminar series, U. Wisconsin, 1996
- Plant Pathology Seminars Committee, U. Wisconsin, 1995

Student and postdoctoral training

Former Graduate students and Postdoctoral trainees

† =Earned UGA Excellence in Teaching Award; given to only five graduate students at UGA each year

† • Julie L. Stoudenmire; Ph.D. 2017. Upon graduation, accepted an Institutional Research and Academic Career Development Award (IRACDA) at Virginia Commonwealth University to conduct research with Dr. Cynthia Cornelissen and develop teaching skills.

† • Richard M. (Mark) Jones; Ph.D. 2017. Upon graduation, accepted postdoc with Dr. David Sack, Johns Hopkins University.

• J. Henry (Hank) Kimbrough; Ph.D. 2016. Upon graduation, accepted postdoc with Dr. Josie Chandler, U. of Kansas. Now postdoc with Dr. Linda McCarter, University of Iowa.

• Deanna Colton; Ph.D. 2014. Upon graduation, accepted position as adjunct lecturer York Technical College, South Carolina. Now with Carolinas College of Health Sciences, Charlotte NC, and freelance writer for AAAS.

• Zomary Flores-Cruz; postdoc 2010-2012. Left as Assistant Professor, University of Puerto Rico.

• Alecia Septer; Ph.D. 2012. Upon graduation, accepted postdoc with Dr. Karin Gibbs, Harvard University, Now Assistant Professor (Marine Sciences), University of North Carolina.

† • Noreen Lyell; Ph.D. 2011. Upon graduation, accepted postdoc with Dr. Stuart Levy, Tufts University. Now lecturer (Biological Engineering), Massachusetts Institute of Technology.

• Dawn Adin; Ph.D. 2008. Upon graduation, accepted postdoc with Dr. Susan Golden, UCSD. Now Program Manager, US Department of Energy.

• Anne Dunn; postdoc 2002-2007. Left as Assistant Professor, now Associate Professor and Chair, Department of Microbiology and Plant Biology, University of Oklahoma.

• Jeffrey Bose; Ph.D. 2007. Upon graduation, accepted postdoc with Dr. Ken Bayles, University of Nebraska. Now Assistant Professor (Microbiology, Molecular Genetics & Immunology), University of Kansas.

Other Contributions to student training (since 2001)

- Hosted fifteen additional rotating graduate students
- Mentored Caleb Fischer, Dr. Megan Kiedrowski, Gabriel Lozano, and Jessica Miles, Yale, 2014-2015
- Research mentor for 37 undergraduates, a high-school teacher, a technician, and a Fulbright Scholar
- Employed 32 hourly workers
- Served on 53 graduate student committees
  -UGA Programs: Microbiology (43), Ecology (4), Entomology (2), and Infectious Diseases (1)
  -Extramural: Georgia Tech (2) and University of Alabama (1)

Current laboratory personnel

- Kathryn Bellissimo; PhD program (2017-present)
- Austin Burgess; undergraduate hourly (2018-present)
- Macey Coppinger; PhD program (2017-present)
- Alizah Garvin; undergraduate hourly/work study/directed study (2016-present)
- Coralis Rodriguez-Garcia; PhD program (2017-present)
- Florence Urum; undergraduate hourly (2018-present)

Publications

Lozano, G.L., J.I. Bravo, M.F. Garavito Diago, H.B. Park, A. Hurley, S.B. Peterson, **E.V. Stabb**, J.M. Crawford, N.A. Broderick, and J. Handelsman. 2019. Introducing THOR, a model microbiome for genetic dissection of community behavior. mBio (In Press)

Stabb, E.V. 2019. Should they stay or should they go? Nitric oxide and the clash of regulators governing *Vibrio fischeri* biofilm formation. Molecular Microbiology (In Press)

Stabb, E.V. 2019. Bacterial bioluminescence. *In* T. Schmidt, (ed.), *Encyclopedia of Microbiology*, *4th edition*. Elsevier, Oxford, pp. (In Press)

Stoudenmire, J.L., M. Black, P.M. Fidopiastis, and **E.V. Stabb**. 2019. Mutagenesis of *Vibrio fischeri* and other marine bacteria using hyperactive mini-Tn*5* derivatives. *In* S.C. Ricke (ed.), *Transposon Mutagenesis: Methods and Protocols.* Springer Publishing, pp. (In Press)

Stoudenmire, J.L., T. Essock-Burns, E.N. Weathers, S. Solaimanpour, J. Mrázek, and **E.V. Stabb**. 2018. An iterative synthetic approach to engineer a high-performing PhoB-specific reporter. Applied and Environmental Microbiology 84: e00603-18 (selected as one of five "Spotlight" articles this issue)

Jones, R.M. Jr., D.L. Popham, A.L. Schmidt, E.L. Neidle and **E.V. Stabb**. 2018. *Vibrio fischeri* DarR directs responses to D-aspartate and represents a group of similar LysR-type transcriptional regulators. Journal of Bacteriology 200: e00773-17 (Featured in Commentary: Mandel MJ, 2018, Journal of Bacteriology, 200: e00773-17)

Stabb, E.V. 2018. Could positive feedback enable bacterial pheromone signaling to coordinate behaviors in response to heterogeneous environmental cues? mBio 9:e00098-18

Kimbrough, J.H. and **E.V. Stabb**. 2017. Comparative analysis reveals regulatory motifs at the *ainS*/*ainR* pheromone-signaling locus of *Vibrio fischeri*. Science Reports 7:11734

Lyell, N.L., A.N. Septer, A.K. Dunn, D. Duckett, J.L. Stoudenmire and **E.V. Stabb**. 2017. An expanded transposon-mutant library reveals that *Vibrio fischeri* δ-aminolevulinate auxotrophs can colonize *Euprymna scolopes*. Applied and Environmental Microbiology 83: e02470-16

Fischer, C.N., E. Trautman, J.M. Crawford, **E.V. Stabb**, N.A. Broderick, and J. Handelsman. 2017. Metabolite exchange between microbiome members produces compounds that influence *Drosophila* behavior. ELife 6:e18855

Stulberg, E., G.L. Lozano, J.B. Morin, H. Park, E. G. Baraban, C. Mlot, C. Heffelfinger, G. M. Phillips, J.S. Rush, A.J. Phillips, N.A. Broderick, M.G. Thomas, **E.V. Stabb**, and J. Handelsman. 2016. Genomic and secondary metabolite analyses of *Streptomyces* sp. 2AW provide insight into the evolution of the cycloheximide pathway. Frontiers in Microbiology 7:573

Kimbrough, J.H. and **E.V. Stabb**. 2016. Antisocial *luxO* mutants provide a stationary-phase survival advantage in *Vibrio fischeri* ES114. Journal of Bacteriology. 198:673-687

Colton, D.M. and **E.V. Stabb**. 2016. Rethinking the roles of CRP, cAMP, and sugar-mediated global regulation in the *Vibrionaceae*. Current Genetics 62:39-45

Dunn, A.K., B.A. Rader, **E.V. Stabb,** and M.J. Mandel 2015. Regulation of bioluminescence in *Photobacterium leiognathi* strain KNH6. Journal of Bacteriology 197:3676-3685

Colton, D.M., J.L. Stoudenmire and **E.V. Stabb**. 2015. Growth on glucose decreases cAMP-CRP activity while paradoxically increasing intracellular cAMP in the light-organ symbiont *Vibrio fischeri*. Molecular Microbiology 97:1114-1127

Colton, D.M., **E.V. Stabb**, and S.J. Hagen. 2015. Modeling analysis of signal sensitivity and specificity by *Vibrio fischeri* LuxR variants. PLoS One 10:e0126474

Septer, A.N., J.L. Bose, A. Lipzen, J. Martin, C. Whistler, and **E.V. Stabb**. 2015. Bright luminescence of *Vibrio fischeri* aconitase mutants reveals a connection between citrate and the Gac/Csr regulatory system. Molecular Microbiology 95:283-296

Stabb, E.V. and K.L. Visick. 2013. *Vibrio fischeri*: A Bioluminescent light-organ symbiont of the bobtail squid *Euprymna scolopes*. *In* E. Rosenberg, E.F. DeLong, E. Stackebrandt, S. Lory, and F. Thompson (eds.), *The Prokaryotes 4th edition*. Springer-Verlag, Berlin Heidelberg, pp. 497-532

Kimbrough, J.H. and **E.V. Stabb**. 2013. Substrate specificity and function of the pheromone receptor AinR in *Vibrio fischeri* ES114. Journal of Bacteriology 195:5223-5232

Stabb, E.V. and Z. Flores-Cruz. 2013. Who turned on the lights? what the regulation of bacterial bioluminescence tells us about this and other bacterial group behaviors. The Biochemist 35:18-23

Lyell, N.L., D.M. Colton, J.L. Bose, M.P. Tumen-Velasquez, J.H. Kimbrough, and **E.V. Stabb**. 2013. Cyclic AMP-receptor protein regulates pheromone-mediated bioluminescence at multiple levels in *Vibrio fischeri* ES114. Journal of Bacteriology 195:5051-5063

Lyell, N.L. and **E.V. Stabb**. 2013. Symbiotic characterization of *Vibrio fischeri* ES114 mutants that display enhanced luminescence in culture. Applied and Environmental Microbiology 79:2480-2483

Septer, A.N., N.L. Lyell, and **E.V. Stabb**. 2013. The iron-dependent regulator Fur controls pheromone-signaling systems and luminescence in the squid symbiont *Vibrio fischeri* ES114. Applied and Environmental Microbiology 79:1826-1834

Septer, A.N. and **E.V. Stabb**. 2012. Coordination of the Arc regulatory system and pheromone-mediated positive feedback in controlling the *Vibrio fischeri lux* operon. PLoS One 7:e49590

Dailey, H.A., A.N. Septer, L. Daugherty, D. Thames, S. Gerdes, **E.V. Stabb**, A.K. Dunn, J.D. Phillips, and T.A. Dailey. 2011. The *Escherichia coli* protein YfeX functions as a peroxidase and is not a heme dechelatase. mBio 2:e00248-11

Septer, A.N., Y. Wang, E.G. Ruby, **E.V. Stabb**, and A.K. Dunn. 2011. The haem-uptake gene cluster in *Vibrio fischeri* is regulated by Fur and contributes to symbiotic colonization. Environmental Microbiology 13:2855-2864

Phillips, N.J., D.M. Adin, **E.V. Stabb**, M.J. McFall-Ngai, M.A. Apicella, and B.W. Gibson. 2011. The lipid A from *Vibrio fischeri* LPS: A unique structure bearing a phosphoglycerol moiety. The Journal of Biological Chemistry 286:21203-21219

Bose, J.L., M.S. Wollenberg, D.M. Colton, M.J. Mandel, A.N. Septer, A.K. Dunn, and **E.V. Stabb.** 2011. Contribution of rapid evolution of the *luxR-luxI* intergenic region to the diverse bioluminescence output of *Vibrio fischeri* strains isolated from different environments. Applied and Environmental Microbiology 77:2445-2457

Altura, M.A., **E. Stabb**, W. Goldman, M. Apicella, and M.J. McFall-Ngai. 2011. Attenuation of host NO production by MAMPs potentiates development of the host in the squid–vibrio symbiosis. Cellular Microbiology 13:527-537

Lyell, N.L., A.K. Dunn, J.L. Bose, and **E.V. Stabb.** 2010. Bright mutants of *Vibrio fischeri* ES114 reveal conditions and regulators that control bioluminescence and expression of the *lux* operon. Journal of Bacteriology 192:5103-5114

Dunn, A.K., A.K. Karr, Y. Wang, A.R. Batton, E.G. Ruby, **E.V. Stabb**. 2010. The alternative oxidase (AOX) gene in *Vibrio fischeri* is controlled by NsrR and upregulated in response to nitric oxide stress. Molecular Microbiology 77:44-55 (Featured in Commentary: Spiro, S., 2010 Mol Microbiol. 77:6-10)

Septer, A.N., J.L. Bose, A.K. Dunn, and **E.V. Stabb**. 2010. FNR-mediated regulation of bioluminescence and anaerobic respiration in the light-organ symbiont *Vibrio fischeri*. FEMS Microbiology Letters 306: 72-81

Mandel, M.J., M.S. Wollenberg, **E.V. Stabb**, K.L. Visick, and E.G. Ruby. 2009. A single regulatory gene is sufficient to alter bacterial host range. Nature 458: 215-218

Troll, J.V., D.M. Adin, A.M. Wier, N. Paquette, N. Silverman, W.E. Goldman, F.J. Stadermann, **E.V. Stabb**, and M.J. McFall-Ngai. 2009. Peptidoglycan induces loss of a nuclear peptidoglycan recognition protein during host tissue development in a beneficial animal-bacterial symbiosis. Cellular

Microbiology 11:1114-1127

Adin, D.M., J.T. Engle, W.E. Goldman, M.J. McFall-Ngai, and **E.V. Stabb**. 2009. Mutations in *ampG* and lytic transglycosylase genes affect the net release of peptidoglycan monomers from *Vibrio fischeri*. Journal of Bacteriology 191:2012-2022 (Featured in Commentary: Nyholm S.V., 2009 J. Bacteriol. 191:1997-1999)

Stabb, E.V. and D.S. Millikan. 2009. Is the *Vibrio fischeri-Euprymna scolopes* symbiosis a defensive mutualism? *In* J.F. White, Jr. and M.S. Torres (eds.), *Defensive Mutualism in Microbial Symbiosis*. Taylor and Francis, Boca Raton, pp. 85-98

Lyell, N.L., A.K. Dunn, J.L. Bose, S.L. Vescovi, and **E.V. Stabb**. 2008. Effective mutagenesis of *Vibrio fischeri* using hyperactive mini-Tn*5* derivatives. Applied and Environmental Microbiology 74:7059-63

Dunn, A.K. and **E.V. Stabb**. 2008. Genetic analysis of trimethylamine *N*-oxide reductases in the light-organ symbiont *Vibrio fischeri* ES114. Journal of Bacteriology 190:5814-5823

Adin, D.M., K.L. Visick, and **E.V. Stabb**. 2008. Identification of a cellobiose utilization gene cluster with cryptic β-galactosidase activity in *Vibrio fischeri*. Applied and Environmental Microbiology 74:4059-69

Bose, J.L., C.S. Rosenberg, and **E.V. Stabb.** 2008. Effects of *luxCDABEG* induction in *Vibrio fischeri*: Enhancement of symbiotic colonization and conditional attenuation of growth in culture. Archives of Microbiology 190:169-183

Mandel, M.J., **E.V. Stabb**, and E.G. Ruby. 2008. Comparative genomics-based investigation of resequencing targets in *Vibrio fischeri*: focus on point miscalls and artefactual expansions. BMC Genomics 9:138

Adin, D.M., N.J. Phillips, B.W. Gibson, M.A. Apicella, E.G. Ruby, M.J. McFall-Ngai, D.B. Hall, and **E.V. Stabb**. 2008. Characterization of *htrB* and *msbB* mutants of the light organ symbiont *Vibrio fischeri*. Applied and Environmental Microbiology 74:633-644

Dunn, A.K. and **E.V. Stabb**. 2008. The twin arginine translocation system contributes to symbiotic colonization of *Euprymna scolopes* by *Vibrio fischeri*. FEMS Microbiology Letters 279:251-258.

Stabb, E.V., A. Schaefer, J.L. Bose, and E.G. Ruby. 2008. Quorum signaling and symbiosis in the marine luminous bacterium *Vibrio fischeri*, *In* S.C. Winans and B.L. Bassler (eds.), *Chemical Communication Among Microbes*. ASM Press, Washington, D.C., pp. 233-250

Bose, J.L., U. Kim, W. Bartkowski, R.P. Gunsalus, A.M. Overley, N.L. Lyell, K.L. Visick, and **E.V. Stabb**. 2007. Bioluminescence in *Vibrio fischeri* is controlled by the redox-responsive regulator ArcA. Molecular Microbiology 65:538-553

Dunn, A.K. and **E.V. Stabb**. 2007. Beyond quorum sensing: the complexities of prokaryotic parliamentary procedures. Analytical and Bioanalytical Chemistry. 387:391-398

Walker, E.L., J.L. Bose, and **E.V. Stabb**. 2006. Photolyase confers resistance to UV light but does not contribute to the symbiotic benefit of bioluminescence in *Vibrio fischeri* ES114. Applied and Environmental Microbiology 72:6600-6606

Dunn, A.K., D.S. Millikan, D.M. Adin, J.L. Bose, and **E.V. Stabb**. 2006. New *rfp*- and pES213-derived tools for analyzing symbiotic *Vibrio fischeri* reveal patterns of infection and *lux* expression *in situ.* Applied and Environmental Microbiology 72:802-810

Sawabe, T., Y. Fukui, and **E.V. Stabb**. 2006. Simple conjugation and outgrowth procedures for tagging vibrios with GFP, and factors affecting the stable expression of the *gfp* tag. Letters in Applied Microbiology 43:514-522

Cloud-Hansen, K.A., S.B. Peterson, **E.V. Stabb**, W.E. Goldman, M.J. McFall-Ngai, and J. Handelsman. 2006. Breaching the Great Wall: peptidoglycan and microbial interactions. Nature Reviews Microbiology 4:710-716

Stabb, E.V. 2006. The *Vibrio fischeri–Euprymna scolopes* light organ symbiosis. *In* F. L. Thompson, B. Austin and J. Swings (eds.), The biology of Vibrios. ASM Press, Washington D.C., pp. 204-218

Dunn, A.K. and **E.V. Stabb**. 2005. Culture-independent characterization of the microbiota of the antlion *Myrmeleon mobilis* (Neuroptera: Myrmeleontidae). Applied and Environmental Microbiology 71:8784-8794

Dunn, A.K., M.O. Martin, and **E.V. Stabb**. 2005. Characterization of pES213, a small mobilizable plasmid from *Vibrio fischeri*. Plasmid 54:114-134

Stabb, E.V. 2005. Shedding light on the bioluminescence "paradox". ASM News 71:223-229

Ruby, E.G., M. Urbanowski, J. Campbell, A. Dunn, M. Faini, R. Gunsalus, P. Lostroh, C. Lupp, J. McCann, D. Millikan, A. Schaefer, **E. Stabb**, A. Stevens, K. Visick, C. Whistler, and E.P. Greenberg. 2005. Complete genome sequence of *Vibrio fischeri*: a symbiotic bacterium with pathogenic congeners. Proceedings of the National Academy of Sciences, USA 102:3004-3009

Burgents, J.E., L.E. Burnett, **E.V. Stabb**, and K.G. Burnett. 2005. Localization and bacteriostasis of *Vibrio* introduced into the Pacific white shrimp, *Litopenaeus vannamei*. Developmental and Comparative Immunology 29:681-691

Koropatnick, T.A., J.T. Engle, M.A. Apicella, **E.V. Stabb**, W.E. Goldman, and M.J. McFall-Ngai. 2004. Microbial factor-mediated development in a host-bacterial mutualism. Science 306:1186-1188

Stabb, E.V., M.S. Butler, and D.M. Adin. 2004. Correlation between osmolarity and luminescence of symbiotic *Vibrio fischeri* strain ES114. Journal of Bacteriology 186:2906-2908

McCann J., **E.V. Stabb**, D.S. Millikan, and E.G. Ruby. 2003. Population dynamics of *Vibrio fischeri* during infection of *Euprymna scolopes.* Applied and Environmental Microbiology 69:5928-5934

Stabb, E.V. and E.G. Ruby. 2003. Contribution of *pilA* to competitive colonization of *Euprymna scolopes* by *Vibrio fischeri*. Applied and Environmental Microbiology 69:820-826

Stabb, E.V. and E.G. Ruby. 2002. RP4-based plasmids for conjugation between *Escherichia coli* and members of the Vibrionaceae. Methods in Enzymology 358:413-426

Stabb, E.V., K.A. Reich, and E.G. Ruby. 2001. *Vibrio fischeri* genes *hvnA* and *hvnB* encode secreted NAD^+ glycohydrolases. Journal of Bacteriology 183:309-317

Stabb, E.V., K.L. Visick, D.S. Millikan, A.A. Corcoran, L. Gilson, S.V. Nyholm, M. McFall-Ngai and E.G. Ruby. 2001. The *Vibrio fischeri-Euprymna scolopes* symbiosis: A model marine animal-bacteria interaction. *In* N.K. Saxena (ed.), Recent Advances in Marine Science and Technology, 2000. PACON International, Honolulu, Hawai'i. pp. 269-277

Nyholm, S.V., **E.V. Stabb**, E.G. Ruby, and M.J. McFall-Ngai. 2000. Establishment of an animal-bacterial association: recruiting symbiotic vibrios from the environment. Proceedings of the National Academy of Sciences, USA 97:10231-10235

Stabb, E.V. and J. Handelsman. 1998. Genetic analysis of zwittermicin A resistance in *Escherichia coli*: Effects on membrane potential and RNA polymerase. Molecular Microbiology 27:311-322

Silo-Suh, L., **E.V. Stabb**, S.J. Raffel, and J. Handelsman. 1998. Target range of zwittermicin A, an aminopolyol antibiotic from *Bacillus cereus*. Current Microbiology 37:6-11

Handelsman, J. and **E.V. Stabb.** 1996. Biocontrol of soilborne plant pathogens. Plant Cell 8:1855-69

Raffel, S.J., **E.V. Stabb**, J.L. Milner, and J. Handelsman. 1996. Genotypic and phenotypic analysis of zwittermicin A-producing strains of *Bacillus cereus*. Microbiology 142:3425-3436

Stohl, E.A., J. Handelsman, and **E.V. Stabb**. 1996. Zwittermicin A and biological control of oomycete pathogens. *In* G. Stacey, B. Mullen and P. Gresshoff (eds.), Advances in molecular genetics of plant-microbe interactions, Vol. 4. Kluwer Academic Publishers, Dordrecht, Netherlands. pp. 475-479

Stabb, E.V., L.M. Jacobson, and J. Handelsman. 1994. Zwittermicin A-producing strains of *Bacillus cereus* from diverse soils. Applied and Environmental Microbiology 60:4404-4412

Stabb, E.V., L.M. Jacobson, M. Janowiak, and J. Handelsman. 1994. Biological control with zwittermicin A-producing strains of *Bacillus cereus* from diverse soils. Molecular Ecology 3:608-609

Brandner, J.P., **E.V. Stabb**, R. Temme, and T.J. Donohue. 1991. Regions of *Rhodobacter sphaeroides* cytochrome c_2 required for export, heme attachment and function. Journal of Bacteriology 173:3958-3964

Teaching & Education

Teaching

- Course Designer & Instructor, UGA, Microbiology 4500/6500 Bacterial Symbioses, 2003-present
- Co-Instructor, UGA, Microbiology 4090/6090, Prokaryotic Biology, 2011-2017
- Instructor, UGA, Microbiology 8160, Seminar in Microbiology, 2015, 2018
- Instructor, Yale University, MCDB 123, Genes and Environment, 2015
- Instructor, UGA, Microbiology 8150, Seminar in Diversity of Microbial Research, 2011-2013
- Co-Instructor, UGA, Biology 1108, Principles of Biology II, 2010
- Course Designer & Instructor, UGA, Microbiology 8700-Special Topics: Bacterial Symbioses, 2002
- Guest lecturer, eight additional courses, University of Georgia system, 2001-present
- Guest lecturer, U. Hawai'i, Prokaryotic Genetics (1997) and Microbial Physiology (1999)
- Tutor, U. Wisconsin Athletic Department, Prokaryotic Microbiology, 1993
- Teaching Assistant, U. Wisc., Prokaryotic Micro. Lab and Physiology of Microorganisms Lab, 1992

NSF-Funded Research Experience for Undergraduates (REU) site-program

- PI (competitive renewal), Summer REU site program 2008-2011
- Co-PI (competitive renewal), Summer REU site program 2011-2014
- REU Admissions Committee, 2016 and 2017
- Initiated, led, and tailored *Entering Mentoring* program for grad students & postdocs, 2008-2013
- Presented "How to Prepare and Present a Poster" to program participants, 2002-2013
- Hosted & mentored sixteen REU participants, 2002-present

Invited Oral Presentations (since 2002)

** Highlights national meeting; (host in parentheses)

** ASM Microbe, track-hub session "Authors are from Mars, Reviewers are from Venus" Atlanta, 6/8/2018

UGA Department of Marine Sciences, 11/6/2017 (Dr. Tim Hollibaugh)

College of William and Mary, Biology Department, 2/17/2017 (Dr. Will Soto)

** ASM Beneficial Microbes Conference, Seattle, 9/10/2016

Kennesaw State University, Molecular Biosciences Interest Group, 8/26/2016 (Dr. Melanie Griffin)

University of Tennessee, Dept. of Microbiology, 6/22/2015 (Dr. Alison Buchan)

Dartmouth, Dept. of Microbiology and Immunology, 5/11/2015 (Mr. Kurt Dahlstrom, student)

University of Connecticut, Dept. of Molecular and Cell Biology, 3/3/2015 (Dr. Spencer Nyholm)

University of Tennessee, Dept. of Microbiology, 2/9/2015 (Dr. Liz Fozo)

Northwestern University, Dept. of Microbiology-Immunology, 11/25/2014 (Dr. Mark Mandel)

** General Meeting, American Society for Microbiology, Boston, 5/18/2014

Emory University, Population Biology, Ecology, and Evolution, 10/14/2011 (Dr. Nicole Gerardo)

Georgia Institute of Technology, Dept. of Biology, 10/6/2011 (Dr. Brian Hammer)

Georgia State University, Dept. of Biology, 9/30/2011 (Dr. Nicole Lopanik)

Georgia State University, Biology Honor Society (tri-Beta), 10/28/2010 (Ms. Vonee Hemans)

** eHormone 2010: Environmental Signaling: Exploring Multiple Dimensions, Tulane University New Orleans, 10/21/2010

Cal Polytechnic State Univ., San Luis Obispo, Dept. of Biology, 10/23/2009 (Dr. Pat Fidopiastis)

** General Meeting, American Society for Microbiology, Philadelphia, 5/19/2009

** ASM Beneficial Microbes Conference, San Diego, 10/15/2008

University of Wisconsin-Madison, Dept. of Bacteriology, 4/3/2008 (Dr. Katrina Forest)

** NSF Workshop on Molecular Communication/Biological Communication Technology, Arlington VA, 2/21/2008 (Dr. Michael Simpson)

Southeastern Branch American Society for Microbiology Meeting, Auburn University, 11/9/2007

University of Florida, Dept. of Microbiology and Cell Science, 10/22/2007 (Dr. Jamie Foster)

Oak Ridge Natl. Lab., Center for Nanophase Materials Sciences, 8/20/2007 (Dr. Michael Allen)

Valdosta State Univ., Science Seminar Series, 1/18/2007 (Dr. Archna Bhasin)

University of Tennessee, Dept. of Microbiology, 11/13/2006 (Drs Erik Zinser and Alison Buchan)

University of Alabama-Birmingham, Dept of Biology, 11/3/2006 (Dr. Robert Thacker)

UGA Department of Avian Medicine, 3/27/2006 (Dr. Margie Lee)

** Marine Eco-Genomics Workshop, NSF/Centers Development Initiative and Medical University of South Carolina, (Rand Haley [CDI] and Dr. Eric Lacy [MUSC]), Charleston, 2/28/2006

University of Nevada-Las Vegas, Dept. of Biological Sci., 10/14/2005 (Dr. Eduardo Robleto)

Loyola University Chicago, Dept. of Microbiology and Immunol., 9/22/2005 (Dr. Karen Visick)

Georgia State University, Dept. of Biology, 1/28/2005 (Dr. Eric Gilbert)

UGA Department of Cellular Biology, 9/28/2004 (Dr. Boris Striepen)

** General Meeting, American Society for Microbiology, New Orleans, 5/26/2004

Xavier University of Louisiana, Dept. of Biology, 1/28/2004 (Dr. Roldan Valverde)

UGA Department of Marine Sciences, 9/25/2003 (Dr. Adrian Burd)

UGA Department of Genetics, 9/10/2003 (Dr. Mary Bedell)

UGA Department of Medical Microbiology and Parasitology, 2/4/2003 (Dr. David Peterson)

Auburn University, Dept. of Biological Sciences, 1/17/2003 (Dr. Laura Suh)

Grice Marine Laboratories and College of Charleston, 10/4/2002 (Dr. Karen Burnett)

Georgia Institute of Technology, Dept. of Biology, 8/30/2002 (Dr. Patty Sobecki)

Funding

Current Extramural Support:

- PI, NSF (MCB), *Collaborative Research: Evolution of information processing in the* Vibrio fischeri *pheromone-signaling network*, 2017-2020, Budget for Stabb lab $420,000; [MCB-1716232]
- PI, NSF (IOS), *Collaborative Research: Experimental evolution of peptidoglycan in the bacterial symbiont* Vibrio fischeri*,* 2016-2019, Budget for Stabb lab $419,838; [IOS-1557964]

Previous Extramural Support:

- PI, NSF (MCB), *6th ASM Conference on Cell-Cell Communication in Bacteria*, 2017-2018, $9,100; [MCB-1735551]
- PI, NSF (IOS), *Sensing more than a quorum: The role of pheromones in the light-organ symbiont* Vibrio fischeri*,* 2011-2015, $503,257; [IOS-1121106]
- PI, NSF (MCB), *5th ASM Conference on Cell-Cell Communication in Bacteria, October 2014 in San Antonio, Texas,* 2014-2015, $9,100; [MCB-1440104]
- Co-PI, NSF (DBI), *Research Experience for Undergraduates Site Program: Research in Prokaryotic* biology, 2011-2014, $313,482 [DBI-1062589]
- Co-PI, NSF, *Collaborative Research: Use of genome-enabled tools to understand symbiosis,* 2009-2012, Budget for Stabb lab $57,114 [IOS-0841480]
- Co-PI, NSF, *Collaborative Research: Iron limitation, carbon metabolism and siderophore production in marine bacteria – a systems biology approach,* 2009-2012, Budget for Stabb lab $134,382 [OCE-0929081]
- PI, NSF, *Research Experience for Undergraduates Site Program: Research in Prokaryotic biology,* 2008-2011, $278,148 [DBI-0755182]

- PI, NSF, *CAREER: Symbiotic role of bacterial bioluminescence,* 2004-2009, $567,000 (including supplements) [MCB-0347317]
- Co-investigator, National Institutes of Health, Vibrio fischeri *as a model of bacterial colonization*, R01 AI50661, (PI: Margaret McFall-Ngai, University of Wisconsin), 2001-2006 and 2007-2009, Budget for Stabb lab $396,950 [R01 AI 50661]
- Collaborator, NSF, Mobilome Genomics: Large plasmids of diverse Prokaryotic groups (PI Anne Summers) 2007-2008, Budget for E. Stabb $14,500 [EF-06-26940]
- PI, Army Research Office, *Quorum-sensing inhibitors present in complex microbiological media*. 2006-2007, $50,000 [49549-LS-II]
- Collaborating researcher, NSF, *Hypercapnic hypoxia impacts shrimp immune defenses against bacterial pathogens* (Co-PI's Karen Burnett and Louis Burnett, College of Charleston). Budget for E. Stabb, 2002-2004, $33,310 [IBN-0212921]

Competitive External Support for DNA Sequencing Projects:

- PI, Department of Energy/Joint Genome Institute, Community Sequencing Program; *Identifying second-site suppressor mutations in* Vibrio fischeri *that restore aerobic growth in a mutant lacking the TCA cycle enzyme aconitase (AcnB)*, funded resequencing of wild-type *V. fischeri* genome as well as six mutant strains. 2009-2010. Value ~$25,000 [CSP-65]
- Co-PI (with Edward Ruby), Gordon and Betty Moore Foundation; *Niche-specific characteristics revealed by genome sequencing of strains in the* Vibrio fischeri/Vibrio logei *group*, funded 8x sequencing coverage of one *V. fischeri* strain's genome. 2005-2006. Value ~$100,000

Fellowship/Award Support for Advisees and Postdoctoral Mentees:

- Sponsor/PI, NSF; Dr. Zomary Flores-Cruz was awarded a Postdoctoral Research Fellowship, 2010-2012, $189,000 total costs [DBI-0905813]
- Mentor/PI; Alecia Septer was awarded a Pre-doctoral National Defense Science and Engineering Graduate Fellowship through the Army Research Office, 2008-2011, (full stipend, tuition, & benefits)
- Advisor; Alecia Septer was awarded a competitive ARCS Foundation Fellowship ($7,500 per year)
- Advisor; Deanna Colton, Georgia Oceans and Health Initiative Fellowship, $21,000 stipend, $8,000 supplies and travel support, 2010-2011
- Sponsor/PI, NSF; Dr. Anne Dunn was awarded a Postdoctoral Fellowship in Microbial Biology, 2003-2005, $100,000 total costs [DBI-0301367]

Patents

Handelsman, J., S.J. Stewart, and **E.V. Stabb**. Issue date Mar. 7, 2000. *Bacillus cereus* strain W35. U.S. Patent Number 6,033,659.

Handelsman, J., S.J. Stewart, and **E.V. Stabb**. Issue date Feb. 29, 2000. *Bacillus cereus* strain Z8. U.S. Patent Number 6,030,610.

Handelsman, J., S.J. Stewart, and **E.V. Stabb**. Issue date Dec. 7, 1999 Disease suppression by novel *Bacillus cereus* strain SOY130. U.S. Patent Number 5,998,196.

Handelsman, J., L.M. Jacobson, and **E.V. Stabb**. Issue date April 7, 1998. *Bacillus cereus* strain DGA34. U.S. Patent Number 5,736,382.

Handelsman, J., **E.V. Stabb,** L.M. Jacobson, R.M. Goodman, D.W. Johnson, and K.P. Smith. Issue date Dec. 23, 1997. *Bacillus cereus* strain MS1-9. U.S. Patent Number 5,700,462.

Handelsman, J., J.L. Milner, E.A. Stohl, S.J. Stewart, and **E. Stabb**. Issue date April 8, 1997. Zwittermicin resistance gene and biocontrol bacteria with the gene. U.S. Patent Number 5,618,692.

Handelsman, J., L.M. Jacobson, D.W. Johnson, K.P. Smith, R.M. Goodman, and **E.V. Stabb**. Issue date Sept. 3, 1996. *Bacillus cereus* strain AS4-12. U.S. Patent Number 5,552,138.

Handelsman, J., L. Halverson, **E.V. Stabb**, B. Lethbridge, and L. Silo. Issue date Aug. 6, 1996. Method of identifying *Bacillus cereus* having biocontrol activity. U.S. Patent Number 5,543,301.