Curriculum Vitae

Terrence J. Ravine , Ph.D.

Work Address:

Department of Biomedical Sciences
University of South Alabama
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Education:

Medical College of Virginia/Virginia Commonwealth University, Ph.D. Pathology	1993
University of Akron, M.S. Biology	1985
University of Akron, B.S. Medical Technology (B.S.M.T.)	1983

Teaching Experience:

Associate Professor: University of South Alabama, Dept. of Biomedical Sciences 2016 - Present

Courses taught:

- BMD 210 - Microbiology in Healthcare
- BMD 210L - Microbiology in Healthcare Lab
- BMD 251 - Human Anatomy & Physiology I
- BMD 252 - Human Anatomy & Physiology II
- BMD 494 - Directed Research Studies
- BMD 499 - Honors Research Thesis
- PT 499 - Senior Honors Project
- UGR 291/391 - Research: Healthcare-Associated Infections

Assistant Professor: University of South Alabama, Dept. of Biomedical Sciences

Courses taught:

- BMD 114 - Human Anatomy & Physiology I (formerly CLS 114)
- BMD 115 -

- x CLS 496 - Comprehensive Examination Review
- x CLS 499 - Senior Honors Project

1999-2001

Adjunct Faculty: University of South Alabama, Keesler Air Force Base, Biloxi, MS

Course taught:

- x CLS 490 - Elective Practica

Adjunct Instructor: Mississippi Gulf Coast Community College/Keesler Center, Biloxi, MS — 1996-1997, 1999-2001

Courses taught:

- x BIO 1134 - General Biology I
- x BIO 1144 - General Biology II

Education Coordinator/Clinical Instructor: Keesler Air Force Base (AFB), MS (Phase II Clinical Laboratory Technician Program /Microbiology) — 1996-1997

Clinical Instructor (Laboratory Sciences): Eglin Air Force Base, FL — 1993-1997

Graduate Student Preceptor: Dept. of Pathology, Medical College of Virginia, VA — 1992

2021 (May-July)

- Mentor - Alexondria E. Fay, Department of Biomedical Sciences. Project - Evaluating Reflectance Spectroscopy as a Method to Measure the Amount of Bacterial Pigment Present on Fabric Samples. Office of Undergraduate Research, University of South Alabama, Mobile, AL.

2019 (May-July)

- Mentor - Katelyn N. Rogers, Department of Biomedical Sciences. Project - Developing a Novel Quantitative Assay to Determine the Antibacterial Effectiveness of Chemically Synthesized Molecules Attached to Fabric Surfaces. Project was selected for oral presentation at USA Undergraduate Research Forum, University of South Alabama, Mobile, AL.

Directed Research (Undergraduate)

2021-Present

- Edgar Escalante (Biomedical Sciences) Evaluation of 8-Hydroxyquinoline (8HQ) and its Derivatives at Eliminating Dormant Bacterial Spores.
- Tia Lofton (Biomedical Sciences) Determining Lowest Concentration of Biocidal Dye Required to Control Bacterial Growth.
- Brianna Dixon (Biomedical Sciences) Determining Effects of Differences in Chloride Concentration of Biocide Dyed Fabric Samples
- Anah Hughes/Baily Welch (Biomedical Sciences) Evaluating Antimicrobial Activity of Biogenic Silver Nanoparticles Against Antibiotic Resistant Bacteria.
- Sicily L. Hardy (Biomedical Sciences) Determining Antimicrobial Activity of a Novel Biocide Dye Incorporated Into Fabric.
- Alexondria E. Fay (Biomedical Sciences) Evaluating Reflectance Spectroscopy as a Method to Measure the Amount of Bacterial Pigment Present on Fabric Samples.
- Mark H. Eggers (Biomedical Sciences), Alexondria E. Fay (Biomedical Sciences) Developing a Quantitative Chromogenic Assay to Detect Intermediate Levels of Antibacterial Activity of Fabric Treated with Biocides.
- Makenna A. Howell (Biomedical Sciences). Measuring Antibacterial Effectiveness of Various Biogenic and Chemically Produced Metallic Nanoparticles.

Directed Research (High School)

2020-2022

- Mentor for Dev V. Mehta, “Bacterial Spores Derived from *Bacillus cereus* Promote Attachment to a Radiation Therapy Immobilization Form”. International Baccalaureate Program, Davidson High School, Mobile, AL.

2017-2018

- Mentor for Julie Dees, “Bacterial Growth Inhibition Study Using Natural Oils (Lemon grass, Cinnamon, Tea tree (melaleuca)”, International Baccalaureate Program, Davidson High School, Mobile, AL.

University Honors Program

Mentor

2022-2023

- x Co-mentor: Andrea Vavrinek, Department of Biomedical Sciences. Thesis: Understanding the Mechanisms and Effects of *Pseudomonas aeruginosa* Exoenzyme Y on Intrinsic Apoptosis In Pulmonary Microvascular Endothelial Cells

2019-2020

- x

2015-2016

- Sarah Harvey, Department of Biomedical Sciences
- Anu Pandit, Department of Biomedical Sciences

2014-2015

- Devang Patel, Department of Biomedical Sciences

2013-2014

- Alyssa Stagner, Department of Biomedical Sciences
- Justin Jong, Department of Biomedical Sciences/Department of Physiology (COM)

2012-2013

- Umair Savani, Department of Biomedical Sciences
- Kathleen Strunk, Department of Biomedical Sciences
- Allia Grace G. Martinez, Department of Biomedical Sciences/Department of Microbiology and Immunology (COM)

Graduate Program

2019-2022

- Committee Member for Michael Russel. Master's Thesis: "Visualizing Muscle Assembly and Function in *C. elegans* ". Department of Biology, BLY 599 (Major Advisor: Dr. Ryan Littlefield).

Publications (peer reviewed) :

1. Brock, C. W., Mehta, D. V., Ravine, T. J. Orthotic Thermoplastic Demonstrates a Similar Contamination Potential with Bacillus Bacteria Recovered from Thermoplastic Radiation Therapy Patient Masks.

Brock, C. W., Ravine, T. J. 26th Annual Undergraduate Research Symposium. University of South Alabama, October 2024.

4. *Determining Ecotoxicological Profiles and Biodegradability of Novel Boronium Compounds using Standardized Wastewater Treatment Microbial Cultures.* Noor A. Shalan, Terrence J. Ravine, Kaushik Venkiteshwaran. 2024 SEMMS, Southeastern Medical Scientist Symposium. Vanderbilt University, Nashville, TN. September 2024.

5. *Contamination Potential of Thermoplastics Used to Construct Patient Orthoses by Antibiotic-Resistant Bacterial Pathogens Causing Healthcare-Associated Infections*. Mehta, D. V., Brock, C. W., Ravine, T. J. 2024 SEMMS, Southeastern Medical Scientist Symposium. Vanderbilt University, Nashville, TN. September 2024.

6. *Pseudomonas aeruginosa Exoenzyme Y Does Not Promote Increased Ubiquitin Expression in Pulmonary Microvascular Endothelial Cells.* Jack Spedale, Claire Kolb Troy Stevens, Ron

26. *Sodium Arachidonate Effects on Dictyostelium discoideum Aggregation.* Ravine TJ, Mata JL. University of South Alabama Research Council (USARC) Research Forum, University of South Alabama, Mobile, AL, March 2010.

27. *Flow cytometry characterization of amoebic plasma membrane surface proteins using monoclonal antibodies against human leukocytes.* Ravine TJ, Jenkins J, Polski JM University of South Alabama Research Council (USARC) Research Forum, Mobile, AL, March 2006.

28. *Growth Supportive Interactions Between Legionella pneumophila and Acanthamoeba castellanii,* Ravine TJ, Dalton HP. 5th Annual International Conference on the Biology & Pathogenicity of Free-Living Amoeba, Richmond, VA August 1992.

Intramural Funding:

1. “Development and Testing of Novel Antimicrobial Boronium Compounds” (PI). Awarded by the University of South Alabama Office of Research & Economic Development, Research and Scholarly Development Grant (RSDG), $25,000, 2023.

2. “Does Pseudomonas Aeruginosa Exo Y Infection of Pulmonary Microvascular Cells Target BCL-xL to Inhibit Intrinsic Apoptosis?” CAHP Research Support Award, $1,000, 2022.

3. "Constructing a Novel Multi-Stack Film Incorporating Antimicrobial Nanoparticles to Cover High-Touch Medical Device Surfaces to Help Prevent Healthcare-Associated Infections," (PI). 3. “Doessent Re [(.)4 oti a Bv6 (M) Twexn of el9.002 Tc 0.007 Tw 12.315 0 Td [(S)2 (t) 67.71.6 (0

-6.7 8.1742 (h)10.w 0.8a)8.9 (8)101c 0.007 Tw Tw (ded by) 6) 2(Un)10.5 (H)2.6 (e95 Tc 06)10.6 e-39.00 Sded by

2. “Determination of Reactive Oxygen Species (ROS) Formation by Oxyion Air Purifiers and Their Effect on Bacteria” (Co-PI). Sponsored Project, Oxyion, Fresno, CA. $6,306, 2020-21.

3. “Evaluation of Bacterial Attachment on Four Different Thermoplastic Immobilization Forms Used During Patient Radiation Therapy Treatment” (PI). Support received in the form of a monetary donation and/or material goods valued at $1,030, 2016.

Honors/Awards:

1. Outstanding Mentor, University of South Alabama Office of Undergraduate Research, 26th Annual USA Undergraduate Research Symposium, October 23, 2024.

2. “Top Prof” Award, Azalea Chapter of Mortar Board National Honor Society, University of South Alabama, 2024.

3. “Top Prof” Award, Azalea Chapter of Mortar Board National Honor Society, University of South Alabama, 2023.

4. “Top Prof” Award, Azalea Chapter of Mortar Board National Honor Society, University of South Alabama, 2022.

5. Faculty Award for Excellence in Research, College of Allied Health Professions, University of South Alabama, March 2022.

6. “Top Prof” Award, Azalea Chapter of Mortar Board National Honor Society, University of South Alabama, 2021.

7. “Top Prof” Award, Azalea Chapter of Mortar Board National Honor Society, University of South Alabama, 2019.

8. Harold Silverman Distinguished Author Award, American Society of Radiologic Technologists (ASRT), for the manuscript: “Attachment Potential and Survival of Bacterial Pathogens on Radiation Therapy Thermoplastic Immobilization Forms” published in the fall 2017 issue of *Radiation Therapist*, $1,000 cash prize awarded 1 June 2018.

9. “Top Prof” Award, Azalea Chapter of Mortar Board National Honor Society, University of South Alabama, 2018.

10. Faculty Award for Excellence in Research, College of Allied Health Professions, University of South Alabama, April 2018.

11. Inducted into Alpha Eta, the National Scholastic Honor Society for the Allied Health Professions. April 2018.

12. “Top Prof” Award, Azalea Chapter of Mortar Board National Honor Society, University of South Alabama, 2017

13. Harold Silverman Distinguished Author Award, American Society of Radiologic Technologists (ASRT), for the manuscript: “Risk of Patient Infection from Heating Appliances Used to Produce Thermoplastic Immobilization Devices” published in the fall 2014 issue of *Radiation Therapist*, $1,000 cash prize awarded 1 June 2015.

Review /Editorial Activities:

Journals:

1.

- x Developmental Review Panel (Autonomic Nervous System, Endocrine System, Lymphatic System and Immunity) of VanPutte, Regan, & Russo: *Seeley's Anatomy & Physiology,* 11th ed, May 2017.
- x Review of LearnSmart Labs "Endocrine Structure and Function", "Digestive System", "Respiratory System" modules, June - July 2014.

3. John Wiley & Company (2004-2014)

3.

- Biosafety Officer, Pat Capps Covey College of Allied Health Professions, 2006-Present.
- Biosafety Committee (Co-chair), Pat Capps Covey College of Allied Health Professions, 2020- Present.
- Biosafety Committee (Chair), Pat Capps Covey College of Allied Health Professions, 2006-2020.
- Dean’s Advisory Council (