National Institutes of Health
Office of Science Policy

Institutional Biosafety Committee
Registration Management System

IBC Report

Institution: Towson University
Location: Towson, MD, 21252-0001
Institution Type: Academic
File Number: MD00016
IBC Origination Date: 07/29/1997

Submission Date: 06/10/2025
Next IBC Submission Due Date: 10/22/2024

NIH Funding: Yes

Type of Submission: Annual Update

Administered Outside: No

5 Or More Voting Members: Yes
Chair and Contact: Yes
Has All Biosketches: Yes
2 Or More Local Non-Affiliated Members: Yes

Biosafety Officer: No, but reporter acknowledged NIH Guidelines
Animal Expert: Yes
Plant Expert: No , but reporter acknowledged NIH Guidelines

Committee Roster

Name	Committee Role	Date Added	Last Updated	Biosketch
Robert McCown	Local Non-Affiliated, Other: Committee Member	06/17/2013	07/12/2022	06/18/2013
Elana Ehrlich	Other: Committee Member	07/17/2013	07/12/2022	07/17/2013
John E. Weldon	Chair, Voting Contact	08/08/2013	07/12/2022	08/08/2013
Melissa Morland	Local Non-Affiliated, Other: Committee Member	08/21/2013	07/12/2022	08/21/2013
Anne Estes	Other: Committee Member	06/17/2020	07/12/2022	06/17/2020
Frank Hubbard Butler	Non-Voting Contact, Other: EHS representative	07/12/2022	07/19/2022	07/19/2022
Erin M. Harberts	Animal Expert	01/11/2023	01/11/2023	01/11/2023
Kishana Y. Taylor	Other: Committee Member	05/29/2025	05/29/2025	05/29/2025

Attachments

File Name	Description	Date Attached	Attached By
IBC Roster 2018-1019 (final).pdf	Roster for 2018-2019	01/13/2020	Matthew R. Hemm
NIH Letter 2019 (submitted).pdf	Annual Letter for 2018-2019	01/13/2020	Matthew R. Hemm
IBC Members Roster 2020.pdf	Roster for 2019-2020	06/17/2020	Barry Margulies
NIH Letter 2020.pdf	Annual letter for 2019-2020	06/17/2020	Barry Margulies
IBC Members Roster 2021.pdf	Roster for 2020-21	06/16/2021	Barry Margulies
NIH Letter 2021.pdf	Annual letter for 2020-21	06/16/2021	Barry Margulies
IBC Members Roster 2022.pdf	Roster 2022	07/13/2022	John E. Weldon
NIH Annual Letter 21-22.pdf	Annual letter 2022	07/13/2022	John E. Weldon
IBC Members Roster 2023.pdf	Roster 2023	09/06/2023	John E. Weldon
NIH Annual Letter 22-23.pdf	Annual Letter 2023	09/06/2023	John E. Weldon
IBC Members Roster.pdf	IBC Member Roster 2024-2025	05/29/2025	John E. Weldon
NIH Annual Letter 24-25.pdf	Annual Letter 2024-2025	06/10/2025	John E. Weldon

National Institutes of Health
Office of Science Policy

Institutional Biosafety Committee
Registration Management System

Committee Member Report

Committee Role: Local Non-Affiliated, Other: Committee Member
Institution: Towson University

Name: Mr. Robert McCown
Degree: MS
Title: Director of Safety

Organization: Sinai Hospital
Address: 1043 Morgan Run Drive
Finksburg, MD 21048
United States

Email: Rmccown@lifebridgehealth.org
Phone / Ext: (410) 876-0517

Biosketch

Name	Date Attached	Attached By
CV2	06/18/2013	Barry Margulies

National Institutes of Health
Office of Science Policy

Institutional Biosafety Committee
Registration Management System

Committee Member Report

Committee Role: Other: Committee Member
Institution: Towson University

Name: Dr. Elana Ehrlich
Degree: PhD
Title: Assistant Professor of Biological Sciences

Organization: Towson University
Department: Biological Sciences
Address: 8000 York Road
Towson, MD 21252
United States

Email: eehrlich@towson.edu
Phone / Ext: (410) 704-2385

Biosketch

Name	Date Attached	Attached By
elana cv 2013 TU	07/17/2013	Barry Margulies

National Institutes of Health
Office of Science Policy

Institutional Biosafety Committee
Registration Management System

Committee Member Report

Committee Role: Chair, Voting Contact
Institution: Towson University

Name: Dr. John E. Weldon
Degree: PhD
Title: Associate Professor

Organization: Towson University
Department: Department of Biological Sciences
Address: 8000 York Rd
Towson, MD 21252
United States

Email: jweldon@towson.edu
Phone / Ext: (410) 704-3191

Biosketch

Name	Date Attached	Attached By
Weldon CV	08/08/2013	Barry Margulies

National Institutes of Health
Office of Science Policy

Institutional Biosafety Committee
Registration Management System

Committee Member Report

Committee Role: Local Non-Affiliated, Other: Committee Member
Institution: Towson University

Name: Ms. Melissa Morland
Degree: MS, MBA, RBP, CBSP
Title: Assistant Director and Biosafety Officer

Organization: University of Maryland, Baltimore
Department: Environmental Health and Safety
Address: 714 W. Lombard St.
Baltimore, MD 21201
United States

Email: mmorland@af.umaryland.edu
Phone / Ext: (410) 706-7845

Biosketch

Name	Date Attached	Attached By
Morland Melissa Ann Bio 03-19-2013	08/21/2013	Barry Margulies

National Institutes of Health
Office of Science Policy

Institutional Biosafety Committee
Registration Management System

Committee Member Report

Committee Role: Other: Committee Member
Institution: Towson University

Name: Dr. Anne Estes

Biosketch

Name	Date Attached	Attached By
2020_0617_EstesAnne_CV.pdf	06/17/2020	Barry Margulies

National Institutes of Health
Office of Science Policy

Institutional Biosafety Committee
Registration Management System

Committee Member Report

Committee Role: Non-Voting Contact, Other: EHS representative
Institution: Towson University

Name: Mr. Frank Hubbard Butler
Title: Environmental Safety Assistant

Organization: Towson University
Department: Environmental Health and Safety
Address: 8000 York Rd
Towson, MD 21252-0001
United States

Email: fhubbardbutler@towson.edu
Phone / Ext: (410) 704-3358

Biosketch

Name	Date Attached	Attached By
Resume, 2022FHB.pdf	07/19/2022	John E. Weldon

National Institutes of Health
Office of Science Policy

Institutional Biosafety Committee
Registration Management System

Committee Member Report

Committee Role: Animal Expert
Institution: Towson University

Name: Erin M. Harberts
Degree: PhD

Biosketch

Name	Date Attached	Attached By
230111 Harberts CV.pdf	01/11/2023	John E. Weldon

National Institutes of Health
Office of Science Policy

Institutional Biosafety Committee
Registration Management System

Committee Member Report

Committee Role: Other: Committee Member
Institution: Towson University

Name: Kishana Y. Taylor
Degree: PhD

Biosketch

Name	Date Attached	Attached By
KishanaTaylorCV_MAY2025.pdf	05/29/2025	John E. Weldon

John Edward Weldon, Ph.D.

Research Interests

I am broadly interested in the molecular biology/biochemistry of proteins. My specific research interests include using an understanding of basic molecular processes to engineer protein therapeutics.

Education

2006 Ph.D., Biology, Johns Hopkins University (Baltimore, MD)
Laboratory of Dr. Robert F. Schleif

2000 B.A., Biology, St. Mary's College of Maryland (St. Mary's City, MD)
magna cum laude, Honors Program graduate with Commendation

Teaching & Research Experience

2012-present Assistant Professor, Department of Biological Sciences
Towson University (Towson, MD)

2008-2012 Instructor, *Biochemistry I & II*
Foundation for Advanced Education in the Sciences Graduate School (Bethesda, MD)

2007/2008/2010 Summer Student Mentor
National Cancer Institute (NCI), National Institutes of Health (NIH; Bethesda, MD)

2006-2012 Postdoctoral Fellow
NCI, NIH, Laboratory of Molecular Biology, Dr. Ira Pastan (Chief)

2005 Course Design & Instructor: *Topics in Molecular Evolution*: *From Astrobiology to Cancer*
Johns Hopkins University (Baltimore, MD)

2002 Lecture Teaching Assistant: *Advanced Molecular Biology*
Johns Hopkins University

2002 Lecture Teaching Assistant & Laboratory Instructor: *Cell Biology*
Johns Hopkins University

2001-2003 Co-founder and co-chair, Biology Student Series (a student-directed seminar series)
Johns Hopkins University

2001 Lecture Teaching Assistant & Laboratory Instructor: *Biochemistry*
Johns Hopkins University

2000-2005 Graduate Student, Department of Biology
Johns Hopkins University, Dr. Robert F. Schleif

1994-2000 Summer Student,
National Eye Institute, NIH, Laboratory of Retinal Cell and Molecular Biology, Dr. G. J. Chader, Dr. J. Tombran-Tink, and Dr. S. P. Becerra.

Continuing Education

2011 Scientific Management Training Seminar (Timothy Quigg)
Personnel and project management training (
http://ccr.cancer.gov/careers/courses/smt/default.asp)

2011 Scientists Teaching Science (Barbara Houtz)
Science pedagogy course (https://www.training.nih.gov/sts_main_page)

2011 Workplace Dynamics Series
Leadership development seminars (https://www.training.nih.gov/leadership_training)

2011 Demystifying Medicine
Translational research course (http://demystifyingmedicine.od.nih.gov/)

2010 Translational Research in Clinical Oncology
Translational research course (http://ccr.cancer.gov/careers/courses/traco/)

Honors and Awards

2009-2011 Federal Technology Transfer Award, NIH

2009 Fellows Award for Research Excellence (FARE), NIH

2006-2009 Pharmacology Research Associate (PRAT) Fellowship Award, NIGMS, NIH

Honors and Awards (cont'd)

2001 Honorable Mention, National Science Foundation Graduate Research Fellowship
2000 Honorable Mention, Howard Hughes Graduate Research Fellowship
1998 *Beta Beta Beta* Biological Honor Society, *Rho Gamma* Chapter

Patents

2010 Deletions in domain II of *Pseudomonas* exotoxin A that remove immunogenic epitopes,
Publication number: US 2010-0215656 A1, Application Number: 12/676,203
2012 Recombinant immunotoxin targeting mesothelin
Patent application number: PCT/US2012/036456

Professional Affiliations

American Association for Cancer Research (AACR)
American Association for the Advancement of Science (AAAS)
The Protein Society

Posters

2010 NCI Fellows and Young Investigators Colloquium
"Characterization of SS1P-LR, a recombinant immunotoxin targeting mesothelin that is resistant to lysosomal degradation"
2009 NIH Research Festival
"Characterization of SS1P-LR, a recombinant immunotoxin targeting mesothelin that is resistant to lysosomal degradation"
2009 The Protein Society Annual Meeting
"A protease-resistant immunotoxin against CD22 with greatly increased activity against CLL and diminished animal toxicity"
2008 Science in the Laboratory of Molecular Biology, NCI: Lessons from History and Prospects for the Future
"Improved therapeutic activity of an anti-CD22 immunotoxin resistant to lysosomal degradation"
2008 NCI Cancer Immunology and Immunotherapy Meeting
"Improved therapeutic activity of an anti-CD22 immunotoxin resistant to lysosomal degradation"
2008 NIH Research Festival
"Improved therapeutic activity of an anti-CD22 immunotoxin resistant to lysosomal degradation"
2007 Molecular targets and Cancer Therapeutics (AACR, NCI, EORTC) Conference
"Improved design of *Pseudomonas* exotoxin A-based Immunotoxins"
2007 NIH Research Festival
"Improved design of *Pseudomonas* exotoxin A-based Immunotoxins"

Talks

2008 Pharmacology Research Associate (PRAT) Fellowship Seminar Series
"Designing *Pseudomonas* exotoxin A immunotoxins for improved therapeutic characteristics."
2009 Closing the Loop: A Celebration of the Scientific Life of Robert F. Schleif
"Immunotoxins for the targeted treatment of cancer: engineering a "magic bullet"."
2010 Laboratory of Molecular Biology Seminar Series
"Improving the design of recombinant immunotoxins made from *Pseudomonas* exotoxin A."

Publications

Weldon JE, Xiang L, Zhang J, Beers R, Walker DA, Onda M, Hassan R, and Pastan I. (2013) A recombinant immunotoxin against the tumor-associated antigen mesothelin reengineered for high activity, low off-target toxicity, and reduced antigenicity. *Mol Cancer Ther*. 12(1):48-57.

Mazor R, Vassall AN, Eberle JA, Beers R, **Weldon JE**, Venzon DJ, Tsang KY, Benhar I, and Pastan I. (2012) Identification and elimination of an immunodominant T cell epitope in recombinant immunotoxins based on *Pseudomonas* exotoxin A. *Proc Natl Acad Sci U S A.* 109(51):E3597-603.

Liu W, Onda M, Kim C, Xiang L, **Weldon JE**, Lee B, and Pastan I. (2012) A recombinant immunotoxin engineered for increased stability by adding a disulfide bond has decreased immunogenicity. *Protein Eng Des Sel*. 25(1):1-6.

Weldon JE and Pastan I. (2011) A guide to taming a toxin: recombinant immunotoxins constructed from *Pseudomonas* exotoxin A for the treatment of cancer. *FEBS J*. 278(23):4683-700.

Pastan I, Onda M, **Weldon J**, Fitzgerald D, and Kreitman R. (2011) Immunotoxins with decreased immunogenicity and improved activity. *Leuk Lymphoma*. 52 Suppl 2:87-90.

Onda M, Beers R, Xiang L, Lee B, **Weldon JE**, Kreitman RJ, and Pastan I. (2011) Recombinant immunotoxin against B-cell malignancies with no immunogenicity in mice by removal of B-cell epitopes. *Proc Natl Acad Sci U S A.* 108(14):5742-7.

Hansen JK, **Weldon JE**, Xiang L, Beers R, Onda M, and Pastan I. (2010) A recombinant immunotoxin targeting CD22 with low immunogenicity, low nonspecific toxicity, and high antitumor activity in mice. *J Immunother.* 33: 297-304.

Weldon JE, Xiang L, Chertov O, Margulies I, Kreitman RJ, Fitzgerald DJ, and Pastan I. (2009) A protease-resistant immunotoxin against CD22 with greatly increased activity against CLL and diminished animal toxicity. *Blood*. 113: 3792-800.

Becerra SP, Perez-Mediavilla LA, **Weldon JE**, Locatelli-Hoops S, deS Senanayake P, Notari L, Notario V, and Hollyfield JG. (2008) Pigment epithelium-derived factor binds to hyaluronan: Mapping of a hyaluronan binding site. *J. Biol. Chem.* 283: 33310-20.

Weldon JE, Rodgers ME, Larkin C, and Schleif RF. (2007) Structure and properties of a truly apo form of AraC dimerization domain. *Proteins* 66: 646-654.

Weldon JE and Schleif RF. (2006) Specific interactions by the N-terminal arm inhibit self-association of the AraC dimerization domain. *Protein Sci*. 15: 2828-2835.

Weldon JE (2005) Understanding and manipulating the β-kiss interaction in the AraC protein. Department of Biology, Zanvyl Krieger School of Arts and Sciences, Johns Hopkins University, Baltimore, MD. Ph.D. thesis.

Alberdi EM*, **Weldon JE*,** and Becerra SP. (2003) Glycosaminoglycans in human retinoblastoma cells: heparan sulfate, a modulator of the pigment epithelium-derived factor-receptor interactions. *BMC Biochem*. 4: 1. *EMA & JEW are co-first authors.

Bessman MJ, Walsh JD, Dunn CA, Swaminathan J, **Weldon JE**, and Shen J. (2001) The gene ygdP, associated with the invasiveness of Escherichia coli K1, designates a Nudix hydrolase, Orf176, active on adenosine-(5')-pentaphospho-(5')-adenosine (Ap_5A). *J. Biol. Chem*. 276: 37834-37838.

Frank Hubbard Butler

11513 Basswood Court
Laurel, MD 20708
443-834-0134
fchbutler@gmail.com

Summary of Qualifications

Possesses quality control and research experience in the biotechnology and chemical industries and proven ability in database administration.

Skilled in independent performance of laboratory work using SOPs, conducting physical inventories, performing laboratory safety inspections, troubleshooting technical issues, as well as the provision of data analysis, special reports for periodic projects, and annual reports for quality assurance.

Experienced in conducting online patent research, providing regulatory support to supervisors, and providing technical support to clients, manufacturers, and other departments within company.

Highly adept in development of databases, forms, logs, spreadsheets, and standard operating procedures.

Successful in development of biofilm remover for one manufacturing firm, development of QC department and cutting costs in production for another manufacturing firm, and successful configuration and implementation of a web-based chemical inventory database for a university.

Great work ethic and team player.

Education

University of Maryland, University College
Master of Science in Environmental and Waste Management, December 2018; 3.917 GPA

University of Maryland, Baltimore County
Bachelor of Science in Chemistry, May 2007

Professional Experience

Towson University, Towson, MD
Environmental Health & Safety
Environmental Health & Safety Manager, Interim (February 2021-present)
Safety Assistant (January 2013-February 2021)

- Administering chemical inventory database for campus faculty and staff
- Graduated from LEAP internal leadership program
- Performing functions as part of Occupational Safety and Health Program for OSHA/MOSH

compliance, such as maintenance of hazard communications (SDS, chemical inventory, etc.), inspections for eyewashes/safety showers, fume hoods, and laboratory safety, in addition to providing training to staff as needed

Vorbeck Materials Corporation, Jessup, MD
Production
Operations & Quality Control Associate (March 2011-September 2012)

- Assisted in R&D for graphene powder and graphene-based products
- Assisted in creation of P&IDs, updated HAZOPs for manufacturing process in pursuit of ISO 9001 certification
- Certified in IATA and RCRA/DOT shipping
- Cut raw materials cost per batch by 72%, and optimized process with different material of construction saving $1,000s/mo in operating costs
- Developed Quality Control department, creating operational documents including product labels, logs, production portfolios, SOPs, and specifications for raw materials, finished products, and packaging; requesting and analyzing raw material samples from vendors; testing production batches at various process stages; preparing customer samples for shipment
- Utilized various analytical equipment in quality control including but not limited to moisture analyzer, thermal gravimetric analyzer, particle size analyzer, Zahn cup, thickness gauge, and BET surface area analyzer

Sterilex Corporation, Owings Mills, MD
Quality Control/Research & Development
Research Assistant (July 2007-June 2010)

- Assisted Customer Service/Sales Dept by creating cost spreadsheets and technical reports in response to product inquiries
- Assisted in editing and organizing documentation for EPA compliance and Quality Management System
- Coordinated shipments of stockpiled obsolete inventory and waste product
- Created lab chemical and equipment inventories, sample and order logs, protocol for packaging outgoing samples for shipment
- Development of experimental Perquat biofilm removers
- Maintained lab notebooks, safety supplies, lab equipment, and consumables
- Utilized UV-Vis, Wet Chemistry Methods

Skills

- Technical proficiency in Microsoft Office Suite (Word, Excel, Powerpoint, Access, and Outlook).
- CAD Experience
- 60+ WPM
- Problem Solving
- Attention to detail
- Customer Service

Erin M. Harberts, PhD
Assistant Professor, Department of Biological Sciences,
The Jess and Mildred Fischer College of Science and Mathematics, Towson University
8000 York Road, Towson, MD 21252
Telephone: (410) 704-2623 Email: eharberts@towson.edu

EDUCATION

Postdoctoral Fellowship, 2014-2020, Department of Microbial Pathogenesis, University of Maryland, Baltimore, MD. Advisor: Dr. Robert K. Ernst

Ph.D., 2014, University of Maryland, Baltimore, Maryland. Advisor: Dr. Anthony A. Gaspari. Major – Microbiology and Immunology

Postbaccalaureate Fellowship, 2008-2010, Viral Immunology Section, National Institute of Neurological Disease and Stroke, National Institutes of Health, Bethesda, MD. Advisor: Dr. Steven Jacobson

B.A., 2008, Colgate University, Hamilton, New York. Major – Molecular Biology, Minor– Education with New York State Teaching Certificate

PROFESSIONAL EXPERIENCE

2022 – present	Assistant Professor, *Immunology, Molecular Biology, CURE Lab Course,* Towson University, Towson, MD
2020 – 2022	Lecturer, *Immunology, Molecular Biology*, *Faculty Research Seminar,* Towson University, Towson, MD
2020	Guest Lecturer, *Biology and Chemistry Senior Seminar*, Coppin State University, Baltimore, MD
2014 – 2018	Affiliate Faculty, *Microbiology, Cell and Molecular Biology, Organismal Biology*, Loyola University, Baltimore, MD
2015	Research Mentor, *Directed a Research Semester for Loyola student Kate Smith*, UMB/Loyola Collaboration, Baltimore, MD
2013 – 2014	Adjunct Faculty, *Anatomy and Physiology,* Community College of Baltimore County, Baltimore, MD
2012 – 2018	Leader/Facilitator, *Small Groups for Medical School Immunology*, University of Maryland Medical School, Baltimore, MD
2012 – 2013	Teaching Assistant, *Bioinformatics*, University of Maryland Medical School, Baltimore, MD
2011 – 2012	Director, *Cutaneous Immunology Journal Club for Dermatology Residents*, Dermatology Department, University of Maryland, Baltimore, MD

FUNDING

2022-present	NIH/NIGMS, *Bridges to the Doctorate: A Partnership Between Towson University and University of Maryland School of Medicine,* R25GM119970-03. Role: Mentor.
2021-2022	Faculty Development and Research Committee Grant, Towson University. ($5,976) *Septic Shock: Defining Alternative Pathways of Activation.* Role: PI.

2021-2022	NIH/NIGMS, *Facilitating seamless transitions from community college to Towson University*, R25GM058264-17. Role: Senior Research Personnel.
2020-2021	Faculty Trainee, TU REP Inclusive Excellence, HHMI 52008712
2018-2020	Postdoctoral Trainee, Signaling Pathways in Innate Immunity, T32AI095190-02
2013-2014	Graduate Student Trainee, Signaling Pathways in Innate Immunity, T32AI095190-02

PUBLICATION LIST

1. **Harberts EM**, Varisco DJ, Izac J, Fields J, Smith R, Duvall J, Snyder G, Ernst RK. Lipid A mimetics BECC438 and BECC470 potentiate durable and balanced immune responses using an ovalbumin murine vaccine model. In preparation for submission to Immunohorizons.
2. Frieman M, Haupt R, Baracco L, **Harberts EM**, Loganathan M, Kerstetter L, Krammer F, Coughlan L, Ernst RK. Enhancing the protection of Influenza virus vaccines with BECC TLR4 adjuvant in aged mice. In press at Scientific Reports. Link to preprint: https://doi.org/10.21203/rs.3.rs-2079146/v2
3. Alexander-Floyd J, Bass AR, **Harberts EM**, Grubaugh D, Buxbaum JD, Brodsky IE, Ernst RK, Shin S. (2022) Human TLR4 and noncanonical inflammasome activation by distinct lipopolysaccharide variants. Infection and Immunity. 90(8): e0020822. PMID: 35862709.
4. **Harberts EM**, Grubaugh D, Akuma D, Shin S, Ernst RK, Brodsky I. (2022) Position-specific secondary acylation determines detection of lipid A by murine TLR4 and caspase-11. Infection and Immunity. 90(8): e0020122. PMID: 35862717.
5. Haupt RE, **Harberts EM**, Kitz RJ, Strohmeier S, Krammer F, Ernst RK, Frieman MB. (2021) Novel TLR4 adjuvant elicits protection against homologous and heterologous Influenza A infection. Vaccine. 39(36):5205-5213. PMID: 34362603.
6. Zacharia A, **Harberts E**, Valencia S, Wu E, Myers B, Sanders C, Larson NR, Middaugh CR, Difilippantonio, Kimbauer R, Roden RB, Pinto LA, Shoemaker RH, Ernst RK, Marshall JD. (2021) Optimization of RG1-VLP vaccine performance in mice with novel TLR4 agonists. Vaccine. 39(2):292-302. PMID: 33309485.
7. Chandler CE, **Harberts E**, Pelletier MR, Thaipisttikul I, Jones JW, Hajjar AM, Sahl J, Goodlett DR, Pride AC, Rasko DA, Trent MS, Bishop RE, Ernst RK. (2020) Early evolutionary loss of the lipid A modifying enzyme PagP allows for innate immune evasion in *Yersinia pestis*. PNAS. 117(37):22984-22991. PMID: 32868431.
8. Richard K, Perkins DJ, **Harberts EM**, Song Y, Mahurkar A, Nallar S, Shirey KA, Lai W, Gopalakrishnan A, Vlk A, Hawkins LD, Ernst RK, Vogel SN. (2020) Dissociation of TRIF bias and adjuvanticity. Vaccine. pii: S0264-410X(20)30536-3. PMID: 32389496
9. **Harberts E**, Liang T, Yoon SH, Opene BN, McFarland M, Goodlett DR, Ernst RK. (2020) TLR4-independent effects of LPS identified using longitudinal serum proteomics. Journal of Proteome Research. 19(3): 1258-1266. PMID: 32037835
10. Chandler CE, **Harberts EM**, Ernst RK. Pathogen sensing: Toll-like receptors and NODs (Innate Immunity). (2019) Encyclopedia of Microbiology, Reference Module in Life Sciences; doi:10.1016/B978-0-12-809633-8.90775-1.
11. Chandler CE, **Harberts EM**, Laemmermann T, Zeng Q, Opene BN, Germain RN, Jewell C, Scott AJ, Ernst RK. (2018) *In vivo* intradermal delivery of bacteria using microneedle arrays. Infect Immun. 86(9):e00406-18. PMID: 29986891
12. Gregg KA, **Harberts E**, Gardner FM, Pelletier MR, Cayatte C, Yu L, McCarthy MP, Marshall JD, Ernst RK. (2018) A lipid A-based TLR4 mimetic effectively adjuvants a Yersinia pestis rF-V1 subunit vaccine in a murine challenge model. Vaccine. 36(28):4023-4031. PMID: 29861179

13. Oyler BL, Khan MM, Smith DF, **Harberts EM**, Kilgour PDA, Ernst RK, Cross AS, Goodlett DR. (2018) Top down tandem mass spectrometric analysis of a chemically modified rough-type lipopolysaccharide vaccine candidate. JASMA. 29(6): 1221-1229. PMID: 29464544
14. Gregg KA, **Harberts E**, Gardner FM, Pelletier MR, Cayatte C, Yu L, McCarthy MP, Marshall JD, and Ernst RK. (2017) Rationally Designed TLR4 Ligands for Vaccine Adjuvant Discovery. MBio. 8(3). pii: e00492-17. PMID: 28487429
15. Zhou H, **Harberts E**, Fishelevich R, Gaspari AA. TLR4 acts as a death receptor for ultraviolet radiation (UVR) through IRAK-independent and FADD-dependent pathway in macrophages. Exp Dermatol. 2016. 25(12):949-955. PMID: 27676214
16. **Harberts E**, Heitmiller K, Gaspari AA. Cell death and skin disease. 2016. Springer Publishing in: Clinical and Basic Immunodermatology.
17. **Harberts E**, Zhou H, Fishelevich R, Liu J, Gaspari AA. Ultraviolet radiation signaling through TLR4/MyD88 constrains DNA repair and plays a role in cutaneous immunosuppression. J Immunology. 2015. 194(7): 3127-35. PMID: 25716994
18. Tuchinda P, Liu H, Tammaro A, **Harberts E**, Gaspari AA. Resolution of occupational dermatitis related to manganese exposures. Dermatitis. 2014. 25(5): 280-1. PMID: 25207694
19. Liu H, Tuchinda P, Fishelevich R, **Harberts E**, Gaspari AA. Human in vitro skin organ culture as a model system for evaluating DNA repair. J of Dermatological Science. 2014. 74(3): 236-41. PMID: 24636351
20. Shallcross L, Ritchie S, **Harberts E**, Tammaro A, Gaitens J, Gaspari AA. Manganese oxidation state as a cause of irritant patch test reactions. Dermatitis. 2014. 25(2):66-71. PMID: 24603521
21. Liu J, **Harberts E**, Tammaro A, Girardi N, Filler RB, Fishelevich R, Temann A, Limon PL, Girardi M, Flavell RA, Gaspari AA. Allergen-specific Th9 regulate responses in allergic contact dermatitis. J of Investigative Dermatology. 2014. 134(7): 1903-11. PMID: 24487305
22. **Harberts E**, Fishelevich R, Liu J, Atamas SP, Gaspari AA. MyD88 mediates the decision to die by apoptosis or necroptosis after UV irradiation. Innate Immunity. 2014. 20(5): 529-39. PMID: 24048771
23. Shiu J, **Harberts E**, Gaspari AA, Nickoloff BJ. Skin: Immunological Defence Mechanisms. In: eLS 2013, John Wiley & Sons Ltd: Chichester http://www.els.net/ [DOI: 10.1002/9780470015902.a0001215.pub3]
24. McDiarmid MA, Gaitens JM, Hines S, Breyer R, Wong-You-Cheong JJ, Engelhardt SM, Oliver M, Gucer P, Kane R, Cernich A, Kaup B, Hoover D, Gaspari AA, Liu J, **Harberts E**, Brown L, Centeno JA, Gray PJ, Xu H, Squibb KS. The Gulf War depleted uranium cohort at 20: Bioassay results and novel approaches to fragment surveillance. Health Physics. 2013. 104(4): 347-361. PMID: 23439138
25. **Harberts E**, Gaspari AA. TLR signaling and DNA repair: Are they associated? J of Investigative Dermatology. 2013. 133(2): 296-302. PMID: 22931928
26. Leibovitch E, Wohler J, Macri S, Montanic K, **Harberts E**, Mines G, Pietro M, Ellis M, Westmoreland S, Silva A, Reich D, Jacobson S. Novel marmoset (Callithrix jaccus) model of Human Herpesvirus 6A and 6B infections: Immunologic, virologic, and radiologic characterization. PLOS Pathogens. 2013. 9(1): e1003138. PMID: 23382677
27. **Harberts E**, Datta D, Wohler J, Chen S, Oh U, Jacobson S. Translocator protein 18 kDa (TSPO) expression in Multiple Sclerosis patients. J of Neuroimmune Pharmacology. 2013. 8(1): 57-57. PMID: 22956240
28. Balato A, Zhao Y, **Harberts E**, Groleau P, Liu J, Fishelevich R, Gaspari AA. CD1d-dependent, NKT cell cytotoxicity against keratinocytes in allergic contact dermatitis. Experimental Dermatology. 2012. 21(12): 915-920. PMID: 23171451

29. Astry B, **Harberts E**, Moudgil KD. A cytokine-centric view of the pathogenesis and treatment of autoimmune arthritis. J of Interferon and Cytokine Research. 2011. 31(12): 927-40. PMID: 22149412
30. **Harberts E**, Yao K, Wohler J, Maric D, Ohayon J, Henkin R, Jacobson S. Human herpesvirus-6 entry into the central nervous system through the olfactory pathway. Proc Natl Acad Sci USA. 2011. 108(33): 13734-9. PMID: 21825120
31. Oh U, Fujita M, Ikonomidou V, Evangelou I, Matsuura E, **Harberts E**, Ohayon J, Pike V, Zhang Y, Zoghbi S, Innis R, Jacobson S. *Translocator protein PET imaging for glial activation in multiple sclerosis.* J of Neuroimmune Pharmacology. 2011. 6(3): 354-61. PMID: 20872081

PATENTS AND INVENTIONS

1. Robert K Ernst, Christopher M Jewell, Erin M Harberts, Robert S Oakes. Use of microneedles formulated with BECC compounds for the stimulation of hair growth. Invention disclosure submitted. UMB Docket Number: 2021-022.
2. Robert K Ernst, Alison J Scott, Erin M Harberts. Transgenic mouse containing the human TLR4 receptor. Invention with tangible research property assigned. UMB Docket Number: 2019-067.
3. Robert K Ernst, Alison J Scott, Erin M Harberts. Transgenic mouse containing the human MD-2 receptor. Invention with tangible research property assigned. UMB Docket Number: 2019-066.
4. Robert K Ernst, Alison J Scott, Erin M Harberts. Methods of treating sepsis using anti-sepsis Lipid A (ASLA) based therapeutics. Pending patent US-2020-0121795-A1. Invention relates to use of bacterial enzyme combinatorial chemistry rationally designed lipid A mimetics in the treatment of septic shock.

INVITED SEMINARS AND ORAL PRESENTATIONS AT CONFERENCES

1. American Association of Immunologists, Honolulu, HI, "Novel lipid A mimetics (BECC438 and BECC470) act as potent adjuvants in bacterial and viral subunit vaccines", 2020- cancelled due to SARS-CoV2
2. European Congress of Clinical Microbiology and Infectious Disease, Paris, France, "Novel lipid A mimetics (BECC438 and BECC470) act as potent adjuvants in bacterial and viral subunit vaccines", 2020- cancelled due to SARS-CoV2
3. American Society for Biochemistry and Molecular Biology, Towson, MD, "Development of Lipid A mimetics as vaccine adjuvants", 2020
4. Inflammation Research Group, UMB, Baltimore, MD, "Development of Lipid A mimetics as vaccine adjuvants", 2019
5. UMB/UMCP Cross-Talk Symposium, College Park, MD, "Development of Bacterial Enzyme Combinatorial Chemistry-derived TLR4-agonist mimetics as vaccine adjuvants", 2019
6. American Society for Mass Spectometry, San Diego, CA, "Modeling septic shock via longitudinal serum proteomics", 2018
7. American Association of Immunologists, Washington, DC, "Rationally designed TLR4 ligands for vaccine adjuvant discovery", 2017
8. AllCells, Webinar, "*In vitro* human primary cell based screening assays for vaccine adjuvant development", 2017
9. MidAtlantic Microbial Pathogenesis, Wintergreen, VA. "Rationally designed TLR4 ligands for vaccine adjuvant discovery", 2017
10. UMB/UMCP Cross-Talk, Shady Grove, MD, "Ultraviolet-radiation induced signaling through TLR4/MyD88 constrains DNA repair and plays a role in cutaneous immunosuppression", 2014

11. Society for Investigative Dermatology, Albuquerque, NM. "Ultraviolet-radiation induced signaling through TLR4/MyD88 constrains DNA repair and plays a role in cutaneous immunosuppression", 2014
12. International Investigative Dermatology, Edinburgh, Scotland, "MyD88 plays a role in deciding between apoptotic and necroptotic cell death after UV irradiation", 2013
13. American Association of Immunologists, Honolulu, HI, "MyD88 plays a role in deciding between apoptotic and necroptotic cell death after UV irradiation", 2013

HONORS AND AWARDS

2022	Undergraduate Faculty Grant, American Association of Immunologists
2021	Undergraduate Faculty Grant, American Association of Immunologists
2020-2021	Public Policy Fellowship Program, American Association of Immunologists
2020	Trainee Abstract Award, American Association of Immunologists
2019	Trainee Travel Award, Mid-Atlantic Microbial Pathogenesis Meeting
2017	Trainee Travel Award, Mid-Atlantic Microbial Pathogenesis Meeting
2014	James Kaper Award, Molecular Microbiology and Immunology Program, UMB
2013	National Graduate Student Research Conference, NIH, Bethesda, MD
2013	Albert M. Kligman Travel Fellowship Award, Society for Investigative Dermatology
2013	Trainee Abstract Award, American Association of Immunologists
2012	Graduate Student Travel Award, Biolegend
2007	Outstanding Summer Student Award, NINDS, NIH

Research Student Awards

2022 Junela Hunat, 1st Place Poster, Undergraduate, Department of Biological Sciences Student Research Symposium, Towson University, *"Evaluation of Dematin Expression in Wild-Type and TLR4-/- Mice for Application in Studies of Endotoxemia"*

2022 Mehnaz Falguni, 2nd Place Poster, Graduate, Department of Biological Sciences Student Research Symposium, *"Tagging LPS to Elucidate Mechanisms of Complement Activation"*

2022 Phoebe Calkins, Research Impact Award, Undergraduate Research and Creative Inquiry, Towson University, *"Identification of Food Contaminants Using Innate Immune Toll-Like Receptors (TLRs)"*

2022 Junela Hunat, 1st Place Poster, University System of Maryland (USM) Louis Stokes Alliance for Minority Participation (LSAMP) Research Symposium, *"Evaluation of Dematin Expression in Wild-Type and TLR4-/- Mice for Application in Studies of Endotoxemia"*

2022 Kathryn Nunez, 1st Place Poster, Office of Undergraduate Research and Creative Inquiry Spring Forum, Towson University, *"The Role of Fibrinogen in the Molecular Response of Septic Shock"*

2021 Kathryn Nunez, 1st Place Poster, Undergraduate, Department of Biological Sciences Student Research Symposium, Towson University, *"The Molecular Response of Alternative Pathways Activated During Septic Shock"*

2021 Phuc Gin and Kerri Keenan, 3rd Place Oral Presentation, Office of Undergraduate Research and Creative Inquiry Spring Forum, Towson University, *"Immunological Profiling of CD-1 Outbred Mice with Novel Vaccine Adjuvants"*

2015 Kaitlyn Smith, 3rd Place Oral Presentation, Undergraduate Research Colloquium, Loyola University, *"Identification of a Rationally Designed LPS Molecule that Outcompetes Naturally Occurring Pro-Inflammatory Forms of LPS"*

Student Funding

Bridges-to-Doctorate, Towson University: Mehnaz Falguni, 2022-present

Marion B. Sewer Distinguished Scholarship for Undergraduates (ASBMB): Kathryn Nunez, 2022

Sweeting Fellowship, Towson University: Kathryn Nunez, Summer 2022

Louis Stokes Alliance for Minority Participation (LSAMP): Junela Cecile Hunat, Summer 2022
Michel Kane-Jackson, Summer 2022

Bridges-to-Baccalaureate, Towson University: Jessica Delos-Santos, Summer 2021

Undergraduate Research Awards, Towson University:

Fall 2022, Junela Hunat, *"Evaluation of dematin expression in endotoxemic WT and TLR4 KO mice"*
Fall 2022, Hiba Awan, *"Investigating Pgam2 at Transcriptional Level in Septic Mice"*
Spring 2022, Mehnaz Falguni, Phoebe Calkins, Anique Aaron, *"Complement Immune Response Activation in TLR4 Knockout Cells"*
Spring 2022, Junela Cecile Hunat, *"Investigation of Dmtn Gene Expression Using a Cell Culture Model of Endotoxemia"*
Spring 2022, Kathryn Nunez, *"The Molecular Response of Alternative Pathways Activated During Septic Shock"*
Spring 2022, Zachary Williford, Michael Lukianenko, Michel Kane-Jackson, *"Generation of Structurally Diverse Lipid A"*
Spring 2021, Phuc Gin, *"Immunological Profile of CD-1 Mice in an Adjuvanted Vaccine Model"*
Spring 2021, Kerri Keenan, *"Immunological Profile of CD-1 Mice Vaccinated with Ova-BECC438"*

PROFESSIONAL ACTIVITIES AND SERVICE

Service at Towson University

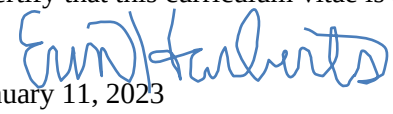
Student Invited Speaker for Tri-Beta Induction Ceremony (12/9/22)
Judge for the FCSM Student Research Symposium (12/4/20, 12/10/21, 5/13/22)
Thesis Committee Member for: Cheyenne Palm (2020-2022)
Terra Riddick (2021-present)
Dayshia Kerney (2022-present)
Matthew Constantine (2022-present)
Matthew Bonett (2022-present)
Write Professional Recommendation Letters in Support of TU Students (May 2021-present)
First Year Experience (FYE) Advisor (September 2021-May 2022)

Professional Society Memberships

2019	European Society for Clinical Microbiology and Infectious Diseases
2019	American Society for Microbiology
2018	International Endotoxin and Innate Immunity Society
2018	American Society for Mass Spectrometry
2012	Society for Investigative Dermatology
2012	American Association of Immunologists
2009	International Society for Neurovirology

STATEMENT

TO WHOM IT MAY CONCERN:
I certify that this curriculum vitae is a current and accurate statement of my professional record.



January 11, 2023

Robert A. McCown, CHSP, CEA
1043 Morgan Run Drive
Finksburg MD 21048
410-876-0517

EDUCATION:

Sc.D. Industrial Hygiene ABD
University of Massachusetts at Lowell, Lowell MA

M.S. Industrial Hygiene 1992
University of Massachusetts at Lowell, Lowell MA

B.S.E.E. 1989
Northeastern University, Boston MA

PROFESSIONAL EXPERIENCE:

2/01 – present **System Director of Safety**
Lifebridge Health System
(Sinai Hospital, Northwest Hospital, Levindale Geriatric and Rehabilitation Hospital, Courtland Gardens Convalescence and Nursing Home)

- Responsible for all safety and environmental functions at 4 facilities and associated locations.
- Approximate number of employees: 7500
- Total number of beds: 1125

9/99 – 2/01 **Director of Safety and Clinical Engineering**
Sinai Hospital of Baltimore, Baltimore MD

- Responsible for Environmental, Health, and Safety program at a 490 bed acute care hospital and all associated off site facilities.
- Responsible for department of 8 technicians handling all repairs and preventative maintenance on biomedical equipment.
- Accountable for $2 million budget.
- Recommended equipment for capital purchase.
- Implemented cost savings measures that resulted in significant savings both initially and annually.

1/97 – 9/99 **Safety Manager**
Sinai Hospital of Baltimore, Baltimore MD

- Responsible for environmental, health, and safety program of a 490 bed hospital and all associated off site facilities.

2/95 - 1/97 **Safety Officer**
St. Joseph Medical Center, Towson MD

- Managed safety program for a 460 bed medical center.
- Developed and conducted a hospital wide training program
- Responsible for medical center compliance with all applicable federal, state, county, and JCAHO regulations.
- Performed all industrial hygiene related activities at SJMC.

7/94 - 2/95 **Safety Officer**
Lemuel Shattuck Hospital

- Responsible for compliance with all applicable federal, state, JCAHO regulations of a 250 bed hospital.
- Member of TB, Radiation, Capital Project, Safety, JCAHO committees

9/93 - 9/94 **Industrial Hygienist**
University of Massachusetts at Lowell

- Ran research projects for asbestos exposure to custodians and lead exposure to bridge workers.

5/92 - 9/93 **Environmental, Health, and Safety Manager**
Johnson Controls Inc.

- Responsible for all Environmental, Health, & Safety issues relating to a semiconductor research facility.
- Provided direction for research projects as a member of ESH Council at SEMATECH.
- Implemented and maintained a medical surveillance program for all employees.

- Designed courses and provided all training necessary for compliance with OSHA regulations.

- Ensured facility was in compliance with all federal, state, and county building, environmental, fire, and health and safety laws.

- Established a Just-in-Time chemical ordering and delivery system.

- Responsible for all on site sampling and monitoring for toxic gases and other potentially hazardous exposures.

- Recommended and implemented all PPE and engineering controls.

6/89 - 12/91 **Product Assurance/Reliability Engineer**
Raytheon Co. Missile Systems Division

- Responsible for environmental testing of PATRIOT and HAWK missile guidance systems and all components of these systems according to DOD specifications.

- Supervised a group of engineers and technicians ranging from 6 - 20 individuals.

6/85 - 12/89 **Process Engineer**
Romicon Inc.

- Member of total quality management engineering team. Responsible for redesign of manufacturing processes.

LICENSES AND CERTIFICATIONS:

Maryland Asbestos Inspector
Maryland Asbestos Supervisor
Maryland Wastewater Treatment Operator
Massachusetts Toxics Use Reduction Planner
40 hour HAZWOPER
AHA CPR Instructor
Certified Mold Inspector
Certified Mold Remediation Supervisor
Hazardous Materials Management – DOT Certification
Certified Healthcare Safety Professional
Certified Energy Auditor
Maryland Lead Visual Inspector
Maryland Lead Inspector Technician
Maryland Lead Risk Assessor

ACTIVITIES:

Member of American Industrial Hygiene Association
Founding Member of the Maryland Healthcare Safety Professionals

Member of International Association of Healthcare Safety and Security
Director of Maryland Chapter of IAHSS

BIOGRAPHICAL SKETCH

Provide the following information for the key personnel in the order listed for Form Page 2.
Photocopy this page or follow this format for each person.

Melissa Ann Morland, MS, MBA, RBP, CBSP, SM(NRCM) 313 Glendwood Rd, Bel Air, MD 21014 (410) 706-7845	POSITION TITLE Assistant Director and Biosafety Officer

EDUCATION/TRAINING (*Begin with baccalaureate or other initial professional education, such as nursing, and include postdoctoral training.)*

INSTITUTION AND LOCATION	DEGREE *(if applicable)*	YEAR(s)	FIELD OF STUDY
Towson University, Towson, MD	B.S.	1998	Biology, minor in Chemistry
University of Maryland University College, Adelphi, MD	M.S	2003	Environmental Management
University of Maryland University College, Adelphi, MD	M.B.A.	2011	Business Administration

Professional Experience:

1991-1993
George Washington University Science and Engineering Apprenticeship Program, United States Army Medical Research Institute of Chemical Defense

1997-1999
Hardware Supervisor, CompUSA, Towson, M.D.

1999-2001
Primary Auditor, Environmental Health and Safety, University of Maryland, Baltimore

2001-2003
Biosafety Officer, Environmental Health and Safety, University of Maryland, Baltimore

2003-Present
Assistant Director and Biosafety Officer, Environmental Health and Safety, University of Maryland, Baltimore

Associations/Committees:

Chesapeake Area Biological Safety Association (1999 to present)
Chesapeake Area Biological Safety Association, Past President (2009-10)
Chesapeake Area Biological Safety Association, President (2008-9)
Chesapeake Area Biological Safety Association, President-Elect (2007-8)
Chesapeake Area Biological Safety Association, Councilor (2003 to 2007)
American Biological Safety Association (2000 to present)
American Biological Safety Association, Secretary and Council Member (2012- present)
ABSA Mentoring Committee, Chair (2009-2013)
ABSA Certification Maintenance Board (2007-present)
American Society for Microbiology Registrant (2005-present)

Certifications:

Certified Biological Safety Professional, American Biological Safety Association
Specialist Microbiologist in Biological Safety Microbiology, National Registry of Certified Microbiologists
Registered Biological Safety Professional, American Biological Safety Association

Elana S. Ehrlich
824 Powers St., Baltimore, MD 21211
410-499-0331
eehrlich@towson.edu

Education:

2007 Ph.D. *Johns Hopkins University, Bloomberg School of Public Health*, Baltimore, MD
Molecular Microbiology and Immunology
Lab of Xiao Fang Yu
Dissertation: Determining the Cellular Function of the Cullin5 E3 Ubiquitin Ligase

2001 BS *University of Massachusetts*, Boston, MA
Major: Biology

Teaching and Education Experience:

2011-present Assistant Professor of Biology, *Towson University*, Towson, MD

2009-2010 Adjunct Professor of Biology, *Stevenson University*, Baltimore, MD
Microbiology – Lecture and Lab

Research Experience:

2008-2011 Post Doctoral Fellow, *Johns Hopkins University School of Medicine*
Research: Studies on the ubiquitin ligase activity of the Kaposi's sarcoma herpesvirus RTA protein.
PI: Dr. Gary Hayward

2007-2008 Post Doctoral Fellow, *Johns Hopkins University, Bloomberg School of Public Health*
Research: Determining the Cellular Function of the Cullin5 E3 Ubiquitin Ligase
PI: Dr. Xiao Fang Yu

2002-2007 PhD student, *Johns Hopkins University, Bloomberg School of Public Health*
Research: Determining the Cellular Function of the Cullin5 E3 Ubiquitin Ligase
PI: Dr. Xiao Fang Yu

Fellowships and Awards:

2008-present Anti-Cancer Drug Development (ACDD) Training Program Post Doctoral Fellowship (T32)

2005,2006 Young Investigator Travel Grant – Conference on Retroviruses and Opportunistic Infections

2005 Delta Omega Public Health Honor Society Poster Competition-First Place

Leadership Experience:

2006-2007 Faculty Student Liaison, *Johns Hopkins University, Bloomberg School of Public Health*, Baltimore, MD – sat in on faculty meetings as representative of graduate students and post-docs

2004-2006 President, Molecular Microbiology and Immunology Student Council, *Johns Hopkins University, Bloomberg School of Public Health*, Baltimore, MD

Publications:

Elana S. Ehrlich, Jennifer Chmura, Nene Kalu and Gary S. Hayward·. KSHV RTA abolishes NFκB responsive gene expression during lytic reactivation by targeting vFLIP for degradation via the proteasome. PLoS ONE. Manuscript submitted.

Elana Ehrlich, Tao Wang, Kun Luo, Zuoxiang Xiao, Anna Maria Niewiadomska, Tara Martinez, Wanping Xu, Len Neckers and Xiao-Fang Yu. Regulation of Hsp90 client proteins by a Cullin5-RING E3 ubiquitin ligase. Proc Natl Acad Sci U S A. 2009 Nov 20.

Sumithra Jayaram, Timra Gilson, Elana S. Ehrlich, Xiao-Fang Yu, Gary Ketner and Les Hanakahi. E1B 55k-independent dissociation of the DNA ligase IV/XRCC4 complex by E4 34k during adenovirus infection. Virology. 2008 Dec 20;382(2):163-70.

Bradford J. Stanley, Elana S. Ehrlich, Leslie Short, Yunkai Yu, Zuoxiang Xiao, Xiao-Fang Yu, Yong Xiong, Structural Insight into the HIV Vif SOCS Box and Its Role in Human E3 Ubiquitin Ligase Assembly J Virol. 2008 Jun 18

Zuoxiang Xiao, Yong Xiong, Wenyan Zhang, Lindi Tan, Elana Ehrlich, Deyin Guo, Xiao-Fang Yu. Characterization of a Novel Cullin5 Binding Domain in HIV-1 Vif. J Mol Biol. 2007 Oct 26;373(3):541-50.

Lindi Tan, Elana Ehrlich, Xiao-Fang Yu. DDB1 and Cul4A are required for HIV-1 Vpr-induced G2 arrest. J Virol. 2007 Jul 11

Kun Luo, Elana Ehrlich, Zuoxiang Xiao, Wenyan Zhang, Gary Ketner, Xiao-Fang Yu. Adenovirus E4orf6 assembles with Cullin5-ElonginB-ElonginC E3 ubiquitin ligase through an HIV/SIV Vif-like BC-box to regulate p53. FASEB J. 2007 Mar 9

Zuoxiang Xiao, Elana Ehrlich, Kun Luo, Yong Xiong, Xiao-Fang Yu. Zinc chelation inhibits HIV Vif activity and liberates antiviral function of the cytidine deaminase APOBEC3G. FASEB J. 2007 Jan;21(1):217-22.

Elana Ehrlich, Xiao-Fang Yu. Lentiviral Vif: viral hijacker of the ubiquitin-proteasome system. Int J Hematol. 2006 Apr;83(3):208-12. Review.

Zuoxiang Xiao, Elana Ehrlich , Yunkai Yu, Kun Luo, Tao Wang, Chunjuan Tian and Xiao-Fang Yu. “Assembly of HIV-1 Vif-Cul5 E3 ubiquitin ligase through a novel zinc-binding domain-stabilized hydrophobic interface in Vif.” Virology. 2006 Mar 10

Kun Luo, Zuoxiang Xiao, Elana Ehrlich, Yunkai Yu, Bindong Liu, Shu Zheng, and Xiao-Fang Yu. “Primate lentiviral virion infectivity factors are substrate receptors that assemble with cullin 5–E3 ligase through a HCCH motif to suppress APOBEC3G”. Proc Natl Acad Sci U S A. 2005 Aug 9;102(32):11444-9.

Yunkai Yu, Zuoxiang Xiao, Elana S. Ehrlich, Xianghui Yu and Xiao-Fang Yu. “Selective assembly of HIV-1 Vif-Cul5-ElonginB-ElonginC E3 ubiquitin ligase complex through a novel SOCS box and upstream cysteines”. GENES & DEVELOPMENT 18:2867-2872, 2004.

Florence Boisgérault, Ying Liu, Natalie Anosova, Elana Ehrlich, M. Reza Dana and Gilles Benichou. “Role of CD4+ and CD8+ T Cells in Allorecognition: Lessons from Corneal Transplantation” The Journal of Immunology, 2001, 167: 1891-1899.

Presentations:

2007	Cold Spring Harbor Ubiquitin Conference
2007	Cold Spring Harbor Retroviruses Conference
2005, 2006	Conference on Retroviruses and Opportunistic Infections

Patents:

Inhibition of Vif-Cul5 Interaction Through Use of Zinc Chelator
JHU Ref: C05051

Cullin 5 as a regulator of Hsp90 clients: a new target for drug development
JHU Ref: C10935

Anne M. Estes
Department of Biological Sciences
Towson University
8000 York Road, Smith Hall, Baltimore, MD 21252
410-704-2126, aestes@towson.edu
https://orcid.org/0000-0002-8775-2656
June 2, 2020

RESEARCH INTERESTS

Insect and bacterial genomics, microbiome diversity and function, symbiosis, microbial ecology

EDUCATION AND TRAINING

2012 Post-doctoral Fellow, the Institute for Genome Sciences, University of Maryland, School of Medicine, Baltimore, MD. Mentor: Dr. Julie Dunning Hotopp

2009 Ph.D. Ecology and Evolutionary Biology, University of Arizona, Tucson, AZ, Thesis: "Life in a fly: The ecology and evolutionary biology of the olive fly endosymbiont, *Candidatus* Erwinia dacicola."Advisors: Dr. Judith Bronstein and Dr. Elizabeth Pierson.

2002 M.S. Biological Sciences, Auburn University, Auburn, AL, Thesis: "Localization and quantification of carbonic anhydrase in the symbiosis of *Cassiopea xamachana* and *Symbiodinium microadriaticum* using 5-dimethylamino-1-naphthalene sulfonamide (DNSA) and the delta pH assay." Advisors: Dr. Raymond Henry and Dr. Stephen Kempf.

1995 B.S. Zoology and Wildlife (Marine Biology concentration), Auburn University, Auburn, AL.

PUBLICATIONS (15 published, Google Scholar h index = 12)

*= undergraduate student

PEER-REVIEWED RESEARCH

Estes, A.M. D. J. Hearn, S. Agarwal, E. A. Pierson, J. C. Dunning Hotopp. 2018. Comparative genomics of the *Erwinia* and *Enterobacter* olive fly endosymbionts. *Scientific Reports* DOI:10.1038/s41598-018-33809-w

Estes, A.M., D.J. Hearn, S. Nadendla, E.A. Pierson, J.C. Dunning Hotopp. 2018 Draft Genome of *Erwinia dacicola*, a dominant endosymbiont of olive flies. *Microbiology Resource Announcements.* DOI: 10.1128/MRA.01067-18

Estes, A.M., D.J. Hearn S. Nadendla, E.A. Pierson, J.C. Dunning Hotopp 2018, Draft Genome Sequence of *Enterobacter sp.* Strain OLF, a colonizer of olive flies. *Microbiology Resource Announcements.* DOI:10.1128/MRA.01068-18

Estes, A.M., D.F.Segura, A. Jessup, V. Wornoayporn, E.A. Pierson. 2014. Effect of the symbiont *Candidatus* Erwinia dacicola on mating success of the olive fly *Bactrocera oleae* (Diptera:Tephritidae). *International Journal of Tropical Insect Science.* DOI:10.1017/S1742758414000174

Estes, A.M., D.J. Hearn, E.C. Snell-Rood, M. Feindler*, K. Feeser*, T. Abebe*, J.C. Dunning Hotopp, A.P. Moczek. 2013. Brood ball-mediated transmission of microbiome members in the dung beetle, *Onthophagus taurus* (Coleoptera:Scarabaeidae). *PLoS One* 8(11): e79061. DOI:10.1371/journal.pone.0079061.

Estes, A.M., D.J. Hearn, H.J. Burrack, P. Rempoulakis, E.A. Pierson. 2012. Prevalence of '*Candidatus* Erwinia dacicola' in wild and laboratory olive fly populations and across developmental stages. *Environmental Entomology.* DOI:10.1603/EN11245.

Estes, A.M., A. Belcari, A. Economopoulis, A. Jessup, P. Rempoulakis, and D. Nestel. A basis for the renewal of SIT for the olive fly, *Bactrocera oleae* (Rossi). 2012. *Journal of Applied Entomology* DOI:10.1111/j.1439-0418.2011.01620.x.

Estes, A.M., D.J. Hearn, J. Bronstein, E.A. Pierson. 2009. The olive fly endosymbiont, "Candidatus Erwinia dacicola," switches from an intracellular existence to an extracellular existence during host insect development. *Applied and Environmental Microbiology*

DOI:10.1128/AEM.00778-09. (Cover image of issue 75(24))

Mateos, M., S.J. Castrezana, **A.M.Estes**, T.A. Markow, N. Moran. 2006. Heritable endosymbionts of *Drosophila. Genetics* DOI:10.1534/genetics.106.058818.

Shawkey, M.D, **A.M. Estes**, L.M.Siefferman, and G.E.Hill. 2004. The anatomical basis of sexual dichromatism in non-iridescent ultraviolet-blue structural colouration of feathers. *Biological Journal of the Linnean Society.* DOI:10.1111/j.1095-8312.2005.00428.x

Cutter, A, B. Payseur, T. Salcedo, **A. M. Estes**, J.M. Good, E. Wood, T. Hartl, H. Maughan, J. Strempel, B. Wang, A.C. Bryan, and M. Dellos. 2003. Molecular correlates of genes exhibiting RNAi phenotypes in *Caenorhabditis elegans*. *Genome Research* DOI:10.1101/gr.1659203.

Shawkey, M.D*, **A.M. Estes*,** L.M.Siefferman, and G.E.Hill. 2003. Nanostructure predicts intraspecific variation in ultraviolet-blue plumage colour. *Proceedings of the Royal Society of. London B.* DOI:10.1098/rspb.2003.2390. (*These authors contributed equally to the work) Featured in *Nature.* 2003. News and Views in Brief: Study in Blue. 423:820)

Estes, A.M., S.C. Kempf, and R. P. Henry 2003. Localization and quantification of carbonic anhydrase activity in the symbiotic scyphozoan *Cassiopea xamachana. Biological Bulletin.* DOI:10.2307/1543599.

Moss, A.G., **A.M. Estes**, L.A. Muellner and D.D.Morgan. 2001. Protistan epibionts of *Mnemiopsis mccraydii* (Ctenophora:Tentaculata). *Hydrobiologica*. DOI:10.1023/A:1011846022599.

Estes, A.M., B.Reynolds, and A.G.Moss.1997. *Trichodina ctenophorii,* sp. nov., a novel symbiont of ctenophores of the northern coast of the Gulf of Mexico. *Journal of Eukaryotic Microbiology* DOI: 10.1111/j.1550-7408.1997.tb05718.x

Estes, A and R.R. Dute. 1994. Valve abnormalities in diatom clones maintained in long-term culture. *Diatom Research.* DOI:10.1080/0269249X.1994.9705305.

OTHER BRIEF COMMUNICATIONS

Hotopp, J.C. and **Estes, A.M.** 2014. Biology Wars: The Eukaryotes Strike Back. *Cell, Host, and Microbe*. DOI:10.1016/j.chom.2014.11.014.

PEDAGOGY PUBLICATIONS

Estes, A.M. 2015. Modeling the dynamic digestive system microbiome. *Journal for Microbiology and Biology Education.* DOI:10.1128/jmbe.v16i2.908

RESEARCH GRANTS, HONORS, AND FELLOWSHIPS

Extramural

2019 Featured Girl Scout alumnus on "Our Stories" Girl Scouts of the United States blog

2018 Featured scientist in STEM coloring book "*Super Cool Scientists #2: A Story and Coloring Book Celebrating Today's Women in Science."* By Sara MacSorley

2012 Keystone Symposia Future of Science Fund Scholarship for Mechanisms and Consequences of Invertebrate-Microbe Interactions Keystone Symposia. January 26-30, 2013 at Tahoe City, CA. ($1,500)

2011 Women Evolving Biological Sciences, National Evolutionary Synthesis Center, Durham, North Carolina. November 6-9, 2011 (registration, room and board ~$1,000)

2009 Deacon Bell Scholarship from the Orchid Society of Arizona ($2,000)

2008 International Atomic Energy Agency (IAEA) Contract ($10,000)
Deacon Bell Scholarship from the Orchid Society of Arizona ($2,000)

2007 Association for Women in Science Educational Foundation Amy Lutz Citation of Merit in Plant Pathology ($300)
International Atomic Energy Agency Contract ($10,000)
Deacon Bell Scholarship from the Orchid Society of Arizona ($2,000)

2006 NSF Doctoral Dissertation Improvement Grant ($12,000)

Deacon Bell Scholarship from the Orchid Society of Arizona ($2,000)
2005 Society for Integrative and Comparative Biology (SICB) Grant-In-Aid ($1,000)
2002-2004 NSF Integrative Graduate Education and Research Traineeship in Evolutionary, Functional and Computational Genomics (~$35,000, $1,500 for research)
2002 Legacy Environmental Education Fellowship
C.V. Starr Fellowship from Bermuda Biological Station for Research
1999 Legacy Environmental Education Fellowship
1993 NSF REU to Bermuda Biological Station for Research
1990 Scholarships: Waste Away Environmental, William A. Blees Carrier, National Ground Water Association, Calhoun Community College

Intramural

2015 University of Maryland, School of Medicine's Office of Public Affairs & Communications (OPAC) Science Communication Internship
2010 University of Arizona, College of Science Outstanding Student Service Award ($500)
2009 University of Arizona, EEB Outstanding Graduate Student for Service ($100)
2008 EEB, University of Arizona, research stipend ($800)
2007 EEB, University of Arizona, research stipend ($800)
2006 EEB, University of Arizona, research stipend ($800)
2004 EEB, University of Arizona, research stipend ($800)
2002 Kenneth Ottis Fellowship for excellence in physiology research and teaching
Auburn University (AU) Biological Sciences competitive Graduate Research Assistantship
2000 AU Graduate Research Forum, first place Biological Sciences
AU Biological Sciences competitive Graduate Research Assistantship
1998 AU Graduate School Research Grant

Student research grants

2019 Towson University Research Impact Award ($1000 to Alison Moss); Garden Club of America Environmental Scholarship ($3000 to Alison Moss); Linda Sweeting Summer Research Fellowship ($5000 to Alison Moss); Fisher College of Science and Mathematics (FCSM) Undergraduate Research Grant ($750 to Alison Moss; $500 to Kylie Brandt)
2018 Garden Club of America Environmental Scholarship ($3000 to Alison Moss); American Society of Microbiology Undergraduate Research Fellowship ($4000 to Alison Moss); FCSM Undergraduate Research Grant ($500 to Sarah Smith)
2011 Towson University Undergraduate Research Grant ($500 to Tselotie Abebe; $500 to Carolyn Kilgore)
2010 Towson University Undergraduate Research Grant ($500 to Karla Feeser); FCSM Undergraduate Research Grant, Towson University ($500 to Karla Feeser)

TRAVEL GRANTS

2011 Funds from Department of Biological Sciences for flight to Women Evolving Biological Sciences, National Evolutionary Synthesis Center, Durham, North Carolina; Funds from Fisher College of Science and Mathematics and Department of Biological Sciences for American Society for Microbiology Meeting, New Orleans, LA.
2010 Funds from Fisher College of Science and Mathematics and Department of Biological Sciences for International Society for Microbial Ecology Meeting, Seattle, WA.
2009 Funds from IAEA for Coordinated Research Project meeting in Mauritius
2008 Funds from IAEA, UA Women in Science and Engineering for Tephritid Workers of Europe, Africa and the Middle East in Mallorca, Spain
2006 Funds from UA EEB, UA Graduate Student and Professional Council, UA Center for Insect Science, UA Women in Science and Engineering for International Symbiosis Symposium in Vienna, Austria
2001 Funds from AU Department of Biological Sciences, AU College of Science and

Mathematics (COSAM), AU Graduate School and SICB to attend SICB 2001 meeting. Funds from AU Department of Biological Science, AU COSAM, AU Provost to attend Bermuda Biological Station for Research Summer Course

2000 Funds from AU Department of Biological Sciences, AU COSAM, AU Graduate School and SICB to attend SICB 2000 meeting

ACADEMIC POSITIONS

2017- present	Assistant Professor, Department of Biological Sciences, Towson University, Baltimore, MD
2012-2017	Post-doctoral Research Fellow, Institute for Genome Science, University of Maryland, School of Medicine, Baltimore, MD
2011 (Summer)	Molecular Ecology Research Experience for Undergraduates mentor, Towson University (TU), Department of Biological Sciences (1 student)
2010 (Spring)- 2011(Fall)	Instructor for *General Biology: Cellular Biology and Genetics*, TU Department of Biological Sciences (students per class: 70 lecture; 24 lab)
2010 (Spring)- 2011(Fall)	Visiting Assistant Professor, TU, Department of Biological Sciences
2007 - 2008	Graduate Assistant, ADVANCE program for Institute Transformation, UA, Office of the Vice-President of Research, Dr.L.Tolbert, Dr.B.Mitchneck, A. Valliancourt
2006	GTA for the Genetics Lab, *Instructor*: Dr. B. Birky
2004, 2005 &2006	GTA for Genetics Lecture, *Instructors:* Drs. B. Birky, B. Walsh, T. Weinert
2002	GTA for Ecology Lab, *Instructors:* Drs. L. Venable, M. Rosenzweig
2002	Biology tutor for AU Minority "Drop-in" program, *Coordinator:* Dr. O. Jenda GTA for Introduction to Biology labs, *Instructor*: K. Lenertz, M.S. GTA for Cell Biology Labs, *Coordinator:* B. Estridge, M.S.
2001	GTA for Cell Biology Labs, *Coordinator:* B. Estridge, M.S.
1997-2000 (Fall, Spring)	GTA for Vertebrate Embryology Labs, *Instructor:* Dr. S. Kempf
1999 (Winter)	Lab Coordinator for Invertebrate Zoology Lab, *Instructor:* Dr. J. Feminella
1997 &1998 (Winter)	GTA for Invertebrate Zoology labs, *Instructor:* Dr. J. Feminella
1999 (Summer)	GTA for Mammalian Physiology, *Instructor:* K. Milly, M.S.
1998 (Summer)	GTA for General Ecology lab, *Instructor:* Dr. M. Oli
1995-1997	Lab Technician. Department of Zoology and Wildlife, Auburn University. *Principle Investigator:* Dr. Anthony Moss
1991-1995	Undergraduate Research Assistant. Department of Botany. Auburn University. *Advisor:* Dr. Roland Dute
1993 (Fall)	NSF REU. Bermuda Biological Station for Research. *Principle Investigators:* Drs. Anthony Michaels and Fred Lipschultz

INVITED RESEARCH PRESENTATIONS (17)

2019 **Estes, A. M.** Bio376 *Symbiosis,* (webinar) University of Puget Sound, Tacoma, WA

2018 **Estes, A.M**. Biology Department, Notre Dame of Maryland University, Baltimore, MD.
Estes, A. M. Bio376 *Symbiosis,* (webinar) University of Puget Sound, Tacoma, WA
Estes, A.M. BIOL405 *Molecular Ecology, Evolution, and Conservation,* Towson University, Baltimore, MD.

2017 **Estes, A.M.** Molecular Biology, Biochemistry, and Bioinformatics Club, Towson University, Baltimore, MD
Estes, A.M. Tri-Beta Biological Honor Society, Towson University

2016 **Estes, A.M.** Department of Biological Sciences, Towson University, Baltimore, MD

2014 **Estes, A.M.** Department of Biology, East Carolina University, Grenville, NC
Estes, A.M. Department of Biology, Middlebury College, Middlebury, VT
Estes, A.M. Department of Biology, University of North Carolina at Asheville, Asheville, NC

2013 **Estes, A.M.** Department of Biology, Salisbury University, Salisbury, MD

2012 **Estes, A.M.** The Maryland Zoo in Baltimore, Baltimore, Maryland

2011 **Estes, A.M.** The Institute for Genome Sciences, University of Maryland School of Medicine.
Estes, A.M. Department of Biological and Environmental Sciences, University of Tennessee at Chattanooga.
2009 **Estes, A.M.** 4th Research co-ordination meeting on the Development of Mass Rearing for New World (*Anastrepha)* and Asian *(Bactrocera)* fruit fly pests in SIT. Pereybère, Mauritius.
2008 **Estes, A.M.** and E. Pierson. 3rd Research co-ordination meeting on the Development of Mass Rearing for New World (*Anastrepha)* and Asian *(Bactrocera)* fruit fly pests in SIT. Valencia, Spain.
2007 **Estes, A.M.** and E.A. Pierson. The 9th Annual Exotic Fruit Fly Symposium. Fresno, CA.

INVITED TEACHING LECTURES (16)
2019 Guest lecture "Real Reads or Contamination?" Microbiome CURE (BIOL474), Towson University, Dr. S. Kimble, Professor
2017 Training webinars for Lactation Consultant Certification/Professional Development
- "Thanks, Mom! Influences on Baby's Microbiome Composition During the Precious Perinatal Period". GOLD Learning Online Education, Vancouver, BC.

"Life as a Biologist?" Tri-beta Biology Honor Society Induction
2016 Guest lecture "The importance of breast feeding for the infant gut microbiome" University of Maryland, School of Social Work, Sarah Dababnah, instructor
2015 Teaching/Research seminar, "Endosymbiont or transient microbe? Defining a Long Term Relationship" Goucher College, Baltimore, MD
Preceptor "Antibiotics and the Human Microbiome" in Host Defenses And Infectious Diseases (MSPR 520) University of Maryland School of Medicine. Dr. E. Mongodin, Professor
Preceptor "Molecular Koch's Postulates" in Host Defenses And Infectious Diseases (MSPR 520) University of Maryland School of Medicine. Dr. J. Kaper, Professor
2014 Teaching seminar, "Predator-Prey Interactions: Models and Examples" Department of Biology, Middlebury College
Preceptor "SG24 Bacteriotherapy" in Host Defenses And Infectious Diseases (MSPR 520) University of Maryland School of Medicine. Dr. E. Mongodin, Professor
Teaching seminar "Cellular and molecular mechanisms of host pathogen interactions: The Human Microbiome" in Microbiology (Biol339), University of North Carolina at Asheville. Dr. B.Wilson, Professor.
2012 Guest lecture "Evolutionary Microbial Genomics: Organelles, Endosymbionts, and their free-living relatives" in Molecular Genetics and Genomics (GPLS717), University of Maryland, School of Medicine. Dr. D. Rasko and J. Dunning Hotopp, Professors
Guest lecture "Insects in the Classroom" in Math and Science in Early Childhood Education (ECED 604). Department of Early Childhood Education, Towson University, Ms. S. Fike, Instructor
2009 Teaching seminar, Biological Sciences, Towson University
Guest lecture, Microbial Diversity (Ecol 329A), Plant Pathology and Microbiology, Dr. E. Arnold, Professor.
2007 Guest lecture, Living in Symbiosis (Ento310) lab, Entomology, University of Arizona, Dr. P. Stock, Professor.
Guest lecture, Microbial Diversity (Ecol 329A), Plant Pathology and Microbiology, Dr. E. Arnold, Professor.

PRESENTATIONS AT CONFERENCES (41, *= student)
2020 Moss, A* and **Estes, A.M.** Metabolic potential in the larval *Onthophagus taurus* gut microbiome. TU Student Research and Creative Inquiry Forum (received 1st place, Biological Sciences)
2019 Moss, A*. and **Estes, A.M.** Larval *Onthophagus taurus* Gut Microbiome Includes Cellulose-Degrading Taxa. ASM Microbe. San Francisco, CA.

Brandt, K* and **Estes, A.M.** Antibiotic Resistance in Bacterial Isolates from the Gut Microbiome of the adult and larval dung beetle, *Onthophagus taurus*. Biological Sciences Department Student Symposium. Towson, MD. December

Moss, A*. and **Estes, A.M.** Larval *Onthophagus taurus* Gut Microbiome Includes Cellulose-Degrading Taxa. Towson University Student Research and Creative Inquiry Forum. Towson, MD.

Smith, S* and **Estes, A.M.** Antibiotic resistance in the microbiome of wild caught *Onthophagus taurus*. Towson University Student Research and Creative Inquiry Forum. Towson, MD.

2018 **A.M. Estes** American Society for Microbiology Conference for Undergraduate Educators, Austin, TX.
2016 **A.M. Estes** and L. Fountain. 6th National Breastfeeding Coalitions Conference. Arlington, VA.
2015 M.A. Hagadorn*, K. Mitchell*, **A.M. Estes,** J. C. Dunning Hotopp, D.L. Price. Entomology Society of America, Austin, TX
2014 **A. M. Estes**, K. King*, E. Snell-Rood, M. Hagadorn*, D. Price, B.Doube, A. Moczek, J. C. Dunning Hotopp. 5Th American Society of Microbiology Conference on Beneficial Microbes, Washington D.C.
K.Mitchell*, M. Hagadorn*, **A.M. Estes**, D. L. Price, and J. C. Dunning-Hotopp. Guerrieri Undergraduate Research Symposium, Salisbury University, Salisbury, MD.
A.M.Estes, E.Snell-Rood, M. Hagadorn*, D. Price, B.Doube, B.Ma, D. Fadrosh, J.Ravel, A.Moczek, J.C. Dunning Hotopp. Mechanisms and Consequences of Invertebrate-Microbe Interactions, Keystone Symposia, Tahoe City, CA.
2012 **Anne M. Estes**, David J. Hearn, Emilie Snell-Rood, Armin Moczek. 7th International Symbiosis Society Congress. Krakow, Poland.
Hagadorn, M.A*, **A.M Estes,** and D.L Price. Biodiversity Conference 2012, Academy of Natural Sciences of Drexel University, Philadelphia, PA.
Hagadorn, M.A*, **A.M Estes,** and D.L Price**.** Guerrieri Undergraduate Research Symposium Salisbury University, Salisbury, MD.
2011 Feeser, K.R*, T. Abebe*, D.J. Hearn, E.C. Snell-Rood, A.P. Moczek and **Estes, A.M.** American Society for Microbiology. New Orleans, LA.
Kilgore, C*, J.Davis, **A.M. Estes.** Towson University Student Research and Scholarship Expo.
Feeser, K*, D. Hearn, E. Snell-Rood, A.Moczek, **A.M. Estes**. Towson University Fisher College of Science and Mathematics Honors Convocation.
Abebe, T*, K. Feeser*, E. Snell-Rood, A. Moczek, **A. M. Estes**. Towson University Student Research and Scholarship Expo.
2010 **Estes, A.M.** and E.A. Pierson. International Society for Microbial Ecology, Seattle, WA.
2009 **Estes, A.M.** Department of Ecology and Evolutionary Biology, University of Arizona
Estes, A.M. and E.A. Pierson. Society for Integrative and Comparative Biology, Boston, MA.
2008 **Estes, A.M.** 1st Tephritid Workers of Europe Africa and the Middle East. Mallorca, Spain.
Estes, A.M. Department of Ecology and Evolutionary Biology, University of Arizona
2007 **Estes, A.M.**, E. Pierson, and J. Bronstein. SICB, Phoenix, AZ.
Estes, A.M. Department of Ecology and Evolutionary Biology, University of Arizona
Estes, A.M. Department of Plant Pathology and Microbiology, University of Arizona
2006 **Estes, A.M.** and E. Pierson. International Symbiosis Symposium, Vienna, Austria.
2005 **Estes, A.M.** Department of Ecology and Evolutionary Biology, University of Arizona
Estes, A.M., V. Callicotte, and E. Pierson. SICB.
2004 **Estes, A.M.** Evolutionary Genomics Meeting. Tucson, AZ.
2003 **Estes, A.M.** Department of Ecology and Evolutionary Biology, University of Arizona
2002 **Estes, A.M.** Department of Ecology and Evolutionary Biology, University of Arizona
2001 **Estes, A.M.,** Kempf, S.C. Henry, R.P. SICB. *Am. Zoologist* 41(6):188.
Estes, A.M., S.Kempf, and R. Henry. Auburn University Graduate Student Forum.
2000 **Estes, A.M.**, Kempf, S.C. Henry, R.P. SICB. *Am. Zoologist* 40(6):1011-1011.
Estes, A.M., S.C. Kempf, and R.P. Henry. AU Graduate Student Forum.
1999 **Estes, A.M**., Kempf, S.C. Henry, R.P. SICB. *Am. Zoologist* 39(5) 239A Sp.Iss.SI.
1998 Moss, A.G., D.D Morgan and **A.M. Estes**. Society of Protozoology.
1997 Moss, A.G. and **A.M.Estes**. American Society of Cell Biology. *Mol. Biol. Cell* 8:300 Suppl. S.,

Estes, A.M. and A.G. Moss. Alabama Academy of Science. 67(2).
1994 **Estes, A.M.** and R.R. Dute. Alabama Academy of Science. 65 (2).

UNDERGRADUATE LEVEL INQUIRY EXERCISES (2)
2014 Developed and presented "Modeling the dynamic digestive system microbiome" for Microbiology (Biol339) at the University of North Carolina Asheville.
2012 Developed and supervised "Zoo Poo: Examining dung beetle preferences" for Introduction to Ecology and Evolution (Biol202) at Towson University.

K-12 and PUBLIC OUTREACH PRESENTATIONS AND INQUIRY ACTIVITIES (27)
2014- present Twitter account @mostlymicrobes, currently has 2,988 followers
2019 Volunteer for American Society of Microbiology at BMAA STEM day at Morgan State,Baltimore, MD;
Volunteer for American Society for Microbiology event at San Francisco Public Library;
Ran #LuxArt bioluminescent bacterial painting workshop with Girl Scout troop #10042
2018 Designed and ran a "Mini Insect Fair" for Towson University Child Care preschool, Towson, MD
2017 Volunteer for American Society of Microbiology booth at the BMAA STEM day at Morgan State, Baltimore, MD;
Co-developed a K-12 activity "Modeling the Emergence of Antibiotic Resistance in the Gut Microbiome" for the American Society of Microbiology.
2016 Earth Day speaker, Youth's Benefit Elementary School (YBES) entire 2nd grade "The Web of Our World –Ecological Interactions of the Chesapeake Bay"
Career Day speaker YBES 2nd grade "Feeding your Healthy Microbiome"
Coordinated and moderated Microbiome Panel to close the art/science exhibit "Culture as Medium" at the Baltimore UnderGround Science Space.
Baltimore UnderGround Science Space Science Slam (5 min talks) participant
Assistant for science/art performance *1000 Handshakes* in Baltimore, MD
Volunteer for American Society of Microbiology booth at the BMAA STEM day at Morgan State, Baltimore, MD
Guest posts on microbiome "seeding", for Science and Sensibility, and book review for Giving Birth With Confidence;
2015 Developed human microbiome blog *Mostly Microbes* www.mostlymicrobes.com, Guest post on the human birth microbiome for Lamaze International's blog Science and Sensibility. Guest posts on microBE.net on the built microbiome of delivery rooms.
2014 Developed and presented "Life as a Biologist: Playing in the dirt and asking questions" for Career Day at Youth's Benefit Elementary School for Kindergarten.
2012 Developed and presented "What do insects eat" for BioBlast! for 3 innercity Baltimore middle schools; Developed and presented "Arthropods" an inquiry activity for Towson University Day Care, 3 year old class, James McHenry 1st grade and special education 6th grade students; Developed and presented "Mutualisms – acquiring superpowers" to Bryn Mawr and Gilman High School Environmental Biology students.
2007, 2008, 2009 – Developed and led symbiosis workshop for Women in Science and Engineering "Expanding Your Horizons" conference for 7th to 12th grade female students in Southern Arizona.
2008 – Developed and led hands-on workshop "Bugs in Bugs" for Helen Keeling Elementary School 5th grade class retreat at the YMCA Triangle Y Ranch.
2006 – Trained Alice Vail Middle School Science Olympiad team for Insect Systematics challenge "Don't Bug Me"

PEDAGOGY POST-GRADUATE EDUCATION (17)
2020 Wellcome Trust Workshop "Bacterial Genomes: Antimicrobial Resistance in Bacterial Pathogens".
ASM Microbiology "Teaching Undergraduate Biology" 6 part webinar series;
"What COVID-19 Is Teaching Us About Inclusive Excellence in STEM Higher Ed" TU-REP, virtual meeting

2019 "Inclusive Teaching Symposium" by Mary Stapleton, Towson University Center for STEM Excellence
2018 "Developing Quantitative Skills in Your Classroom Using HHMI Resources" by Holly Basta and Rebecca Orr, American Society for Microbiology Conference for Undergraduate Educators.
2017 "Flipped Case Studies in the Microbiology Classroom" by HHMI, American Society for Microbiology Conference for Undergraduate Educators.
2016 "Designing Lessons Based on National Recommendations for STEM Education". American Society for Microbiology Conference for Undergraduate Educators.
2014 "FERPA/Academic Integrity"; "Create an Effective Syllabus", "Mentoring Undergraduate Students", "Learning Environments", "Key Concepts and Strategies for Teaching" University of Maryland at Baltimore, Pedagogy Seminar Series, Baltimore, MD
2011 "Class Discussion Leadership", "Improve Student Results with Grading Guidelines and Feedback", "Avoiding Common Pitfalls in Teaching", Teaching@Towson, Baltimore, MD.
2011 "At-risk university faculty gatekeeper".Training in identifying and assisting students in psychological distress. Towson University, Baltimore, MD
2008 PERT Pedagogy Workshop, Center for Insect Science, Tucson, AZ.

PARTICIPATION IN OTHER MEETINGS AND WORKSHOPS (12)
2019 NSF sponsored "Deciphering the Microbiome" as a moderated virtual community member
2018 American Society for Microbiology Conference for Undergraduate Educators, Austin, TX
2017 Built Microbiome, Washington, DC
Frontiers of Genomics Symposium, Institute for Genome Sciences, Baltimore, MD
American Society for Microbiology Conference for Undergraduate Educators, Denver, CO
2016 American Society for Microbiology Conference for Undergraduate Educators, Bethesda, MD
2015 Institute for Genome Sciences Transcriptomics Analysis Workshop, Baltimore, MD.
Institute for Genome Sciences Metagenome Analysis Workshop, Baltimore, MD.
2012 "Whole genome mapping using the OpGen Argus system". Institute of Genome Sciences, University of Maryland, School of Medicine, Baltimore, MD.
2010 "An in-depth introduction to single genome and metagenome sequencing and analysis." Institute of Genome Sciences, University of Maryland, School of Medicine, Baltimore, MD.
2007 "Nematode-bacteria symbiosis workshop." Tucson, AZ sponsored by International Symbiosis Society and the National Science Foundation. April 21-23, 2007
2002 "2nd annual *Drosophila* Species Workshop and Symposium on *Drosophila* Evolution." University of Arizona.

COMMITTEE MEMBER (3)
2018 – present Towson University, Masters of Biology – Marta Perez-Vazquez;
Towson University, Masters of Biology – Anthony Tritz
2013 – 2016 Salisbury University, Masters of Biology – Mallory Hagadorn

HIGH SCHOOL AND UNDERGRADUATE MENTORING (18)
Towson University – Independent research experience
2017- 2020 Alison Moss (Biological Sciences Honors Thesis)
Fall 2019 Kylie Brandt
2017-2018 Sarah Smith
Institute for Genome Sciences – Summer Training in microbiology and molecular biology
2014 Katie Mitchell and Mallory Hagadorn from Salisbury University
Kenyone King, Youths Work Fellow from Western High School in Baltimore, MD
2012 Mallory Hagadorn from Salisbury University
Towson University – Research Experience for Undergraduates in Molecular Ecology
2011 Michele Feindler from Ursinus College
Towson University – Independent research experience
2011 Carolyn Kilgore
2010 – 2011 Tselotie Abebe

2010 – 2011 Karla Feeser
2010 Matt Rei

University of Arizona – Research supervision
2009 Doug Mahana
2008-2009 Justin Clark
2008 Clarissa Martinez
2008 Rebecca Rupple
2007 Victoria Calcotte – Independent study

Auburn University - Research supervision
2000 Kim Hammond
1999 Christy Smith

NATIONAL SERVICE (33)

2020 Judge for BioRender's Graphical Abstract competition; Ad Hoc Reviewer, *Molecular Ecology*

2019 Ad Hoc Reviewer, *Proceedings of the Royal Society: B; Royal Society Open Science*

2018 Ad Hoc Reviewer, *Proceedings of the Royal Society: B, Journal of Applied Entomology, Scientific Reports*
Coordinated and facilitated #luxart the Bioluminescent Agar Art Event at American Society for Microbiology Conference for Undergraduate Educators (ASMCUE).
Quoted in *The Atlantic:* "What a Beetle's Genital Worms Reveal About the Concept of Individuality" Oct 1, 2018

2017 Ad Hoc Reviewer, *Molecular Ecology, BMC Microbiology;*
Coordinated #luxart the Bioluminescent Agar Art Event at
Quoted in *National Geographic* "Weird and Fascinating Ways Animals Use Poop"

2016 Ad Hoc Reviewer, National Science Foundation
Assisted with #luxart, the Bioluminescent Agar Art Event at ASMCUE
Quoted in *National Geographic* "Why Insects Rule the World", "These Tiny Organisms Have Really Weird Shapes"

2015 Ad Hoc Reviewer, *Molecular Ecology, Royal Society Open Science*

2014 Ad Hoc Reviewer, National Geographic

2013 Ad Hoc Reviewer, National Science Foundation, *Annals of Applied Biology, Philippine Agricultural Scientist*

2012 Ad Hoc Reviewer, *Insects*, *Folia Microbiologica (2), Annals of Applied Biology*

2011 Ad Hoc Reviewer, United States-Israel Binational Agricultural Research & Development Fund

2011 Ad Hoc Reviewer, *Agricultural Science Research Journal*

2011 Ad Hoc Reviewer, *Folia Microbiologica*

2011 Ad Hoc Reviewer, *Journal of Pest Science*

2011 Ad Hoc Reviewer, *Symbiosis*

2007 Ad Hoc Reviewer, *Bulletin of Entomological Research*

2006 Ad Hoc Reviewer, *Proceedings of the Royal Society of London*

LOCAL SERVICE (17)

2020 Featured in "Faculty Spotlight" for TU FACET "Summer Online Course Design" workshop.
Interviewed by Dr. Rysavy, Director of Institutional Research and Training at Goldey-Beacom College, Delaware for how I adapted to on-line teaching Spring 2020.

2019 American Society for Microbiology outreach event at BMAA Day STEM Extravaganza, Morgan State University, Baltimore, MD
Judge for Fall 2019, Towson University Student Research Symposium, Towson University, Baltimore, MD

2018 Judge for Fall 2018, Towson University Student Research Symposium, Towson University, Baltimore, MD

2017 Judge for Fall 2017, Towson University Student Research Symposium, Towson University, Baltimore, MDs

American Society for Microbiology outreach event at BMAA Day STEM Extravaganza, Morgan State University, Baltimore, MD
2016 American Society for Microbiology outreach event at BMAA Day STEM Extravaganza, Morgan State University, Baltimore, MD
2012-2014 eMentor for the University of Maryland University College Biotechnology graduate program
2006 Panelist for "Unraveling the Mysteries of Graduate and Professional School", UA Undergraduate Biology Research Program
2003 Insect and plant diversity survey at Los Fresnos Nature Preserve (Nature Conservancy)
2001 Assisted in hosting Cell Biology program of Regional Science Olympiad at AU
Conducted aquatic macro-invertebrate survey for Auburn watershed ("Save the Saugahatchee")
Member of interview panel for the AU College of Science and Mathematics leaders
2000 Assisted in hosting Herpetology program of Regional Science Olympiad at AU
Assisted in hosting Alabama Academy of Science meeting at AU
1996 Assisted with hosting Bioprocess program of Regional Science Olympiad at AU
1994 Assisted with hosting Geology program of Regional Science Olympiad at AU

UNIVERSITY SERVICE (4)
2020 Fisher College of Science and Mathematics College Council member and recording secretary
Fisher College of Science and Mathematics Institutional Biosafety Committee member
Department of Biological Sciences member of Seminar Committee
2019 Department of Biological Sciences member of Seminar Committee

PROFESSIONAL AFFILIATIONS
2017 – present Member, National Center for Case Study Teaching in Science
2010 - present Member, International Society for Microbial Ecology
2011 - present Member, American Society for Microbiology
2006 - present Member, International Symbiosis Society
2007 - present Member, Entomological Society of America
1999 - 2009 Member, Society of Integrative and Comparative Biology
1997 Member, American Society for Cell Biology
1994-1997 Member, Phycological Society of America

2016- present Member, National Association of Science Writers
2016- present Member, DC Science Writers

REFEREES

Julie Dunning Hotopp, PhD
Associate Professor
Institute for Genome Science
University of Maryland, School of Medicine
Email: jdhotopp@som.umaryland.edu
Phone: (410) 706-5673

Claire Fraser, PhD
Professor
Director, Institute for Genome Sciences
Institute for Genome Science
University of Maryland, School of Medicine
Email: cmfraser@som.umaryland.edu
Phone(410)706-3879

Elizabeth Pierson, PhD
Professor
Department of Horticultural Sciences
Texas A&M University
Email: eapierson@tamu.edu
Phone: 979-862-1307

Kishana Yvonne (Williamson) Taylor, M.S., Ph.D.

CURRICULUM VITAE

Co-Founder, Black Microbiologists Association
Email: Kytaylor@Towson.edu * KishanaTaylor.com

EDUCATION

Ph.D. University of Georgia, Athens, Georgia, Interdisciplinary Biomedical Science, 2018
Dissertation: Development of an In-Vivo Model for Epizootic Hemorrhagic Disease Virus.

M.S. The George Washington University, Washington, D.C., Public Health Microbiology and Emerging Infectious Disease, 2013
Thesis: *The Effects of Confined Poultry Feeding Operations on Discharges of Antimicrobial- Resistant Pathogenic* E. Coli *and Nutrients from Watersheds.*

B.S. University of Delaware, Newark, Delaware, Animal Science, 2011
Thesis: Zoos and Aquariums of the Past Present and Future: An Ethical and Scientific Critique of Zoos and Aquariums in the 21st Century and the Future of Zoos.

PROFESSIONAL APPOINTMENTS

August 2024 – Current	**Assistant Professor**, Towson University
Dec 2023 – June 2024	**Visiting Assistant Professor**, The College of New Jersey Biology
August 2023 – December 2023	**Adjunct Professor**, The College of New Jersey Biology
May 2021 – May 2023	**Postdoctoral Associate,** Rutgers University Earth and Environmental Sciences
October 2021-June 2022	**Maternity leave**
August 2020 – May 2021	**Postdoctoral Researcher,** Carnegie Mellon University, Biomedical Engineering
July 2020 – Current	**HHMI Inclusive Excellence Teaching Fellow,** Mercy College, Natural Sciences
August 2018 – January 2019	**Maternity leave**
May 2018 – August 2020	**Postdoctoral Researcher**, Univ. of California at Davis, Microbiology and Molecular Genetics

AWARDS AND HONORS

Equality, Diversity and Inclusion Prize, 2025, Microbiology Society

William A. Hinton Award, 2023, American Society for Microbiology

Distinguished Young Alumni, 2021, University of Delaware

Cornell Rising Star, 2020, Cornell University

University Senior Thesis, 2010, University of Delaware

Summer Institute Scholar 2009, University of Delaware

Woman of Promise 2008, University of Delaware

Science and Engineer Scholar 2008, University of Delaware

EPSCoR Scholar 2008, University of Delaware

FORTHCOMING PUBLICATIONS

Bilynksy, C., **K. Taylor**, M. Annand, E. Wayne. *2022. TCID50 Measurements of antiviral efficacy on metal printed masks*. Under Review https://doi.org/10.1101/2022.10.13.512105

PEER REVIEWED PUBLICATIONS

Watts, J. and **K. Taylor.** 2024. *Gentrification Increases Risk of Tick-borne-Disease For Communities of Color*. Nature Microbiology. Accepted

Taylor, K. I. Agu, I. José, S. Mäntynen, AJ Campbell, T. Chou, B. Zhou, D. Gresham, E. Ghedin, S.L. Díaz Muñoz. 2023. *Influenza Virus Reassortment is Strain Dependen*t. PLos Pathogens. . 9(3): e1011155 https://doi.org/10.1371/journal.ppat.1011155

Spriggs, C., N. Pittman, N. Scott, **K. Taylor**, A. Kozik. 2022. *A Talent Network of Black Microbiologists.* Nature Microbiology 7, 469. https://doi.org/10.1038/s41564-022-01085-0

Carlson, C., M. Farrell, Z. Grange and 32 authors including K. Taylor. 2021. *Zoonotic Risk Technology Enters the Viral Emergence Tool Kit*. Phil. Trans. R. Soc. B 376: 20200358. Published September 20, 2021. https://doi.org/10.1098/rstb.2020.0358

Taylor, K, Wilson, J.J., Park, A., Nemeth, N. M., Yabsley, M., Fenton, H., Keel, M.K., and Gottdenker, N. L. 2021. *Temporal and spatial patterns in Canine Distemper Virus cases in wildlife diagnosed at the Southeastern Cooperative Wildlife Disease Study (SCWDS), 1975-2019.* J Wildl Dis. 2021 Aug 30. https://doi.org/10.7589/JWD-D-20-00212

Taylor, K.*, A.J. Kozik, C. Spriggs, N. Scott, N. Pittman. 2021. *Introducing the Black Microbiologists Association*. Lancet Microbe. February 16, 2021. https://doi.org/10.1016/S2666-5247(21)00038-0

Taylor, K*. 2020. mSphere of Influence*: That's Racist –COVID-19, Biological Determinism, and the Limits of Hypotheses.* mSphere 5:e0094520. https://doi.org/10.1128/mSphere.00945-20

Taylor, K.*, M.G. Ruder, D.G. Mead, D. E. Stallknecht. 2020. *An Embryonated Chicken Egg Transmission Model for North American Epizootic Hemorrhagic Disease Viruses.* Zoonotic and Vector borne Diseases 20:9; 728-730. https://doi.org/10.1089/vbz.2019.2590

Wong, N, J. Graham, C. Pelc, **K. Taylor**, L. B. Price, M. Altabet, T.E. Jordan. 2020. *Effects of Confined Poultry Operations on Antimicrobial-Resistant Escherichia coli and Nutrient Pollution in Chesapeake Bay Watersheds*. Science of The Total Environment 735: 15 September, 139401 https://doi.org/10.1016/j.scitotenv.2020.139401

Soler-Garcia, A.A., A.J. De Jesus, **K. Taylor** and E.W. Brown. 2014. *Differentiation of Salmonella Strains from the SARA, SARB and SARC Reference Collections by Using Three Genes PCR-RFLP and the 2100 Agilent Bioanalyzer.* Frontiers in Microbiology 5:417.

OTHER PUBLICATIONS

Taylor, K., A.J. Kozik. A Better Future for Black Microbiologists: Lessons Past & Present. American Society for Microbiology. https://asm.org/Articles/2021/February/A-Better-Future-for-Black-Scientists-Lessons-Past

Williamson K., R.L. Alphin, C. Ciaverelli, M. Rankin, and E.R. Benson.
Feed Info 2009. *Onset and Cessation of Rigor Mortis in Layer Hens*. February 2009.
*Corresponding Author

PRESENTATIONS

Research

Taylor, K. (2025) *Influenza A Virus Reassortment is Strain Dependent*. Portland State University (Invited Talk)

Taylor, K. (2024) *Influenza A Virus Reassortment is Strain Dependent*. SUNY Albany. (Invited Talk)

Taylor, K. (2024) *Influenza A Virus Reassortment is Strain Dependent*. FASEB Virus Structure and Assembly. Southbridge, Massachusetts (Invited Talk)

Taylor, K. (2023) *Hello, Is It Me You're Looking For? What We Can Learn From Surveillance and Targeted Experimental Evolution of Emerging and Re-emerging Viruses.* University of Maryland Baltimore County, Department of Biological Sciences, Catonsville, MD. (Invited Talk)

Taylor, K. (2023) *Hello, Is It Me You're Looking For? What We Can Learn From Surveillance and Targeted Experimental Evolution of Emerging and Re-emerging Viruses.* Towson University, Department of Biological Sciences Towson, MD. (Invited Talk)

Taylor, K. (2023) *Hello, Is It Me You're Looking For? Surveillance of Viral Evolution and Ecology Is Integral To Public Health.* Yale University School of Public Health, New Haven Connecticut (Invited Talk)

Taylor, K. (2023) *Influenza A Virus Reassortment is Strain Dependent*. University of Rochester, Department of Microbiology and Immunology. Rochester, NY. (Invited Talk)

Taylor, K. (2021) *Centering Equity in Infectious Disease Research*. Pennsylvania State University, Center for Infectious Disease Dynamics, University Park, PA. (Invited Talk)

Taylor, K. (2021) *Centering Equity in Infectious Disease Research*. Virginia Tech, Center for Emerging, Zoonotic and Arthropod borne Pathogens, Blacksburg Virginia, VA (Invited Talk)

Taylor, K. (2021) *Integrating Equity into Emerging Infectious Disease Research.* Microbes and Social Equity Seminar Series. University of Maine, Orono, ME. (Invited Talk)

Taylor, K. (2021) *Integrating Equity into Emerging Infectious Disease Research.* BIO Colloquium. San Francisco State University, San Francisco, CA (Invited Talk)

Taylor, K. (2021) *Centering Equity in Emerging Infectious Disease Research: From scientific methods to scientists.* Womxn in Science Outside the Lab and Ecology, Evolution and Conservation Biology Seminar Series. Oregon State University, Corvallis, OR. (Keynote)

Taylor, K. Samuel L. Diaz[1], Ilechukwu Agu[1], Ivy José[1], Mirella Salvatore[2], Tsui-wen Chou[3], Timothy Song[3], Bin Zhou[4], David Gresham[3], Elodie Ghedin. (2019) *High Frequency of Reassortment Among Diverse Influenza Viruses Revealed by High-Throughput Experimental Coinfection*. American Society for Microbiology. San Francisco, CA. (Short Talk and Poster)

Taylor, K. Samuel L. Diaz[1], Ilechukwu Agu[1], Ivy José[1], Mirella Salvatore[2], Tsui-wen Chou[3], Timothy Song[3], Bin Zhou[4], David Gresham[3], Elodie Ghedin. (2019) *High Frequency of Reassortment Among Diverse Influenza Viruses Revealed by High-Throughput Experimental Coinfection*. Gordon Research Seminar: Viruses and Cells. Barga, Italy. (Short Talk and Poster)

Taylor, K. (2019) *The Enemy Within: North American Bunyaviruses and Their Potential to Be the Next Big Pathogen*. California State University, Sacramento. (Invited Talk)

<u>Science Communication and Community Outreach</u>

What Doesn't Kill You Makes You Stronger (and also tired): My STEM Journey. HHMI Elevating Student Voice Symposium. Mercy College, Dobbs Ferry, NY. (Keynote Speaker)

Virulent Viruses. 2021. Teen Science Café @AMNH. American Museum of Natural History, New York, NY.

Don't Miss Your Shot. 2021. West Chester University, Westchester, PA.

Basic Science and Public Health Perspectives on Vaccination. 2021. Mercy College, Dobbs Ferry, NY (Panelist)

COVID Vaccine Townhall. 2021. Teaneck Town Council. Teaneck, NJ. (Panelist)

"Scientist Roundtable on COVID-19 Vaccines". Dec. 18, 2020. WDIV Detroit News.

Inside the Attempt to Build Trust About the COVID-19 Vaccine in Black Communities. Dec 12, 2020 PBS News Hour.

Fact or Fiction: from Coronavirus origins to vaccine safety. 2020. Syracuse University, Syracuse, NY (Invited Talk)
"Black In Microbiology Week, Virology Day". September 29, 2020. Black In Microbiology Week. (Panelist)

"Flattening Our Curve: A conversation with Black Scientists and Professionals On The Current and Future Impact of COVID-19". July 29, 2020. Harvard University, Boston, MA. (Panelist)

Podcasts

"Black In Microbiology With Ari Kozik and Kishana Taylor." Oct. 15, 20202. This Week In Virology Ep. 672

"Let's Talk About COVID-19." April 2020. PhD Divas Podcast S5E8

DEI and Outreach

Banfield, I., N. Pittman and **K. Taylor** (2025) *If Not Now, When? Building a Community to Empower Black Microbiologists*. Microbiology Society. Liverpool, England, UK

Taylor, K. (2025). *Take Chances, Make Mistakes, Get Messy! - Embodying Miss Frizzle while Navigating New People, Places, Things and Ideas.* Women in Science Forum. Towson University, Towson, MD. (Keynote Speaker)

Taylor, K. (2024). *The Importance of Creating Community in Science.* Molecular Microbiology and Immunology Fall Retreat, Johns Hopkins University, Baltimore, MD. (Invited Talk).

Taylor, K. (2023*) Miss Frizzle Taught Me: My Journey in STEM As a Black Woman.* University of Rochester, Rochester, NY. (Invited Talk)

Taylor, K. (2020) *Journey to the Center of a Pandemic: From Dolphins to Viruses and More.* STEM Scholars in Biology 2020 Virtual Institute: Pathways to STEM Careers. Mercy College, Dobbs Ferry, NY. (Invited Talk)

(2020) *Career Path Panel Women+ of color in STEM PhD Programs***.** Harvard University, Boston, MA (Invited Panelist)

(2020) *Making Graduate Science More Inclusive*. Stanford University, Stanford, CA (Invited Panelist)

Taylor, K. (2020) *Increasing Diversity in the Microbial Sciences: Trainee Perspectives.* Strengthening Career Pathways in Science for Underrepresented Groups, American Society for Microbiology Congressional Briefing on Diversity and Inclusion in STEM. (Invited Talk)

Taylor, K. (2020) *Journey to the Center of a Pandemic: From Dolphins to Viruses and More.* STEM Scholars in Biology 2020 Virtual Institute: Pathways to STEM Careers. Mercy College, Dobbs Ferry, NY. (Invited Talk)

Taylor, K. (2016). STEM Diversity and Inclusion, Perspectives on Why It Matters, University of Delaware Seminar. Newark, DE. (Invited Talk)

TEACHING

Teaching

Towson University, Towson, NJ
Assistant Professor, Department of Biology, August 2024 – Current
Microbiology (BIO318)

The College of New Jersey, NJ
Visiting Assistant Professor, Department of Biology, December 2023 – June 2024
Immunology (BIO 370)
Foundation of Biological Inquiry (BIO 201)

The College of New Jersey, NJ
Adjunct Professor, Department of Biology, August 2023 – Dec 2023
Microbiology (BIO 312)

University of Michigan Medical School, Ann Arbor, MI
Invited Guest Lecturer, Department of Microbiology and Immunology, April 2021, March 2022, March 2023
Global Impact of Microbes (MICRO 450)

Rutgers University - Newark, Newark, NJ
Invited Guest Lecturer, Department of Biological Sciences, October 2022
General Microbiology

Rutgers University - Newark, Newark, NJ
Invited Guest Lecturer, Department of Earth and Environmental Sciences, April 2021
Evolution

Mercy College, Dobbs Ferry, NY
Adjunct Professor, Department of Biology, September 2020 – August 2021

Immunology (BIO 310)

Kenyon College, Gambier, OH
Invited Guest Lecturer, Department of Biology, October 2019
Virology (BIOL 375)

University of California, Davis, Davis, Ca
Invited Guest Lecturer, Department of Neurobiology, Physiology and Behavior, April 2019
Biological Science for Social Justice

The University of Georgia, Athens, Ga
Instructor, Biology, Peach State LSAMP, July 2016
Louis Stokes Alliance for Minority Participation (LSAMP) Summer Bridge Program

University of Delaware, Newark, DE
Instructor, Department of Animal and Food Sciences, June 2009
Emergency Poultry Disease Response (EPDR) Certificate Course

RESEARCH EXPERIENCE

The University of Georgia, Athens, GA
Graduate Research Assistant, Southeastern Cooperative Wildlife Disease Study, May 2014- May 2018

Food and Drug Administration, College Park, MD
Microbiology Intern, Center for Food Safety and Nutrition, July 2012 –March 2013

The George Washington University, Washington, D.C.
Graduate Research Assistant, Department of Environmental and Occupational Health, January - November 2012

University of Delaware, Newark, DE
Undergraduate Research, Department of Animal and Food Sciences, January 2008 -August 2010

GRANTS AND FELLOWSHIPS

Current

The 2030STEM Champions Network, Burroughs Wellcome Fund 2024
Role: Co-PI, Amount: $150,000

Completed

Effects of SARS- CoV-2 cellular entry in exacerbating monocyte activation, NSF 2020
Role: Key Personnel/Postdoctoral Scholar, Amount: $200,000

Loan Repayment Program Award, 2018-2020, National Institutes of Health 2018
Role: PI, Amount: $70,000

Annual Biomedical Research Conference for Minority Students Judge Travel Award 2019
Role: Judge, Amount: $1250

Gordon Research Conference Carl Storm Underrepresented Minority Fellowship 2019
Role: Presenter, Amount: $600

American Society for Virology, Graduate Student Travel Grant 2017
Role: Presenter, Amount $500

The George Washington University Epidemiology and Biostatistics Practicum Research Award
Role: Scholar, Amount: $1200 2012

Submitted

National Institutes of Health, MIRA ESI 2025
Role: PI, Amount: $1,250,000

Building Research Capacity – Biology, National Science Foundation 2024
Role: PI, Amount: $497,290

Postdoctoral Enrichment Program, Burroughs Wellcome Fund 2021
Role: PI, Amount: $60,000

National Institutes of Health Career Development Award (K99/R00) 2020
Potential role of reassortment and co-infection in Orthobunyavirus emergence
Role: PI, Amount: $987,000

Burroughs Wellcome Fund Postdoctoral Enrichment Program 2019
Role: PI, Amount: $60,000

National Science Foundation Postdoctoral Research Fellowship in Biology 2018
Role: PI, Amount: $210,000

MENTORING

7 Undergraduate students

3 Graduate Students

SELECT MEDIA

Interviews

"Black Microbiologists Push for Visibility Amid a *Pandemic."* Sept. 28,2020. The New York Times

"Navigating virtual Conferences as a junior researcher." *Nat Commun* **11,** 5019 (2020). https://doi.org/10.1038/s41467-020-18656-6

"Will a COVID Vaccine be as unreliable as the seasonal flu vaccine?" July 2020. *Global Health Now*. John Hopkins School of Public Health

"Will COVID-19 make the coming flu season *worse?"* July 2020. *Global Health Now.* Hopkins School of Public Health

"What Black Scientists Want from Colleagues and Their Institutions." *Nature* **583**, 319-322 (2020) *doi: https://doi.org/10.1038/d41586-020-01883-8*

PROFESSIONAL DEVELOPMENT

Vaccine Young Investigator Program, May 2025- May 2026

CURE Developer Cohort, 2025-2026, Towson University

Navigating NIH Programs to Enhance Your Career, NIH Regional Seminar, October 2018

Writing an Effective K Application, NIH Regional Seminary, October 2018

Data Intensive Biology Summer Institute, July 2018

Mosquito and Arbovirus Identification Methods, Pre-Conference Workshop, American Society for Tropical Medicine and Hygiene, November 2016

Scientific Writing and Publishing Institute (SWPI) Online Workshop; American Society for Microbiology, January 2015.

LEADERSHIP & SERVICE

Professional

Co-Founder and President, Black Microbiologists Association	2021- Current
Co-Founder, Black In Microbiology Week	2020
Postdoctoral Councilor, American Society for Virology	2020-2023
Poster Judge, Annual Biomedical Research Conference for Minority Students	Nov. 2019

Journal Reviewer (PLoS One, PLoS Neglected Tropical Disease, Journal of General Virology)

Towson University Institutional Biosafety Committee
2018-2019

Towson University Members

Interim Chair:
Matthew Hemm, Ph.D.
Towson U. Dep't of Biol.
8000 York Road
Towson, MD 21252-0001
410-704-2996
mhemm@towson.edu

Barry J Margulies, Ph.D.
Towson U. Dep't of Biol.
8000 York Rd.
Towson, MD 21252-0001
410-704-5019
bjmarg@alum.mit.edu
ANIMAL EXPERT

Elana Ehrlich, Ph.D.
Towson U. Dep't of Biol.
8000 York Road
Towson, MD 21252-0001
410-704-2385
eehrlich@towson.edu

Larry Wimmers, Ph.D.
Towson U. Dep't of Biol.
8000 York Road
Towson, MD 21252-0001
410-704-2766
lwimmers@towson.edu
PLANT EXPERT

John Weldon, Ph.D.
Towson U. Dep't of Biol.
8000 York Road
Towson, MD 21252-0001
(410) 704-3191
jweldon@towson.edu

Marco Goicochea, Ph.D.
Towson U. Dep't of Biol.
8000 York Road
Towson, MD 21252-0001
410-704-5020
mgoicochea@towson.edu

Community Members

Melissa Morland
University of Maryland, Baltimore
Environmental Health and Safety
714 W. Lombard St.
Baltimore, MD 21201
410-706-7845
mmorland@af.umaryland.edu

Robert A. McCown, CHSP (Director of Safety)
1043 Morgan Run Drive
Finksburg, MD 21048
410-876-0517
rmccown@jointcommission.org

EHS Representative
Richard S. Setzer
Environmental Health & Safet
Towson University
8000 York Rd.
Towson, MD 21252-0001
410-704-5510
rsetzer@towson.edu

University Research Representatives
Nancy Dufau, Assistant Vice President
Office of Sponsored Research
Towson University
8000 York Road
Towson, MD 21252-0001
410-704-2236
ndufau@towson.edu

Mara Shainheit, Ph.D.
Towson U. Dep't of Biol.
8000 York Rd.
Towson, MD 21252-0001
(410)-704-2623
mshainheit@towson.edu

13 January 2020
Ms. Michelle Johnson-Lancaster
IBC Coordinator
National Institutes of Health
Office of Biotechnology Activities
6705 Rockledge Drive, Suite 750
Bethesda, MD 20892-7985

Dear Ms. Johnson-Lancaster,

Please find our review of protocols for the 2018-2019 academic year. Our longtime Chair, Dr. Barry Margulies, was on sabbatical this academic year, so I replaced him as Interim Chair. One voting member, Dr. Marco Goicochea, was also added to the IBC committee to replace Dr. Barry Margulies. There was also a change in our Office of Sponsored Project and Research leadership; Ms. Nancy Dufau replaced Ms. Amy Taylor as the University Research Representative. Twenty new and two renewing recombinant DNA protocols and registrations of potentially infectious agents were approved. Annual biosafety cabinet and lab inspections were also completed to ensure compliance.

If you have any questions please do not hesitate to contact me.

Sincerely,

Matthew R. Hemm, Ph.D.
Department of Biological Sciences
Towson University
8000 York Road
Towson, MD 21252
410-704-2996
FAX 410-704-2405
mhemm@towson.edu

Towson University Institutional Biosafety Committee
2019-2020

Towson University Members

Chair:
Barry J Margulies, Ph.D.
Towson U. Dep't of Biol.
8000 York Rd.
Towson, MD 21252-0001
410-704-5019
bjmarg@alum.mit.edu
ANIMAL EXPERT

Elana Ehrlich, Ph.D.
Towson U. Dep't of Biol.
8000 York Road
Towson, MD 21252-0001
410-704-2385
eehrlich@towson.edu

Larry Wimmers, Ph.D.
Towson U. Dep't of Biol.
8000 York Road
Towson, MD 21252-0001
410-704-2766
lwimmers@towson.edu
PLANT EXPERT

Matthew Hemm, Ph.D.
Towson U. Dep't of Biol.
8000 York Road
Towson, MD 21252-0001
410-704-2996
mhemm@towson.edu

John Weldon, Ph.D.
Towson U. Dep't of Biol.
8000 York Road
Towson, MD 21252-0001
(410) 704-3191
jweldon@towson.edu

Marco Goicochea, Ph.D.
Towson U. Dep't of Biol.
8000 York Rd.
Towson, MD 21252-0001
(410)-704-5020
mgoicochea@towson.edu

Anne Estes, Ph.D.
Towson U. Dep't of Biol.
8000 York Rd.
Towson, MD 21252-0001
(410)-704-2126
aestes@towson.edu

Community Members

Melissa Morland
University of Maryland, Baltimore
Environmental Health and Safety
714 W. Lombard St.
Baltimore, MD 21201
410-706-7845
mmorland@af.umaryland.edu

Robert A. McCown, CHSP (Director of Safety)
1043 Morgan Run Drive
Finksburg, MD 21048
410-876-0517
rmccown@jointcommission.org

EHS Representative
Richard S. Setzer
Environmental Health & Safety
Towson University
8000 York Rd.
Towson, MD 21252-0001
410-704-5510
rsetzer@towson.edu

17 June 2020
Ms. Michelle Johnson-Lancaster
IBC Coordinator
National Institutes of Health
Office of Biotechnology Activities
6705 Rockledge Drive, Suite 750
Bethesda, MD 20892-7985

Dear Ms. Johnson-Lancaster,

Please find our review of protocols for the 2019-2020 academic year. The only roster change this past year was the addition of Dr. Anne Estes to the committee. Eighteen renewing recombinant DNA protocols and registrations of potentially infectious agents were approved. Annual biosafety cabinet and lab inspections were also completed to ensure compliance.

If you have any questions please do not hesitate to contact me.

Sincerely,

Barry E. Margulies, Ph.D.
Department of Biological Sciences
Towson University
8000 York Road
Towson, MD 21252
410-704-5019
FAX 410-704-2405
bjmarg@alum.mit.edu

Towson University Institutional Biosafety Committee
2020-2021

Towson University Members

Chair:
Barry J Margulies, Ph.D.
Towson U. Dep't of Biol.
8000 York Rd.
Towson, MD 21252-0001
410-704-5019
bjmarg@alum.mit.edu
ANIMAL EXPERT

Elana Ehrlich, Ph.D.
Towson U. Dep't of Biol.
8000 York Road
Towson, MD 21252-0001
410-704-2385
eehrlich@towson.edu

Larry Wimmers, Ph.D.
Towson U. Dep't of Biol.
8000 York Road
Towson, MD 21252-0001
410-704-2766
lwimmers@towson.edu
PLANT EXPERT

Matthew Hemm, Ph.D.
Towson U. Dep't of Biol.
8000 York Road
Towson, MD 21252-0001
410-704-2996
mhemm@towson.edu

John Weldon, Ph.D.
Towson U. Dep't of Biol.
8000 York Road
Towson, MD 21252-0001
(410) 704-3191
jweldon@towson.edu

Marco Goicochea, Ph.D.
Towson U. Dep't of Biol.
8000 York Rd.
Towson, MD 21252-0001
(410)-704-5020
mgoicochea@towson.edu

Community Members

Melissa Morland
University of Maryland, Baltimore
Environmental Health and Safety
714 W. Lombard St.
Baltimore, MD 21201
410-706-7845
mmorland@af.umaryland.edu

Robert A. McCown, CHSP (Director of Safety)
1043 Morgan Run Drive
Finksburg, MD 21048
410-876-0517
rmccown@jointcommission.org

EHS Representative
Richard S. Setzer
Environmental Health & Safety
Towson University
8000 York Rd.
Towson, MD 21252-0001
410-704-5510
rsetzer@towson.edu

Anne Estes, Ph.D.
Towson U. Dep't of Biol.
8000 York Rd.
Towson, MD 21252-0001
(410)-704-2126
aestes@towson.edu

16 June 2021
Ms. Michelle Johnson-Lancaster
IBC Coordinator
National Institutes of Health
Office of Biotechnology Activities
6705 Rockledge Drive, Suite 750
Bethesda, MD 20892-7985

Dear Ms. Johnson-Lancaster,

Please find our review of protocols for the 2020-2021 academic year. Twelve renewing recombinant DNA protocols and registrations of potentially infectious agents were approved. Annual biosafety cabinet and lab inspections were also completed to ensure compliance.

If you have any questions please do not hesitate to contact me.

Sincerely,

Barry E. Margulies, Ph.D.
Department of Biological Sciences
Towson University
8000 York Road
Towson, MD 21252
410-704-5019
FAX 410-704-2405
bjmarg@alum.mit.edu

Towson University Institutional Biosafety Committee
2021-2022

Towson University Members

Chair

John Weldon, Ph.D.
Towson University
Department of Biological Sciences
8000 York Road
Towson, MD 21252-0001
410-704-3191
jweldon@towson.edu

Committee Members

Elana Ehrlich, Ph.D.
Towson University
Department of Biological Sciences
8000 York Road
Towson, MD 21252-0001
410-704-2385
eehrlich@towson.edu

Matthew Hemm, Ph.D.
Towson University
Department of Biological Sciences
8000 York Road
Towson, MD 21252-0001
410-704-2996
mhemm@towson.edu

Anne Estes, Ph.D.
Towson University
Department of Biological Sciences
8000 York Road
Towson, MD 21252-0001
410-704-2126
aestes@towson.edu

EHS Representative

Frank Hubbard Butler
Towson University
Environmental Health and Safety
Towson University
8000 York Rd.
Towson, MD 21252-0001
410-704-5510
fhubbardbutler@towson.edu

Community Members

Melissa Morland
University of Maryland, Baltimore
Environmental Health and Safety
714 W. Lombard St.
Baltimore, MD 21201
410-706-7845
mmorland@af.umaryland.edu

Robert A. McCown, CHSP (Director of Safety)
1043 Morgan Run Drive
Finksburg, MD 21048
410-876-0517
rmccown@jointcommission.org

TOWSON UNIVERSITY

Department of Biological Sciences
8000 York Road
Towson, MD 21252-0001

12 July 2022
Ms. Michelle Johnson-Lancaster
IBC Coordinator
National Institutes of Health
Office of Biotechnology Activities
6705 Rockledge Drive, Suite 750
Bethesda, MD 20892-7985

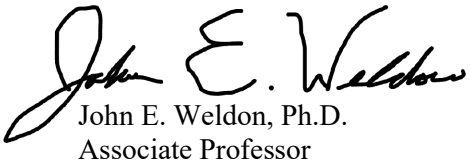
Dear Ms. Johnson-Lancaster,

Please find our review of protocols for the 2021-2022 academic year. Four renewed recombinant DNA protocols and one renewed registration of potentially infectious agents were approved. One new registration of potentially infectious agents was approved. Annual biosafety cabinet and lab inspections were also completed to ensure compliance.

Several changes in the IBC membership occurred over the year. Dr. John Weldon assumed the IBC Chair with the departure of Dr. Barry Margulies. Drs. Marco Goicochea (resigned) and Larry Wimmers (retired) also left the committee. EHS representative Mr. Richard Setzer retired and was replaced by Mr. Frank Hubbard Butler. The current committee membership consists of Towson University faculty members Dr. John Weldon (Chair and point of contact), Dr. Matthew Hemm, Dr. Elana Ehrlich, and Dr. Anne Estes, along with community members Mr. Robert McCown and Ms. Melissa Morland. The non-voting EHS representative and additional point of contact is Mr. Frank Hubbard Butler. A full committee roster is included with this submission.

If you have any questions, please do not hesitate to contact me.

Sincerely,



John E. Weldon, Ph.D.
Associate Professor
Chair, Institutional Biosafety Committee
Department of Biological Sciences
Towson University
8000 York Road
Towson, MD 21252
410-704-3191
FAX 410-704-2405
jweldon@towson.edu

Towson University Institutional Biosafety Committee
8/31/2023

Towson University Members

Chair

John Weldon, Ph.D.
Associate Professor
Towson University
Department of Biological Sciences
Science Complex, Room 5101K
8000 York Road
Towson, MD 21252-0001
410-704-3191
jweldon@towson.edu

Committee Members

Elana Ehrlich, Ph.D.
Professor
Towson University
Department of Biological Sciences
Science Complex, Room 5150B
8000 York Road
Towson, MD 21252-0001
410-704-2385
eehrlich@towson.edu

Matthew Hemm, Ph.D.
Associate Professor
Towson University
Department of Biological Sciences
Science Complex, Room 5101B
8000 York Road
Towson, MD 21252-0001
410-704-2996
mhemm@towson.edu

Anne Estes, Ph.D.
Assistant Professor
Towson University
Department of Biological Sciences
Science Complex, Room 5150G
8000 York Road
Towson, MD 21252-0001
aestes@towson.edu

Erin Harberts, Ph.D.
Assistant Professor
Towson University
Department of Biological Sciences
Science Complex, Room 5150P
8000 York Road
Towson, MD 21252-0001
eharberts@towson.edu

EHS Representative

Frank Hubbard Butler
Environmental Safety Assistant
Towson University
Office of Environmental Health and Safety
Public Safety Building, Room 205
8000 York Rd.
Towson, MD 21252-0001
410-704-5510
fhubbardbutler@towson.edu

Community Members

Melissa Morland
Executive Director
Operations and Maintenance
University of Maryland, Baltimore
622 W. Fayette St.
Baltimore, MD 21201
mmorland@umaryland.edu

Robert A. McCown, CHSP
Director of Safety
1043 Morgan Run Drive
Finksburg, MD 21048
410-876-0517
safetbob@msn.com

TOWSON.EDU

TOWSON UNIVERSITY

Department of Biological Sciences
8000 York Road
Towson, MD 21252-0001

28 August 2023
Ms. Michelle Johnson-Lancaster
IBC Coordinator
National Institutes of Health
Office of Biotechnology Activities
6705 Rockledge Drive, Suite 750
Bethesda, MD 20892-7985

Dear Ms. Johnson-Lancaster,

Please find our review of protocols for the 2022-2023 academic year. Three renewed recombinant DNA protocols and two renewed registrations of potentially infectious agents were approved. Two new registration of potentially infectious agents was approved. Annual biosafety cabinet and lab inspections were also completed to ensure compliance.

One change to the IBC membership occurred over the year. Dr. Erin Harberts, animal expert, was added to the membership roster. The current committee membership consists of Towson University faculty members Dr. John Weldon (Chair and point of contact), Dr. Matthew Hemm, Dr. Elana Ehrlich, Dr. Anne Estes, and Dr. Erin Harberts, along with community members Mr. Robert McCown and Ms. Melissa Morland. The non-voting EHS representative and additional point of contact is Mr. Frank Hubbard Butler. A full committee roster is included with this submission.

If you have any questions, please do not hesitate to contact me.

Sincerely,

John E. Weldon, Ph.D.
Associate Professor
Chair, Institutional Biosafety Committee
Department of Biological Sciences
Towson University
8000 York Road
Towson, MD 21252
410-704-3191
FAX 410-704-2405
jweldon@towson.edu

5/29/2025

Towson University Institutional Biosafety Committee (IBC)

Towson University IBC Members

Chair

John Weldon, Ph.D.
Associate Professor
Towson University
Department of Biological Sciences
Science Complex, Room 5101K
8000 York Road
Towson, MD 21252-0001
410-704-3191
jweldon@towson.edu

Committee Members

Elana Ehrlich, Ph.D.
Professor
Towson University
Department of Biological Sciences
Science Complex, Room 5150B
8000 York Road
Towson, MD 21252-0001
410-704-2385
eehrlich@towson.edu

Kishana Taylor, Ph.D.
Assistant Professor
Towson University
Department of Biological Sciences
Science Complex, Room 5150P
8000 York Road
Towson, MD 21252-0001
410-704-5020
kytaylor@towson.edu

Anne Estes, Ph.D.
Associate Professor
Towson University
Department of Biological Sciences
Science Complex, Room 5150G
8000 York Road
Towson, MD 21252-0001
aestes@towson.edu

Erin Harberts, Ph.D.
Assistant Professor
Towson University
Department of Biological Sciences
Science Complex, Room 5150P
8000 York Road
Towson, MD 21252-0001
eharberts@towson.edu

Community Members

Melissa Morland
Executive Director of Facility Operations and Maintenance Administration
University of Maryland, Baltimore
Facilities and Operations Service Center
622 W Fayette St
Baltimore, MD 21201
410-706-7570
mmorland@umaryland.edu

Robert A. McCown, CHSP
Director of Safety
1043 Morgan Run Drive
Finksburg, MD 21048
410-876-0517
safetbob@msn.com

EHS Representative

Frank Hubbard Butler
Environmental Safety Manager
Towson University
Office of Environmental Health and Safety
Public Safety Building, Room 205
8000 York Rd.
Towson, MD 21252-0001
410-704-3358
fhubbardbutler@towson.edu

OSPR Representative

Jennifer Ippolito
Assistant Director for Research Compliance
Towson University
Office of Sponsored Programs & Research Administration Building, Room 3250
8000 York Road
Towson, MD 21252-0001
410-704-6227
jippolito@towson.edu

TOWSON UNIVERSITY

Department of Biological Sciences
8000 York Road
Towson, MD 21252-0001

10 June 2025
Ms. Michelle Johnson-Lancaster
IBC RMS Administrator
National Institutes of Health
Office of Biotechnology Activities
6705 Rockledge Drive, Suite 750
Bethesda, MD 20892-7985

Dear Ms. Johnson-Lancaster,

Please find our review of protocols for the 2024-2025 academic year. Four renewed recombinant DNA protocols were approved. One new and three renewed registrations of potentially infectious agents were approved. Annual biosafety cabinet and lab inspections were also completed to ensure compliance.

One change to the IBC membership occurred over the year. Virologist Dr. Kishana Taylor was added to the membership roster, replacing Dr. Matthew Hemm. The current committee membership consists of Towson University faculty members Dr. John Weldon (Chair and point of contact), Dr. Elana Ehrlich, Dr. Anne Estes, Dr. Kishana Taylor, and Dr. Erin Harberts, along with community members Mr. Robert McCown and Ms. Melissa Morland. The non-voting TU Environmental Health and Safety representative and additional point of contact is Mr. Frank Hubbard Butler. Ms. Jennifer Ippolito, Assistant Director for Research Compliance, represents the TU Office of Sponsored Programs and Research as a non-voting member. A full committee roster is included with this submission.

If you have any questions, please do not hesitate to contact me.

Sincerely,

John E. Weldon, Ph.D.
Associate Professor
Chair, Institutional Biosafety Committee
Department of Biological Sciences
Towson University
8000 York Road
Towson, MD 21252
410-704-3191
FAX 410-704-2405
jweldon@towson.edu