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## EDUCATION AND ACADEMIC TRAINING

University of Delaware. USDA CSREES Postdoctoral Fellow (01/09-11/10) and Postdoctoral Researcher (02/08-01/09). College of Agriculture & Natural Resources.  
Advisors: Robin W. Morgan and Joan Burnside.

University of Delaware. Postdoctoral Researcher (07/07-02/08). Delaware Biotechnology Institute.  
Advisor: Thomas E. Hanson.

University of Delaware. Ph.D. (2007) College of Marine Studies. Dissertation title: *Abundance, Diversity and Distribution of Aerobic Anoxygenic Phototrophic Bacteria in the Delaware Estuary*.  
Advisor: David L. Kirchman.

University of Maryland. M.S. (1993) Graduate School, Baltimore. Sci.M. in Applied Molecular Biology.

University of Maryland Baltimore County. B.S. (1991) Biological Sciences.

## PROFESSIONAL EXPERIENCE

Assistant Professor. (08/18-present) University of West Florida, Center for Environmental Diagnostics and Bioremediation (CEDB) and Biology.

Research Scientist (07/16-12/16), Research Assistant Professor (01/17-08/18), and Adjunct Professor, Biology (07/16-08/18). University of West Florida, CEDB and Biology.

Principal Research Scientist. (08/14 – 06/16) BHO Technology, LLC.

Principal Research Associate. (07/12 – 08/14) H<sub>2</sub>OPE Biofuels, LLC.

Principal Research Associate. (11/10 – 07/12) Elcriton, Inc.

Technician, Research Assistant, and Ph.D. student. (08/00-03/07) University of Delaware, College of Marine Studies and College of Earth, Ocean and Environment.

Tech-Line<sup>sm</sup> Supervisor. (02/00 - 07/00) Life Technologies, Inc., Technical Services.

Staff Specialist. (01/99 - 02/00) Life Technologies, Inc., Technical Services.

Teacher's Assistant. (09/97 - 12/97) Johns Hopkins University, Biotechnology Graduate Program.

Technical Associate, Technical Services. (02/96 - 01/99) Life Technologies, Inc., Technical Services.

Research Assistant. (10/92 - 02/96) University of Maryland Baltimore County, Department of Chemistry and Biochemistry.

Intern. (06/92 - 08/92) National Institutes of Health, National Institute on Aging, Gerontology Research Center.

**PUBLICATIONS** (\*, UWF graduate student; \*\*, UWF undergraduate student)

- Potdukhe\*, T.V., Caffrey, J.M. Rothfus\*, M.J., Daniel\*, C.E., Swords\*\*, M.E., III, Albrecht, B.B., Jeffrey, W.H., and **Waidner, L.A.** (*in press*) Viable Putative *Vibrio vulnificus* and *parahaemolyticus* in the Pensacola and Perdido Bays: Water Column, Sediments, and Invertebrate Biofilms. *Front. Mar. Sci.*, doi: [10.3389/fmars.2021.645755](https://doi.org/10.3389/fmars.2021.645755).
- Gao, Y.-Z., Palatucci\*, M.L., **Waidner, L.A.**, Li, T., Guo, Y., Spain, J.C., and Zhou, N.-Y. (2020) A Nag-like dioxygenase initiates 3,4-dichloronitrobenzene degradation via 4,5-dichlorocatechol in *Diaphorobacter* sp. strain JS3050. *Environ. Microbiol.* <https://doi.org/10.1111/1462-2920.15295>.
- Babcock\*, K.K., Cesbron, F., Patterson, W.F., Garner, S.B., **Waidner, L.A.**, and Caffrey, J.M. (2020). Changing Biogeochemistry and Invertebrate Community Composition at Newly Deployed Artificial Reefs in the Northeast Gulf of Mexico. *Estuaries Coasts* 43, 680–692.
- Palatucci\*, M.L., **Waidner, L.A.**, Mack, E.E., and Spain, J.C. (2019). Aerobic biodegradation of 2,3- and 3,4-dichloronitrobenzene. *J. Hazard. Mater.* 378, 120717.
- Madeira, C.L., Jog, K.V., Vanover, E.T., Brooks, M.D., Taylor, D.K., Sierra-Alvarez, R., **Waidner, L.A.**, Spain, J.C., Krzmarzick, M.J., and Field, J.A. (2019). Microbial Enrichment Culture Responsible for the Complete Oxidative Biodegradation of 3-Amino-1,2,4-triazol-5-one (ATO), the Reduced Daughter Product of the Insensitive Munitions Compound 3-Nitro-1,2,4-triazol-5-one (NTO). *Environ. Sci. Technol.* 53, 12648–12656.
- Plummer, M., Plummer, S.M., Merkel, P.A., Hagen, M., Biddle, J.F., and **Waidner, L.A.** (2016) Using directed evolution to improve hydrogen production in chimeric hydrogenases from *Clostridia* species. *Enzyme and Microbial Technology* 93 (2016) 132–141.
- Schab, C.M., Park, S., **Waidner, L.A.**, and Epifanio, C.E. (2013) Return of the Native: Historical Comparison of Invasive and Indigenous Crab Populations near the Mouth of Delaware Bay. *J. Shellfish Research*. 32(3):751-758.
- Jamindar, S., Polson, S.W., Srinivasiah, S., **Waidner, L.A.**, and Wommack, K.E. (2012) Evaluation of Two Approaches for Assessing the Genetic Similarity of Virioplankton Populations as Defined by Genome Size. *Applied and Environmental Microbiology*. 78:8773-8783.
- Waidner, L. A.**, Burnside, J., Anderson, A. S., Bernberg, E. L., German, M. A., Meyers, B. C., Green, P. J., and Morgan, R.W. (2011) A microRNA of infectious laryngotracheitis virus can downregulate and direct cleavage of ICP4 mRNA. *Virology*. 411:25-31.
- Waidner, L.A.**, Morgan, R.W., Anderson, A.S., Bernberg, E.L., Kamboj, S., Garcia, M., Riblet, S.M., Ouyang, M., Isaacs, G.K., Markis, M., Meyers, B.C., Green, P.J., and Burnside, J. (2009) MicroRNAs of Gallid and Meleagrid herpesviruses show generally conserved genomic locations and are virus-specific. *Virology*. 388:128-136.
- Waidner, L.A.**, and Kirchman, D.L. (2008) Diversity and distribution of ecotypes of the aerobic anoxygenic phototrophy gene, *pufM*, in the Delaware estuary. *Applied and Environmental Microbiology*. 74:4012-4021.
- Elifantz, H., **Waidner, L.A.**, Cottrell, M.T., and Kirchman, D.L. (2008) Diversity and abundance of glycosyl hydrolase family 5 in the Sargasso Sea. *FEMS Microbiology Ecology*. 63:316-327.
- Campbell, B.J., **Waidner, L.A.**, M.T. Cottrell, M.T., and Kirchman, D.L. (2008) Abundant proteorhodopsin genes in the North Atlantic Ocean. *Environmental Microbiology*. 10:99-109.
- Waidner, L.A.**, and Kirchman, D.L. (2007) Aerobic anoxygenic phototrophic bacteria attached to particles in turbid waters of the Delaware and Chesapeake estuaries. *Appl. Environ. Microbiol.* 73:3936-3944.

**PUBLICATIONS, ctd.**

**Waidner, L.A.**, and Kirchman, D.L. (2005) Aerobic anoxygenic photosynthesis genes and operons in uncultured bacteria in the Delaware River. *Environmental Microbiology* 7:1896-1908.

Cottrell, M.T., **Waidner, L.A.**, Yu, L., and Kirchman, D.L. (2005) Bacterial diversity of metagenomic and PCR libraries from the Delaware River. *Environmental Microbiology* 7:1883-1895.

**Waidner, L.A.**, Flynn, E.K., Wu, M., and Karpel, R.L. (2001) Domain effects on the DNA-interactive properties of T4 gene 32 protein. *Journal of Biological Chemistry* 276:2509-2516.

Technical Report: Waidner, L.A., Jeffrey, W.H., and Caffrey, J.M. (2020). Technical report summarizing results from winter 2020 sampling: Escambia County 2020 Aquatic Bacteria Survey, *Vibrio* Assessment (Pensacola, FL.: University of West Florida).

**PRESENTATIONS (Presenter in bold; <sup>a</sup>, undergraduate student; <sup>b</sup>, graduate student)**

*Seminar. Vibrio* bacteria in Florida: The good, the bad, and the ugly. (Feb. 2021) **Waidner, L.A.** UWF Biology Seminar Course. *Instructor: Jane Caffrey.*

Viable *Vibrio vulnificus* and *V. parahaemolyticus* in the Pensacola and Perdido Bays: Water Column, Sediments, and Invertebrate Biofilms. (Dec. 2020). **Potdukhe<sup>b</sup>, T.V.**, Caffrey, J.M., Swords<sup>a</sup>, M.E. III, Rothfus<sup>b</sup>, M.J., Daniel, C.E., Jeffrey, W.H., Albrecht, B.B., and Waidner, L.A. Bays and Bayous Symposium (virtual conference)

Use of Bioinformatics to Improve Molecular Tools for Enumerating Pathogenic *Vibrio vulnificus* and *Vibrio parahaemolyticus*. (Dec. 2020) **Hope<sup>a</sup>, K.**, Potdukhe<sup>b</sup>, T.V., Harrell<sup>b</sup>, J., Christerson<sup>a</sup>, S., Rivard<sup>a</sup>, J.R., and Waidner, L.A. AGU 2020 Fall Meeting (virtual conference)

Use of bioinformatics to improve molecular tools for enumerating pathogenic *Vibrio vulnificus* and *Vibrio parahaemolyticus* in coastal Gulf of Mexico waterways. (Aug. 2020) **Hope<sup>a</sup>, K.**, and Waidner, L.A. UWF Summer Undergraduate Research Program SURP Symposium.

Oyster Ecology: Understanding Factors Affecting their Respiration, Excretion, and Microbiome. (Apr. 2020) **Kay<sup>a</sup>, K.**, Bowman<sup>a</sup>, L., Caffrey, J.M., and Waidner, L.A. University of West Florida Student Symposium.

Determining the Variability in Seasonal Abundance of *Vibrio* spp. in the Coastal Waters of Pensacola Beach. (Apr. 2020). **Rodriguez<sup>b</sup>, G.**, Waidner, L.A., and Jeffrey, W.H. University of West Florida Student Symposium.

Enumerating new Photoheterotrophy Genes in Polar Regions. (Apr. 2020) **Hope<sup>a</sup>, K.**, G. Castaing<sup>a</sup>, G., Severson<sup>a</sup>, L. Simmering<sup>b</sup>, A., Harris<sup>b</sup>, L., W.H. Jeffrey, W.H. and Waidner, L.A. University of West Florida Student Symposium.

*Vibrio vulnificus* and *Vibrio parahaemolyticus* abundance in water, sediment, and biofilm samples in the Pensacola Bay System. (Apr. 2020) **Potdukhe<sup>b</sup>, T.V.**, Daniel<sup>b</sup>, C.E. Swords<sup>a</sup>, M.E. III, Rodriguez<sup>a</sup>, G., Bowman<sup>a</sup>, L., Rothfus<sup>b</sup>, M., Jeffrey, W.H., Caffrey, J.M., Albrecht, B.B., and Waidner, L.A. University of West Florida Student Symposium.

*Invited seminar. Vibrio* bacteria: The good, the bad, and the ugly. (2020) **Waidner, L.A.** Escambia County Science Hour. Pensacola, FL.

Comparative metaproteomics to assess environmental changes: The combined effects of oil, sunlight and dispersant on marine microbial communities. (Feb. 2020) **Surget, S.M.**, Nigro, L.M., Waidner, L.A., Werner, J., Lebaron, P., and Jeffrey, W.H. ASLO Aquatic Sciences Meeting, San Diego, CA.

**PRESENTATIONS, ctd.**

Response of Microbial Processes Following Deployment of Artificial Reefs in the Northeast Gulf of Mexico. (Nov. 2019) **Smyth<sup>a</sup>, K.**, Giraldo<sup>a</sup>, J., Gore<sup>a</sup>, B., Cesbron, F., Jeffrey, W., Hagy, M., Patterson, W., Waidner, L., and Caffrey, J. CERF Coastal and Estuarine Research Federation. Mobile, AL.

Community Knowledge and Perceptions of the Presence of *Vibrio vulnificus*. (Nov. 2019) **Roney<sup>a</sup>, N., Ngalame<sup>a</sup>, J.**, Prousalis<sup>b</sup>, M., Owusu-Daaku, K., and Waidner, L.A. Waidner. CERF Coastal and Estuarine Research Federation. Mobile, AL

The Regulation of Bacterial Activity and Abundance by Environmental Parameters within a Subtropical Coastal Estuary. (Nov. 2019) **Prousalis<sup>b</sup>, M.**, Schwartz, M., Simmering<sup>b</sup>, A., Neat-Headrick<sup>b</sup>, E., Hope<sup>a</sup>, K., Harris<sup>b</sup>, L., Gore<sup>a</sup>, B., Caffrey, J.M., Jeffrey, W.H. and Waidner, L.A. Coastal and Estuarine Research Federation (CERF). Mobile, AL. Nov. 2019

*Invited PBS television segment. Medical Matters and Public Health Concerns. Aware! With Dee Dee Sharp.* (Oct. 2019) **Waidner, L.A.** and **Lanza, J.J.** Pensacola, FL.

An Assessment of Vibrio Presence and Knowledge in a Subtropical Coastal Estuary. (Aug. 2019) **Ngalame<sup>a</sup>, J., Roney<sup>a</sup>, N.**, Prousalis<sup>b</sup>, M., Owusu-Daaku, K., and Waidner, L.A. UWF Summer Undergraduate Research Program SURP Symposium, Pensacola, FL. Aug. 2019

Response of Microbial Processes Following Deployment of Artificial Reefs in the Northeast Gulf of Mexico. (2019) **Gore<sup>a</sup>, B.**, J. Giraldo, K. Smyth, F. Cesbron, W.H. Jeffrey, W. Patterson, L. Waidner and J. Caffrey. University of West Florida Student Symposium, Pensacola, FL. April 2019.

The abundance of *Vibrio vulnificus* in Indian Bayou, a Subtropical Coastal Estuary. (2019) **Ngalame<sup>a</sup>, J., M. Prousalis<sup>b</sup>, E. Neat, J.Caffrey, W.H. Jeffrey, and L. Waidner.** University of West Florida Student Symposium, Pensacola, FL. April 2019.

*Seminar. Vibrio bacteria in Florida.* (Oct. 2019) **Waidner, L.A.** UWF Honors Course, Ecology of Florida, IDH4030. *Instructor: Frank Gilliam.*

The Regulation of Bacterial Activity and Abundance by Environmental Parameters within a Subtropical Coastal Estuary. (Apr. 2019) **Prousalis<sup>b</sup>, M.**, Simmering<sup>b</sup>, A., Neat<sup>b</sup>, E., Hope<sup>a</sup>, K., Harris<sup>b</sup>, L., Gore<sup>a</sup>, B., Jeffrey, W.H. Schwartz, M., and Waidner, L.A. University of West Florida Student Symposium, Pensacola, FL.

The Influence of Environmental Factors on the Abundance and Composition of *Vibrio vulnificus* within Bacteria Communities of a Subtropical Coastal Estuary. (Apr. 2019) **Hope<sup>a</sup>, K., Harris<sup>b</sup>, L., Prousalis<sup>b</sup>, M., and Waidner, L.A.** UWF Student Scholars Symposium, Pensacola, FL.

*Seminar. Photoheterotrophic Bacteria in the Pensacola Bay System.* (Jan. 2019) **Waidner, L.A.** UWF Biology Seminar Course. *Instructor: Phil Darby.*

Proteorhodopsin bacteria and aerobic anoxygenic phototrophic bacteria abundance in the Pensacola Bay system. (Nov. 2018) **Daniel, C.<sup>a</sup>**, Caffrey, J., Ederington-Hagy, M., Albrecht, B. Jeffrey, W., and L. Waidner. Bays and Bayous, November 2018. Mobile AL.

Editing our Evolution Forum: NSF Facilitating a National Dialogue on Human Genome Editing. National Informal Stem Network. (May 2018) Pratt, M., Fleekop, J., Chmiel, J.D., Jenson, M., and Waidner, L.A. Pensacola MESS Hall, Pensacola, FL.

Proteorhodopsin Bacteria Abundance in the Pensacola Bay System. (Apr. 2018) **Daniel, C.<sup>a</sup>**, Ousley, S.<sup>a</sup>, Gossett, M.<sup>a</sup>, Ederington-Hagy, M., Albrecht, B., O'Steen, C., Asmuth, T., Janosik, A., Jeffrey, W., and L. Waidner. UWF Student Scholars Symposium, Pensacola, FL.

**PRESENTATIONS, ctd.**

Pensacola Bay and Gulf of Mexico Photoheterotrophy: Bacteria Community Seasonal Shifts and Light-Induced Growth. (Aug. 2017) **Snyder, M.<sup>a</sup>**, Overton, M., Jeffrey, W., and L. Waidner. Univ. of West Florida Summer Undergraduate Research Program SURP Symposium, Pensacola, FL.

Furthering the Mitochondrial Genome Investigation of *Donax variabilis* using PCR and Plasmid Vectors: A Course Based Undergraduate Teaching Project. (Apr. 2017) **Clark, A.<sup>a</sup>**, Reidy J.<sup>b</sup>, Chung H.-M., and L. Waidner. UWF Student Scholars' Symposium, Pensacola, FL.

Thompson Bayou Microcosm Experiments: Aerobic Anoxygenic Phototrophic Bacteria Community Shifts Upon Particle Enrichment. (Apr. 2017) **Daniel, C.<sup>a</sup>**, Ederington-Hagy, M., Jeffrey, W., and L. Waidner. UWF Student Scholars Symposium, Pensacola, FL.

Aerobic Anoxygenic Phototrophic Bacteria in Coastal Gulf of Mexico Community Shifts Upon Exposure to MC252 Water Accommodated Fraction and Dispersant. (Feb. 2017) **Waidner, L.A.**, Matallana Surget, S. Nigro, L., LeBaron, P., Ederington-Hagy, M. Brock<sup>a</sup>, M., Daniel, C.<sup>a</sup>, Valek, J.<sup>a</sup>, and W.H. Jeffrey. ASLO Aquatic Sciences Meeting, Honolulu, HI.

*Invited seminar.* The Use of Duckweed for Wastewater Bioremediation and Biofuel Production. (2012) **Waidner, L.A.** Center for the Inland Bays, Scientific & Technical Advisory Committee. Lewes, DE.

The ethanol effect: Understanding the cellular basis for fetal alcohol syndrome. (2010) **Siburt, T.<sup>a</sup>**, Adams, E.L., Waidner, L.A., Czymbek, K.J., Klintsova, A.Y., and R.R. Helton. 2010 University of Delaware Undergraduate Research Symposium. Newark, DE.

Expression of microRNAs in feather tips of Marek's Disease virus infected chickens. (2010) **Markis, M.<sup>a</sup>**, Isaacs, G.K. Bernberg, E.L. Lagasse, G.A.<sup>a</sup> Anderson, A.S., Waidner, L.A., Burnside, J. and R.W. Morgan. 5<sup>th</sup> Internataional Workshop on the Molecular Pathogenesis of Marek's Disease Virus and 1<sup>st</sup> Symposium on Avian Herpesviruses. Athens, GA.

Marek's Disease virus microRNA mdv1-miR-M4 acts as a miR-155 homolog and down regulates JARID2. (2010) **Anderson, A.S.**, Bernberg, E.L., Markis<sup>a</sup>, M., Waidner, L.A., Bolisetty, M., Beemon, K., Morgan, R.W., and J. Burnside. 5<sup>th</sup> Internataional Workshop on the Molecular Pathogenesis of Marek's Disease Virus and 1<sup>st</sup> Symposium on Avian Herpesviruses. Athens, GA.

A microRNA of Infectious Laryngotracheitis Virus downregulates the major transcription factor ICP4. (2010) **Waidner, L.A.**, Morgan, R.W., Anderson, A.S., Bernberg, E.L., German, M.A., Meyers, B.C., Green, P.J., and J. Burnside. RNA Silencing: Mechanism, Biology and Application. Keystone, CO.

**Richard B Rimler Memorial Award:** Feather tip monitoring of Marek's Disease virus in experimental and commercial settings. (2010) Markis, M.<sup>a</sup>, Rosenberger, J.K., Rosenberger, S. Isaacs, G.K., Bernberg, E.L., Lagasse<sup>a</sup>, G.L., Anderson, A.S., Waidner, L.A., Burnside, J. and R.W. Morgan. American Association of Avian Pathologists. Atlanta, GA.

MicroRNAs of oncogenic and non-oncogenic avian herpesviruses have conserved genomic locations but no sequence similarity. (2009) **Waidner, L.A.**, R.W. Morgan, A.S. Anderson, E.L. Bernberg, M. Markis, G.K. Isaacs, G.A. Lagasse<sup>a</sup>, N.A. Rager<sup>a</sup>, M. Garcia, S.M. Riblet, M.A. German, B.C. Meyers, P.J. Green, and J. Burnside. Keystone Symposium MicroRNA and Cancer. Keystone, CO.

Marek's Disease virus microRNA expression in feather tips. (2009) **Markis, M.<sup>a</sup>**, G.K. Isaacs, E.L. Bernberg, A.S. Anderson, G.A. Lagasse<sup>a</sup>, L.A. Waidner, J. Burnside, J.K. Rosenberger, and R.W. Morgan. AAAP/AVMA Annual Meeting. Seattle, WA.

**PRESENTATIONS, ctd.**

Genetic analysis of Chesapeake Bay virioplankton assemblages based on major capsid gene (gp23) and randomly amplified polymorphic DNA. (2008) **Jamindar, S.**<sup>b</sup>, S. Srinivasiah<sup>b</sup>, L.A. Waidner, D.M. Winget, and K.E. Wommack. Am. Society for Microbiology 108th General Meeting. Boston, MA.

Invited seminar with honorarium. Metagenomics, ecotypes, and distribution of aquatic bacteria with a “new” metabolism. (2006) **Waidner, L.A.** Department of Biological Sciences, University of Maryland Baltimore County. Baltimore, MD.

Abundance of aerobic anoxygenic photosynthetic bacteria in turbid estuarine waters. (2006) **Waidner, L.A.** and D.L. Kirchman. ASLO/TOS/AGU Ocean Sciences Meeting, Honolulu, HI.

Guest Lecture. Using genomics for clues to environmental adaptations. (2005) **Waidner, L.A.** U of Delaware College of Marine Studies, **Environmental Genomics Course.** *Instructor: Adam Marsh.*

Dynamics of photoheterotrophic bacteria in the Delaware Estuary. (2005) **Waidner, L.A.,** M.T. Cottrell and D.L. Kirchman. Delaware Estuary Science Conference, Cape May, NJ.

Unique anoxygenic photosynthesis genes and operons in uncultured bacteria in the Delaware Estuary. (2004) **Waidner, L.A.,** M.T. Cottrell and D.L. Kirchman. ASLO/TOS Ocean Sciences, Honolulu, HI.

Metagenomic analysis of uncultured *Cytophaga* and other microbes in marine and freshwater consortia. (2004) **Kirchman, D.L.,** M.T. Cottrell and L.A. Waidner. Genomes to Life Program Department of Energy Office of Science Biological and Environmental Research Program, Washington, DC.

Interactions between the Asian shore crab (*Hemigrapsus sanguineus*) and the common mud crab (*Panopeus herbstii*): Larval supply vs. post-settlement competition. (2003) **Epifanio, C.E.,** S. Park, E.K. Grey and L.A. Waidner. Proceedings of the Third International Conference on Marine Bioinvasions. La Jolla, CA.

A metagenomic library of bacterial DNA isolated from the Delaware River. (2003) **Kirchman\*, D.L.,** M.T. Cottrell and **L.A. Waidner\*.** Genomes to Life Program Workshop, Arlington, VA. *\*Co-presenters.*

Bacterial stratification in deep-sea hydrothermal vent chimneys as determined by molecular methods. (2001) Campbell, B.J., **L.A. Waidner,** A.L. Reysenbach, G.W. Luther III and S.C. Cary. American Society of Limnology and Oceanography. Albuquerque, NM.

Cloned RNase A. (1998) **Waidner, L.A.** and R. Roberts. Life Technologies Genome Analysis Meeting. Objective-strategic support for CONCERT nucleic acid purification and cGMP production. Rockville, MD.

Double-stranded DNA-interactive properties of intact and truncated gene 32 protein. (1997). **Karpel, R.L.,** H.I. Zisman, and L.A. Waidner. American Society for Biochemistry and Molecular Biology. San Francisco, CA.

Nucleic acid interactive properties of bacteriophage T4 gene 32 protein and its substituent domains. (1996) **Karpel, R.L.,** L.A. Waidner, E.K. Flynn and H.I. Zisman. Biophysical Society Meeting. Baltimore, MD.

Effects of bacteriophage T4 gene 32 protein and deletion mutants on nucleic acid conformational interchange. (1995) **Waidner, L.A.,** E.K. Flynn, and R.L. Karpel. “Molecular Recognition in Biochemistry,” 1st Joint Biochemistry Symposium of the University of Maryland. Baltimore, MD.

**PRESENTATIONS, ctd.**

Rate and fidelity of hybridization of oligonucleotides to DNA templates. (1994) **Waidner, L.A.** and R.L. Karpel. The American Chemical Society 28<sup>th</sup> Middle Atlantic Regional Meeting. Baltimore, MD.

Protein-nucleic acid and protein-protein binding properties of T4 gene 32 protein and its proteolytic products. (1994) **Karpel, R.L.**, E.K. Flynn and L.A. Waidner. American Society for Biochemistry and Molecular Biology. Washington, D.C.

**PROFESSIONAL SOCIETIES**

AAAS (2006-present)

American Association of University Women (AAUW) (2010-present)

American Society of Limnology and Oceanography (2000-present)

Bream Fisherman's Association (2016-present)

Graduate Women in Science (2018-present)

Coastal and Estuarine Research Federation (2018-present)

Center for the (Delaware) Inland Bays, Scientific and Technical Advisory Committee (2011-present)

Partnership for the Delaware Estuary (2005-present)

**HONORS AND AWARDS**External funding

Escambia County: Aquatic Bacteria Survey. Notification of award Jan. 2020. **\$60,000**. Waidner PI. Co-PI's: Jane M. Caffrey and Wade H. Jeffrey.

Dept. of Defense SEED/SEDRP. Notification of award Feb. 2018. Complete Biodegradation of Insensitive High Explosive Compounds. Spain & Waidner, as subcontractors to U. of Arizona, lead. **\$274,366** (This is UWF portion.)

Florida Institute of Oceanography (FIO). Notification of award June 2018. Understanding diversity of bacterioplankton and phytoplankton in estuarine and coastal environments. **\$22,000** (4 days at \$5,500/day). Caffrey PI, co-PI Waidner

Internal funding

UWF ITEP Project entitled "Next Generation Biology Student Technology: Advancing Computational Skills for Biology through Courses and Independent Research Projects" Waidner PI, with Chair of the Biology Department, Phil Darby. (Aug. 2019-May 2020) **\$62,293**

2017, 2019, and 2020 HMCSE Travel Awards. **\$750** each year.

Other funding and awards:

- **Internal UWF Innovative Interdisciplinary Research Grant: STEAMing the River to the Gulf: Water Quality Assessments and Communication** (2017) \$43,000. PI, Waidner; co-PIs, Thomas Asmuth (UWF Art) and Alexis Janosik (UWF Biology)
- **Work on the DuPont Corporate Remediation Group contract LBIO-65019 (J. Spain, PI)**, awarded for work with UWF M.S. student, Mallory Palatucci, and genomic mapping of putative degradation gene pathways. (\$8,195, Fall 2017)
- **SBIR Phase I:** (2012) \$149,707. Cultivation of Duckweed for Bioremediation of Delaware and Chesapeake Watersheds
- **USDA Postdoctoral Fellowship** (Animal Genomes Part D). \$125,000. (Jan 2009-Dec 2010)
- **University of Delaware Frances Severance Academic Council Award**, given for the best thesis or dissertation within a program area, presented May 2008.
- **UD Publication Award**, for best student first-authorship paper for (2007) Appl. Environ. Microbiol. 73:3936-3944, presented May 2008.
- **University of Delaware Dissertation Fellows Award.** Academic Year 2006-2007. This annual

University-wide award is competitive and funds the awardee's stipend in the last year of dissertation completion.

- **University of Delaware Marion R. Okie Fellow.** Academic Year 2001-2002. The fellowship is based on academic and research excellence and demonstrated leadership abilities.
- **Life Technologies, Inc. 1999 Annual Level 3 Award.** For excellent performance, Technical Services Database Upgrade.
- **Life Technologies, Inc. 1998 Annual Level 3 Nomination.** Nominated for database upgrade, Technical Support and Customer Training Team (TSCTT). Received Level 2 Award.

## SYNERGISTIC ACTIVITIES AND SERVICE

Synergistic activities:

1. *Peer reviews of manuscripts for the following journals:* ISME Journal, Deep Sea Research, Environmental Science and Technology, Frontiers in Marine Science, and Molecular Ecology.
2. *Ad hoc grant proposal reviews:* NSF Biol. Oceanography Program and UNC WRII Program.
3. *Prescott's Microbiology 11<sup>th</sup> Edition:* (Summer 2020) Reviewer and Focus Group panelist.

Community service:

4. *Northwest Florida K-12 schools:* (Spring 2017) Judge, middle and high school "Northwest Florida Regional Science Fair."
5. *Pensacola / Northwest Florida:* (May 2017) UWF STEAMing Tent and Activities, Lionfish Awareness Day, Pensacola, FL, with Thomas Asmuth.
6. *Brown Barge Middle School:* (Sept-Oct. 2017) With Barbara Albrecht, President of BFA, and UWF student, Sara Ousley and postdoctoral teaching fellow, Claudia O'Steen, presented ecology concepts to 92 middle school students (7<sup>th</sup> and 8<sup>th</sup> grades), as part of "The Oceans" class.
7. *Pensacola / Northwest Florida:* (Oct. 2017) STEAMing exhibit, UWF TAG, with Thomas Asmuth and Claudia O'Steen.
8. *Pensacola / Northwest Florida:* (Feb. 2018) STEAM Night, Jay High School, Jay FL, with Claudia O'Steen.
9. *Pensacola / Northwest Florida:* (Spring 2018) Panel member, "Editing our Evolution." Pensacola MESS Hall, Pensacola FL.
10. *Pensacola / Northwest Florida:* (May 2018) With Barbara Albrecht, Bream Fisherman Association, demonstration of research labs to the Sunday's Child grant panel.
11. *Pensacola / Northwest Florida:* (Oct. 2018) Provided microbiology-focused class assignment interviews with students of Booker T. Washington High School, Pensacola, FL.
12. *Pensacola / Northwest Florida:* (Jan. 2019) Advisor, Gulf Breeze HS Marine Science program.
13. *Pensacola / Northwest Florida:* (2018-2019) Served as technical advisor to Bream Fisherman Association, "Project Oyster and Detective Oyster," Urban 5 Star POP, and Bruce Beach-Washerwoman Creek proposals.
14. *Delaware:* (Winter 2020 and Summer 2021). Mentor for University of Delaware program, "Hens Hiring Hens: UD Job Shadow."
15. *Escambia County:* (Feb. 2020). Provided a talk for Escambia County Science Hour.

Department:

16. *Biology Department:* (Feb. 2019-May 2020) With the help of the Chair of the Biology Department, Phil Darby, obtained 32 laptops for the Biology Department for course use via the UWF ITEP program and executed procedures for seamless implementation in 10 formal Biology courses. "Next Generation Biology Student Technology: Advancing Computational Skills for Biology through Courses and Independent Research Projects."
17. *Biology Department:* (Summer 2019) Assisted with new Biology curriculum and assisted with curriculum change requests for *Molecular Aquatic Microbial Ecology*, MCB 4990 & 5990.



18. *Biology Department*: (Feb. 2019) With Coordinator of Visit Experience, Office of Undergraduate Admissions, provided a personalized laboratory tour to prospective student and family.
19. *Biology Department*: (Sept 2018 – May 2019). Wrote and submitted Curriculum Change Requests for implementation of *Bioinformatics for Biologists*, PCB 4125 & 5525.
20. *Biology Department*: (Spring 2019) Member, Marine Biology, Biomedical curricula committees.
21. *Biology Department*: (2016-2020). Informal microscopy data analysis teaching and lab training to undergraduate and graduate students advised by other UWF faculty. Resulting 2018-2020 products: student presentation at UWF symposia (3), student presentation at regional conference (4), student presentation at national conference (1), student presentation at international conference (2), and UWF Biology M.S. thesis defense (2).
22. *CEDB and Art Departments*: (Summer 2019) Assisted, with Jane Caffrey and Mike Murrell, in Art Department course, ART3905 SPECIAL TOPICS IN CERAMICS. Instructor, Meagan Gates.
23. *Biology Department*: July 2019, served as a faculty panel member and “BioCORE Meet and Greet” for NSF CURE integration into Genetics Laboratory and Cell Biology Laboratory (PIs, Hui-Min Chung and Peter Cavnar)
24. *Biology Department*: (Spring 2020) Undergraduate Student Engagement Committee.

## College:

25. *UWF HMCSE and USF*: (Summer 2017) Served as lab and data analysis mentor to visiting (U. South Florida) SURP student for another UWF faculty mentor.
26. *HMCSE*: (Spring 2018) Wrote the exams and coordinated the regional B and C ECOLOGY events (middle- and high-schoolers) for Northwest Florida Science Olympiad.
27. *HMCSE*: (Spring 2019) Wrote the exams and coordinated the middle and high school Science Olympiad events, *Heredity* and *Designer Genes*.
28. *HMCSE*: (Spring 2019) Assisted with recruiting for HMCSE and Biology Department at the *UWF Explore!* recruiting event.

## University:

29. *University*: (Spring 2017) Faculty Mentor to 3 undergraduate “OUR Explorers”
30. *University*: (Spring 2017) Judge for UWF Undergraduate and Graduate Student Symposium.
31. *University*: (Spring 2019) Served as one of four reviewers for the CUTLA review of University-wide assessment reports.
32. *University*: (Fall 2018 - Spring 2019) Served as committee member on the High Impact Practice (HIP) Undergraduate Research Working Group.
33. *University*: (Fall 2018 - Spring 2019) Reviewed 7 OUR project award student proposals.
34. *University*: (Spring 2020) Served as a STEM mentor, Anchor Down Mentor Program, for First and Second Year Experiences, Office of Student Retention Initiatives.
35. *University*: (Spring 2019) Served as a mentor to 2 undergraduate “OUR Explorers”
36. *University*: (Spring 2020) Served as a mentor to 2 undergraduate “OUR Explorers”
37. *University*: (Spring 2021) Served as a mentor to 3 undergraduate “OUR Explorers”

**Art Presentations resulting from Interdisciplinary Collaboration:**

STEAM2020 Exhibition and Colloquium. February 2020. Pensacola Museum of Art, Pensacola, FL.

Thomas Asmuth and Lisa Waidner. **The Ecosystem Status: Tannins, Bacteria, and Genes.**

Foreground, water from local bayou, Santa Rosa County, FL, mixed with polyacrylamide in a slab gel in which leaf is embedded to demonstrate source of humic acids. Background, **visualization of** colony blots in x-ray film of bacterial gene library screening,

STEAM2020 Exhibition and Colloquium. February 2020. Pensacola Museum of Art, Pensacola, FL.

Thomas Asmuth and Lisa Waidner. **Land to Sea.** Autoradiograph of a <sup>35</sup>S-Sanger sequencing run, displayed in lightbox; foreground, plywood box and gelled waters with varying degrees of humics.

Synergistic Activities and Service prior to 2016

STEM Role Model. (2011) As Elcriton, Inc. Scientist, served as mentor for young women contemplating science and engineering careers at the 12th annual American Association of University Women (AAUW) Award Luncheon for Excellence in Science and Math, 11th grade girls (Newark, DE).

“Coast Day” Demonstrations. (2000 through 2006, and 2010-2012) Planning, organizing, and implementing research displays in an annual general public outreach event for >10,000 visitors each year. Research activity research exhibitions, with hands-on demonstrations for children. U. of Delaware, Lewes, DE.

Instructor. (2010 and 2012) “Dirty DNA: Profiling Soil Microbes” at the Delaware State 4-H Environmental Camp, co-sponsored by University of Delaware Institute of Soil and Environmental Quality and The Delaware Environmental Institute. Taught field and laboratory techniques to 4H campers. Students learned about uncultured microorganisms in the soil and waterways; and students gained hands-on experience in making slides, light microscopy, and extracting DNA from soil.

Ag Day Demonstrations, (2008-2010 and 2012). Exhibition of research activities for the general public at “AG Day,” **ISEQ/DENIN/DBI booth 2010 was awarded a First Place Blue Ribbon for science teaching.**

INBRE/EPSCoR Seminar Series and Outreach. (2007, 2008) Sat on panels for INBRE/EPSCoR interns to discuss Ph.D. programs and postdoctoral training. Moderated several seminar series presentations.

Bacterial production and radioactive waste management. (June 2003-2007) Aided Wommack laboratory in bacterial production samples and managing radioactive waste for Chesapeake Bay observatory cruises.

Reviewer for Journals: Environmental Microbiology Reports, Applied and Environmental Microbiology, Bioresource Technology, Journal of Shellfish Research.

**TEACHING**University of West Florida

1. Spring 2021: *Molecular Aquatic Microbial Ecology (MAME), MCB4990 & 5990, 3 credits.*  
**Enrollment: 34 undergraduate students and 5 graduate students.**
2. Spring 2021: *Thesis credits, 2 total, BSC6971.* 1 credit each, Trupti Potdukhe and Carrie Daniel.
3. Spring 2021: *BSC6905 DIS, Vibrio Molecular Directed Independent Study, 2 credits.* T. Potdukhe
4. Spring 2021: *BSC6905 DIS, Photoheterotrophy Molecular, 2 credits.* C. Daniel.
5. Fall 2020: *Molecular Aquatic Microbial Ecology (MAME), MCB4990, 3 credits.* **Enrollment: 31 undergraduate students.**
6. Fall 2020: *BSC6905 DIS, In Silico Data Analyses, 2 credits.* J. Harrell.

**TEACHING, ctd.**

7. Fall 2020: Guest instructor: *Professional Development, BSC6840*. One 75-minute guest lecture and leading of discussion on career options, research activities and publications in academic and industrial positions. **16 graduate students.**
8. Summer 2020: *Advanced Molecular Biology and Bioinformatics for Biologists. PCB4125 and PCB5525, 3 credits. Enrollment: 13 undergraduate students and 6 graduate students.*
9. Spring 2020: *Molecular Aquatic Microbial Ecology (MAME), MCB4990 & 5990, 3 credits. Enrollment: 8 undergraduate students and 3 graduate students.*
10. Spring 2020: *MCB4905 DIS, Microbiology Research, 1 credit.* Logan Severson.
11. Spring 2020: *PCB4905 DIS, Molecular Microbial Research, 1 credit.* Gaby Castaing.
12. Fall 2019: *Microbiology. MCB3020, 3 credits. Enrollment: 120 undergraduate students*
13. Fall 2019: *DIS Microbial Ecology Research, PCB6905 1 credit.* T. Potdukhe
14. Fall 2019: *DIS Photoheterotrophic Microbial Ecology Research, PCB6905 1 credit.* C. Daniel
15. Summer 2019: *DIS, 1 credit: Photoheterotrophy Research, PCB6971.* L. Harris.
16. Summer 2019: *DIS, 1 credit: Molecular Research, PCB4905.* K. Hope.
17. Summer 2019: *Marine Field Studies, OCB3108 (FIO course), 3 credits.* Instructor Jane Caffrey. Co-Instructors: Wade Jeffrey, Frank Gilliam, Lisa Waidner. In 5<sup>th</sup> week, during UWF activities, FIO students received lecture and demonstration by Waidner (06/12/19) of staining and filtration for total prokaryote counts; students experience image capture, abundance and size data acquisition and analysis using AX70 microscope and image analysis software. Students will receive data on 10 stations collected at various locations within the Panhandle. Waidner wrote the module on prokaryote abundance and epifluorescence microscopy; wrote the exam questions pertaining to microbial ecology and microscopy. **Enrollment: 16 undergraduates**
18. Spring 2019: *Advanced Molecular Biology and Bioinformatics for Biologists. PCB4990 and PCB5990, 3 credits. Enrollment: 10 undergraduate students and 4 graduate students.*
19. Spring 2019: Guest instructor: *Aquatic Botany BOT4404C, 4 credits.* One guest lecture on harmful algal blooms and phytoplankton controls. **Enrollment: 46 undergraduates.**
20. Spring 2019: *Directed Independent Study, 1 credit: Vibrio Literature Research, PCB3905.* J. Williams.
21. Spring 2019 – Guest instructor: One guest lecture (seminar); Presented at *Biology Seminar, undergraduate and graduate, PCB4922 & PCB5924.* Seminar entitled: Photoheterotrophic Bacteria in the Pensacola Bay System. **Enrollment: 69 undergraduate students and 13 graduate students.**
22. Fall 2018: *3 sections Molecular Biology Laboratory. PCB4524L, 1 credit each section.* Developed new curriculum modules, including the use of qPCR to enumerate bacterial and human cell DNA loads in student cheek samples. **Enrollment: 61 undergraduate students total, plus 2 post-graduates auditing the course.**
23. Fall 2018: *Independent Study, Research Techniques and Lab Skills, PCB4905, 3 credits.* C. Daniel.
24. Spring 2018 – Instructor and course developer: *Advanced Molecular Biology and Bioinformatics for Biologists. PCB4990 and PCB5990, 3 credits.* Developed this new course to address a gap in existing curriculum to assist students interested in analyses of macromolecule (DNA, RNA, protein) data. **Enrollment: 12 graduate students and 8 undergraduates.**
25. Fall 2017 – Guest instructor: *Microbiology. MCB3020.* Three guest lectures, including development of new material for demonstration of Microbial Taxonomy, Phylogeny, Systematics. **Enrollment: 80 undergraduate students**

**TEACHING, ctd.**

26. Fall 2017 – Guest instructor: *Estuarine Ecology. PCB4048 and PCB5445*. One guest lecture on estuarine contaminants, with a focus on the Pensacola Bay System. **Enrollment: 2 undergraduate students and 9 graduate students.**
27. Fall 2017: *Molecular Biology Laboratory. PCB4524L, 1 credit*. Developed new curriculum modules, including the use of PCR subcloning to involve students in my current photoheterotrophy research. Students learned how to amplify proteorhodopsin genes from mixed community DNA using PCR. Students subcloned products and analyzed subcloning efficiency. **Enrollment: 10 undergraduate students. New curriculum modules were used by 3 sections, average 12 students each section.**
28. Summer 2017: *DIS, Molecular Techniques and Lab Skills, PCB6905, 3 credits*. K. Brooks.
29. Spring 2017: *Genetics Laboratory PCB3063C, 1 credit*. Re-wrote Lab Manual Part II. Trained other Instructors and TAs in molecular methods including PCR subcloning and bioinformatics for student lab activity curriculum. Designed the new bioinformatics module. **Enrollment: 24 undergraduate students. New curriculum modules were used by 4 sections, average 22 students each section.**
30. Fall 2016: *Genetics Laboratory PCB3063C, 1 credit. Enrollment: 24 undergraduate students*
31. Fall 2016– Guest instructor: *Classic Papers in Oceanography and Aquatic Ecology PCB5905. Enrollment: 8 undergraduate students*

University of Delaware

32. Fall 2009 – Guest lecturer for three consecutive sessions of *Introduction to Bioinformatics, ANSC644*. Taught theory and practice of phylogenetic analyses, and wrote and administered the Phylogenetics practical examination.

Johns Hopkins University

33. Fall 1997. Teacher’s Assistant for Johns Hopkins University, Biotechnology Graduate Program. A joint industry-academic lab training program, held at Life Technologies, Rockville, MD:
  - a. Introduction to Tissue Culture Techniques in Cell Biology
  - b. Recombinant Protein Expression, Production, and Analysis

**UWF GRADUATE STUDENTS AND COMMITTEE MEMBERSHIPS**

Serving as committee member or chair,\* M.S. thesis committee

<u>Student, Time Frame</u>	<u>Department, Committee chair</u>
a. Mallory Palatucci: Spring 2016 – Summ. 2017	Biology, chair Jim Spain
b. Khursana Duty: Fall 2017 – Summ. 2019	Biology, chair Hui-Min Chung
c. Ari Simmering: Spring 2018 – Summ. 2020	Biology, chair Wade Jeffrey
d. Erika Neat Headrick: Spring 2018 – Summ. 2019	Biology, chair Wade Jeffrey
e. Mark Prousalis: Spring 2018 – Summ 2020	EES, chair Matt Schwartz
f. Leila Harris: Fall 2018 – present	Biology, chair Wade Jeffrey
g. Trupti Potdukhe: started Fall 2019	Biology*
h. Carrie Daniel: started Fall 2019	Biology*
i. Tristan Craig: started Spring 2021	Biology*

Laboratory training and research mentoring of graduate and undergraduate students:

- 1) Jessica Valek, 3.5 months, volunteer. 6 hr per week, Fall 2016.
- 2) Carrie Daniel (Aug. 2016-Dec. 2018 as undergraduate student). 6 hr per week in Fall 2016 (paid from OUR Works!); 9 hr per week in Spr 2017 (CEDB funds), 10 hr per week in Fall 2017 (paid from STEAM grant), and 12 hr per week in Spr 2018 (CEDB funds). Directed Independent Study in Fall 2018. Fall 2019 – present: M.S. thesis student, with a research focus on photoheterotrophic microbial diversity, distribution, and resistance to grazing.
- 3) Kirsten Ayres (2017-18) Co-mentored with T. Asmuth: field work, CTD design, (Art funds).

Laboratory training and mentoring, ctd.

- 4) Jack Prior, 3 months, volunteer in microscopy, 7 hours per week in Spring 2017.
- 5) Brooke Davis, 2 months, volunteer in microscopy prep and counting, 2 hr per week, Spring 2017.
- 6) Meredith Snyder (USF Tampa), May – August, 2017, (SURP). 15 hr per week, supervised and trained on lab, analytical, and writing skills as service to UWF faculty colleague; see Synergistic Activities.
- 7) Kreston Debrick, Post-graduate Intern. 4 months, 4 hr per week, Fall 2017. Epifluorescence microscopy prep and analyses.
- 8) Guilherme de Lima (08/2017-08/2018): Volunteer, PCR and qPCR of proteorhodopsin ecotypes.
- 9) Verdion Martin (Fall 2017). Volunteer, 2 hr per week. New qPCR primer design for *nifH*.
- 10) Sara Ousley (Spring-Summer 2018): Volunteer, 5 hr per week. DNA extraction, PCR, qPCR.
- 11) Mallory Palatucci, Summer 2016-Spring 2017. Mentoring and supervision on gene annotation, bioinformatics analyses, and functional gene subcloning. (Collaboration with Jim Spain).
- 12) Rachel Capps, Fall 2016 – Summer 2017. Advisor and supervision on sediment DNA extraction, qPCR primer design and qPCR of *nifH* and 16S rDNA genes (Collaboration with Jane Caffrey).
- 13) Kendra Brooks, May – August, 2017. Instructor for Directed Independent Study (3 credits). Advisor and supervisor on flow cytometry and microscopy to target autofluorescent picoplankton and/or bacterioplankton. Additional skills taught: DNA extractions, PCR, gel electrophoresis, qPCR. Kendra defended M.S. in Spring 2018.
- 14) Khursana Duty, Nov. 2017-May 2019. Serving on M.S. advisory committee and advisor on molecular analyses of *D. melanogaster* microbiome composition. Thesis proposal title: “Investigating the Impact of Genetic Factors on Gut Microbiota Composition in Flies”
- 15) Jenny Dysvik-Edgeworth, Jan. 2018 – Nov. 2018, non-thesis M.S. student. Mentoring in molecular biology, in particular, PCR subcloning, bioinformatics, new primer development, and qPCR (collaboration with Jane Caffrey, continuation of Rachel Capps seagrass *nifH* project).
- 16) Mark Prousalis, Jan. 2018 – May 2021: molecular ecology mentoring and training in basic and advanced molecular biology techniques, including bacterioplankton DNA extraction, PCR, gel electrophoresis, qPCR. Part of the Patagonia-funded project to examine Indian Bayou bacterial communities (collaboration with Matt Schwartz, Wade Jeffrey, and Barbara Albrecht). Mark defended in Summer 2020. Fall 2020 – Summ 2021: Continue mentoring in manuscript preparation.
- 17) Jaime Williams, Jan – May 2019. Directed Independent study on *Vibrio* literature review.
- 18) Jani Ngalame, Jan. 2019 – Jan. 2020. In Spring 2019, as volunteer, teaching basic microbiology laboratory skills. Mentored Jani in SURP/GeoScholars application process. Jani also presented at the 2019 Spring Symposium. Jani was awarded GeoScholars status, partnered with Niyiah Roney (see below), co-mentored by Waidner and Kwame Owusu-Daaku. Part of the Patagonia-funded project to examine Indian Bayou bacterial communities.
- 19) Niyiah Roney, May 2019 – Jan. 2020. As part of GeoScholars collaboration, mentoring Niyiah on environmental water sampling and microbiological procedures. Part of the Patagonia-funded project to examine Indian Bayou bacterial communities.
- 20) Kelsey Hope, Sept. 2018 – present. Volunteer and OUR Project scholar Fall 2018 – Spring 2019, as part of the Indian Bayou project. Summer 2019 -Mar. 2020, volunteered on the Polar Photoheterotrophy project of Leila Harris, M.S. student. Summer 2021: Directed Independent Study in bioinformatics, new molecular tool development, and qPCR. Summer 2020: SURP student, analyzed pathogenicity-specific genes of *Vibrio vulnificus* and *V. parahaemolyticus*, presented findings at the virtual UWF SURP symposium and at her first national conference, AGU (Fall 2020). Spring 2021- present: performing molecular biology and bioinformatics research with Waidner as a UWF Biology non-thesis M.S. student.
- 21) Leila Harris, Dec. 2018 – Spr. 2020. General training on DNA extractions, end-point PCR, qPCR.

Laboratory training and mentoring, ctd.

- 22) Nicole Brown, May 2019 – Aug. 2019, Post-Grad Intern, through the UWF Office of Experiential Learning. Training on DNA extraction, DNA quantity and quality analyses, end-point and quantitative PCR. Also mentored in career skill areas such as CV/Resume development, LinkedIn and ResearchGate profile building, and other areas of career development including graduate school application process.
- 23) Gaby Castaing: Fall 2019 -April 2020, volunteered on the Polar Photoheterotrophy project of Leila Harris, M.S. student and presented results at the Spring 2020 UWF symposium.
- 24) Logan Severson: Fall 2019 -April 2020, volunteered on the Polar Photoheterotrophy project and presented results at the Spring 2020 UWF symposium.
- 25) Jade Harrell: Fall 2020. As part of a 2-credit DIS, she continued her *Bioinformatics for Biologists* summer course project, performing more in-depth research on various *Vibrio* pathogenicity genes, and other molecular markers with potential for our distinguishing between human pathogens and “other” (unknown, environmental) strains.
- 26) Trupti Potdukhe: Fall 2019 – present: M.S. thesis student, with a research focus on the distribution of *Vibrio vulnificus* and *V. parahaemolyticus*. Additional topics explored are ecological considerations, including abiotic factors and presence/abundance of harmful algal species such as *Karenia brevis*.
- 27) Tristan Craig, Spring 2021 – present, with a research focus on the distribution of microbes containing genes key to nitrification, denitrification, and nitrogen fixation. Sample locations yet to be determined. Planned thesis proposal completion in Summer 2021.

**WORKSHOPS AND PROFESSIONAL DEVELOPMENT TRAINING AT UWF**

Spring 2021: Hanover Webinar -- Understanding the RFP: the foundation of a responsive proposal (sponsored by UWF RAE)

Spring 2020: Participant in “*EvaluateUR*” with A. Schwartz (OUR), M. Schwartz (RAE), and Jill Singer, SUNY Buffalo State, who provided information regarding the use of external evaluators in educational-based grant proposals and projects.

Fall 2019: HMCSE NSF Proposal Development workshop

Throughout Spring 2019, was invited to serve as one of four reviewers on the 2018-2019 spring CUTLA review of University-wide assessment reports. For the Assessment Report Review Project, we scored and documented the quality of all departmental graduate-level (ALP) assessment reports. Training began in January 2019, with regular (usually fortnightly) meetings to validate the scoring methods and discuss ambiguities encountered in individual department reports. The final report was compiled in May 2019.

May 15, 2019: All Faculty and Students GeoScholars Initiation Session: Pre-project student and faculty surveys and learning objectives.

May 9, 2019 UWF Faculty Mentoring Workshop. Development of communication and meeting leadership skills.

April 13, 2019: UWF CUTLA Workshop: Guidelines for Curriculum Assessment.

Mar. 6, 2019: UWF CUTLA Seminar: Document the Quality of Your Service.

Feb. 8, 2019: UWF CUTLA Workshop: Tenure and Promotion.

Jan 17, 2019: UWF Amazon Business Training for UWF.

**PROFESSIONAL DEVELOPMENT, ctd.**

Dec. 6, 2018: At UWF, facilitated and attended ThermoFisher training on new quantitative PCR instrument, QuantStudio and associated software.

May 25, 2018: UWF Official Laboratory safety training seminar.

May 14-15, 2018: UWF Research & Sponsored Programs Workshop - How to Write a Successful Grant.

May 9-11, 2018. HMCSE 2018 Summer Faculty Workshop. A working event to “facilitate the preparation of plans, initiatives and other activities related to student engagement in research.”

**OTHER FORMAL TRAINING AND PROFESSIONAL DEVELOPMENT**

- Introduction to Flow Cytometry. Spring 2010. University of Delaware, Department of Biological Sciences. Operation and theory of flow cytometry and flow sorting techniques.
- “Networking and Mentoring for Postdocs in the Life Sciences.” 2009-2010. University of Delaware, Delaware Biotechnology Institute.
- ArcGIS Training. 2007. Introduction to Geography Information Systems, U of Delaware.
- Open Helix Genome Browser Training. 2005. Presented at the Delaware Biotechnology Institute, Newark, DE. In-depth training of genomics bioinformatics programs.
- Targeted Selection Interviewer Training. 1999. Development Dimensions International (DDI). Interviewing training by members of Life Technologies, Inc. Human Resources and Finance.
- “MENTTOR” (Maximizing Experience, Networks and Talent Through One-on-one Relationships). 1999 - 2000. For the Life Technologies, Inc. mentoring program, selected as one of 16 mentees from all U.S. employees. Mentor: Senior Vice President of R&D, Derek Woods, Ph.D.