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Educational Background

1990-1998 **HARVARD UNIVERSITY** (Cambridge, MA)
Ph.D., Cell and Developmental Biology, Division of Medical Sciences
Dissertation: *DNA methyltransferases in mammalian development and host defense*
Mentor: Timothy H. Bestor, PhD. (currently Professor Emeritus, Columbia University)

1986-1990 **WORCESTER POLYTECHNIC INSTITUTE** (Worcester, MA),
B.S., High Distinction, Biotechnology
Senior Thesis: *Cross-linking of the ram sperm antigen ESA152 induces the acrosome reaction*
Mentors: David E. Wolf, Ph.D. (Worcester Foundation for Experimental Biology)
David S. Adams, Ph.D. (Worcester Polytechnic Institute)

Professional Appointments

2024-pres. **EXECUTIVE DIRECTOR**, Genetics and Genomics Academy, Office of University Interdisciplinary Programs, NC State University, Raleigh, NC

2024-pres. **PROFESSOR**, Department of Biological Sciences, College of Sciences, NC State University, Raleigh, NC

2019-2024 **PROFESSOR**, Department of Molecular Biomedical Sciences, College of Veterinary Medicine, NC State University, Raleigh, NC

2010-2019 **ASSOCIATE PROFESSOR**, Department of Molecular Biomedical Sciences, College of Veterinary Medicine, NC State University, Raleigh, NC

2004-2010 **ASSISTANT PROFESSOR**, Department of Molecular Biomedical Sciences, College of Veterinary Medicine, NC State University, Raleigh, NC

2002-2004 **ASSISTANT PROFESSOR**, Department of Biology, College of Arts & Sciences, University of South Florida, Tampa, FL

2002-2004 **ASSISTANT PROFESSOR (ADJUNCT)**, Dept. of Pediatrics, College of Medicine, University of South Florida, Tampa, FL

2002-2004 **MEMBER**, Immunology Program, H. Lee Moffitt Cancer Center and Research Institute, Tampa, FL

1998-2002 **POST-DOCTORAL RESEARCH FELLOW,** Children's Research Institute, Department of Pediatrics, College of Medicine, University of South Florida, St. Petersburg, FL
Mentor: Gary W. Litman, Ph.D. (retired 2017)

1998-2002 **RESEARCH FELLOW**, H. Lee Moffitt Cancer Center and Research Institute, Tampa, FL

Leadership Experience

INTERNAL

2024-pres. **EXECUTIVE DIRECTOR**, Genetics and Genomics Academy (GGA)
The primary commitments of the GGA are to 1) advance graduate education across life-science disciplines, 2) enhance interdisciplinary research, 3) advance G&G knowledge for all undergraduate students, and 4) advance G&G knowledge across the state of North Carolina. In this role I work collaboratively with the Office of Interdisciplinary Programs to develop, manage, and promote all activities across the GGA. I manage the GGA Executive Committee (including faculty and full-time staff), and the GGA Advisory Committee, and report to the Senior Vice Provost for University Interdisciplinary Programs.

2018-2024 **HEAD OF RESEARCH COMMITTEE**, Genetics & Genomics Academy (GGA) Executive Committee
I served on the GGA Executive Committee since it started as the Genetics and Genomics Initiative. I led the design and development of the Research Interest Groups (RIGs) and managed their topics and leadership. I was the primary organizer of the annual retreats which included: 1) designing the overall schedule, 2) inviting internal and keynote speakers, 3) coordinating student posters, and 4) inviting corporate sponsors.

2023-2024 **DIRECTOR OF CAREER DEVELOPMENT PROGRAM**, Center for Human Health and the Environment (CHHE)
I coordinated the mentoring of early-stage investigators by partnering them with more experienced faculty for grant writing guidance. The goal was to increase the NIEHS funding by faculty across the CHHE.

2020-2021 **CHAIR**, University Research Committee
I served on the URC from 2017-2021 and was chair for the 2020-2021 academic year. During the pandemic, I proposed a survey to assess the impacts of COVID on different groups of faculty, and led a team to develop, execute and analyze the survey. The results revealed that younger and newer faculty experienced more severe delays in their professional progress. Results were distributed to colleges and units and used to develop strategies to support faculty. For example, the graduate school and ORI provided bridging support for graduate students whose funding had ended during COVID but needed additional time to complete their dissertation.

2011-2014 **LEADER,** Conservation Genomics Working Group, Center for Comparative Medicine and Translational Research (predecessor to Comparative Medicine Institute)
I organized this working group under the Clinical Genomics Research Core of the CCMTR. I helped partner faculty with expertise in wildlife medicine, genomics, statistics and bioinformatics. This group included faculty members from six departments, three colleges and from three different centers. I organized regular meetings, annual internal workshops, and coordinated collaborative grant proposals.

2008-2024 **IMMUNOLOGY CONCENTRATION AREA LEADER**, Comparative Biomedical Sciences (CBS) Graduate Program
I served on the CBS Graduate Studies Committee and am coordinating the merging of the Immunology and Infectious Disease concertation areas. I also coordinated an on-campus joint recruiting event for accepted students to the CBS Graduate Program, the GG Scholars Program, and the Comparative Molecular Medicine Training Program.

EXTERNAL

2020-2023 **ORGANIZING COMMITTEE,** Zebrafish Disease Models Society (ZDMS) Annual Conference
I served on the organizing committee for this international conference that was held in 2021 (virtual) and in 2023 (in person). I helped decide session topics, invited speakers, and moderated sessions.

2019-2023. **LEADER,** Research Interest Group – Infection & Inflammation, Zebrafish Disease Models Society (ZDMS)
I organized and hosted multiple on-line mini symposia for the zebrafish community as well as in person events at the annual conferences.

2017 **LEAD ORGANIZER,** North American Comparative Immunology (NACI) Conference
The NACI Conference is hosted annually at various venues across the US and Canada. I organized and hosted the NACI Conference in 2017 at the NC State Talley Student Center. This involved organizing a small planning committee, securing the venue/catering/housing, organizing the sessions, selecting speakers, organizing judges for student presentations, and writing conference grants to NSF and the NC Biotechnology Center.

Funding Sources, Extramural

2024-2027 **NATIONAL SCIENCE FOUNDATION:** IOS-2419126
Collaborative Research: OSIB: A Multi-Omic Evaluation of Innate Immune Responses Across Vertebrate Evolution
Collaborative Grant with UNC-Charlotte (PI A. Dornburg) and UNC-Chapel Hill (PI: E. Baker)
Role on grant: PI $645,180 ($1,528,681 total)

2023 **NORTH CAROLINA BIOTECHNOLOGY CENTER - INNOVATION IMPACT GRANT**
Acquisition of a Multi Camera Array Microscope (MCAM) for Research Involving Chemical and Genetic Screens
Role on grant: PI $116,268

2021-2024 **NATIONAL INSTITUTES OF HEALTH:** R03-ES032532
Linking PFAS exposure to thyroid disruption and innate immunity
Role on grant: PI $146,798

2021-2023 **NATIONAL INSTITUTES OF HEALTH** (Primary Sponsor) R44-OD024879
RAMONA OPTICS, INC. (Direct Sponsor)
Parallelized Imaging and Automated Analysis of Zebrafish Assays with a Gigapixel Microscope
Role on grant: co-I (PI: Harfouche, Mark) $393,892 (subaward to JY)

2020-2025 **NATIONAL INSTITUTES OF HEALTH:** P42-ES031009
Center for Environmental and Health Effects of PFAS
Role on grant: 1 of 19 co-Is (PI: Carolyn Mattingly) $6,479,572

2018-2022 **NATIONAL SCIENCE FOUNDATION:** IOS-1755330
Collaborative Research: Understanding the molecular diversification of self recognition through ray-finned fish innate immune receptor families
Collaborative Grant with UNC-Charlotte (PI A. Dornburg)
Role on grant: PI $524,897 ($673,889 total)

2019-2021 **ANIMAL AND PLANT HEALTH INSPECTION SERVICE (APHIS) - USDA**
NBAF Scientist Training Program Agreement
Role on grant: PI $236,078

2017-2021 **NATIONAL INSTITUTES OF HEALTH:** R01-HL137093
Enhancing vascular delivery of stem cells and microparticles
Role on grant: co-I (PI: Ke Cheng) $1,489,731

2017-2018 **MOFFITT CANCER CENTER**
Drug Toxicity and Efficacy Screens with Zebrafish Embryos
Role on grant: PI $15,000

2017-2018 **NATIONAL SCIENCE FOUNDATION - CONFERENCE PROPOSAL**
From Omics to Function, Future Directions for Comparative Immunology, NACI Workshop 2017
Role on grant: PI $8,423

2017 **NORTH CAROLINA BIOTECHNOLOGY CENTER - BIOTECHNOLOGY MEETING GRANT**
North American Comparative Immunology Workshop
Role on grant: PI $2,500

2016-2017 **TRIANGLE CENTER FOR EVOLUTIONARY MEDICINE**
Linking fish models to human health through the sequences of living fossils
Role on grant: PI $20,000

2014-2017 **NATIONAL INSTITUTE OF ENVIRONMENTAL HEALTH SCIENCES**
CONTRACTS #HHSN273201400195P, #HHSN273201500234P
Zebrafish immune function and disease resistance assays
Role on project: PI $296,203

2015-2017 **MORRIS ANIMAL FOUNDATION:** D16CA-048
Role of TSLP in canine atopic dermatitis - A new target to inhibit itch and inflammation in dogs
Role on grant: co-I (PI: Wolfgang Baeumer) $25,250

2015 **TRIANGLE CENTER FOR EVOLUTIONARY MEDICINE/NATIONAL EVOLUTIONARY SYNTHESIS CENTER**
Transcriptional response of immunoglobulin domain-containing innate immune receptors
Role on grant: PI $15,500

2015 **AMERICAN ASSOCIATION OF IMMUNOLOGISTS: CAREERS IN IMMUNOLOGY FELLOWSHIP**
TRIM9 as an Intracellular Mediator in Macrophage Chemotaxis
Role on grant: PI $50,112

2010-2014 **NATIONAL INSTITUTES OF HEALTH:** 2R01 AI057559
Novel innate immune receptors in zebrafish
Role on grant: Sr-I (PI: Gary W. Litman) $1,487,750

2014 **North Carolina Biotechnology Center - Institutional Development Grant Program**
ZRC-NCSU: A Zebrafish Core at NCSU to advance basic, environmental and biomedical research
Role on grant: co-I (PI: Tony Planchart) $196,752

2010-2012 **NATIONAL INSTITUTES OF HEALTH:** R56 AI089313
Mechanism of HIV latency and viral reactivation in Regulatory T cells
Role on grant: co-I (PI: Shila Nordone) $384,469

2007-2012 **NATIONAL INSTITUTES OF HEALTH:** R01 GM079114
Switchable systems for spatio-temporal control of gene expression in zebrafish
Role on grant: Co-I (PI: Alex Deiters) $1,412,482

2008-2011 **MORRIS ANIMAL FOUNDATION:** D08CA-085
Evaluation of TREM-1 as a specific biological marker for sepsis in dogs
Role on grant: co-I (PI: Shila Nordone) $224,078

2008-2010 **NATIONAL INSTITUTES OF HEALTH:** R21 AI076829
Whole organism transcriptional profiling of innate immune response
Role on grant: PI $389,982

2004-2009 **NATIONAL INSTITUTES OF HEALTH:** 1R01 AI057559
Novel innate immune receptors in zebrafish
Role on grant: Sr-I (PI: Gary Litman) $1,593,106

2004-2007 **NATIONAL SCIENCE FOUNDATION:** MCB-0344618
Novel immune-type receptors and cytotoxicity in zebrafish
Role on grant: PI $351,000

2004 **NATIONAL INSTITUTES OF HEALTH:** R21 AI057559
Novel innate immune receptors in zebrafish
Role on grant: Sr-I (PI: Gary Litman) $326,250

1999-2002 **NIH INDIVIDUAL NATIONAL RESEARCH SERVICE AWARD:** F32 GM20231
Novel immune-type receptor (nitr) genes and zebrafish
Role on grant: PI $98,232

Funding Sources, Intramural

2024 **NCSU GENETICS AND GENOMICS ACADEMY**
Using a multi-omic approach to unravel the evolutionary mechanisms of invasion in the red lionfish
Role on grant: PI $25,000

2023-2024 **NCSU COMPARATIVE MEDICINE INSTITUTE**
Development of zebrafish mast cell reporter lines to enhance the in vivo studies of mast cells in neurobiology, infection, and immunity
Role on grant: co-I (PI: N. Duque-Wilckens, Co-I: K. Marsden) $45,000

2023 **NCSU COLLEGE OF VETERINARY MEDICINE EQUIPMENT GRANT**
Acquisition of a Varioskan LUX Multimode Microplate Reader
Role on grant: PI $13,427

2022-2023 **NCSU CENTER FOR HUMAN HEALTH AND THE ENVIRONMENT**
Assessing the impact of PFAS exposure on neutrophil function and microbial infection
Role on grant: PI $38,000

2019-2021 **NCSU COLLEGE OF AGRICULTURE AND LIFE SCIENCES – BIG IDEA GRANT**
Genetics and Genomics Research Interest Groups (RIGs)
Role on grant: Co-I (PI: Fred Gould) $5,000

2019-2020 **NCSU COLLEGE OF VETERINARY MEDICINE RESEARCH GRANT**
Linking Per- and Polyfluoroalkyl Substance Exposure to Immunosuppression
Role on grant: PI $20,442

2017-2018 **NCSU CENTER FOR HUMAN HEALTH AND THE ENVIRONMENT**
Immune suppression by pyrene exposure
Role on grant: PI $25,000

2017-2108 **NCSU COMPARATIVE MEDICINE INSTITUTE**
Assessment of Canine Cerebrospinal Fluid for Antibodies (NMDA, CASPR2, AMPA, LGI1, DPPX, and GABAB) Predictive of Autoimmune-Mediated Encephalitis to Confirm Novel Diagnoses in Veterinary Medicine
Role on grant: co-I (PI: Natasha Olby) $5,000

2015-2016 **NCSU CENTER FOR HUMAN HEALTH AND THE ENVIRONMENT**
Immune-suppression by embryonic exposure to polycyclic aromatic hydrocarbons
Role on grant: PI $37,875

2015-2016 **NCSU COLLEGE OF VETERINARY MEDICINE RESEARCH GRANT**
TMEM150A mediated regulation of cytokine release
Role on grant: PI $21,045

2015 **NCSU COLLEGE OF VETERINARY MEDICINE EQUIPMENT GRANT**
Update of compound fluorescent microscope Leica DM5000B
Role on grant: PI $21,395

2014-2015 **NCSU COLLEGE OF VETERINARY MEDICINE RESEARCH GRANT**
TRIM9 and leukocyte function.
Role on grant: PI $24,736

2014 **NCSU COLLEGE OF VETERINARY MEDICINE EQUIPMENT GRANT**
Purchase of Cellometer® Vision CBS System (Nexcelom)
Role on grant: PI $30,390

2014 **NCSU CENTER FOR HUMAN HEALTH AND THE ENVIRONMENT**
Cellular & molecular studies of inorganic arsenic-induced deficiencies in the innate immune system
Role on grant: co-I (PI: Tony Planchart) $25,500

2013-2014 **NCSU CENTER FOR COMPARATIVE MEDICINE AND TRANSLATIONAL RESEARCH**
Functional evaluation of antimicrobial peptides from zebrafish
Role on grant: PI $7,500

2013 **NCSU CENTER FOR COMPARATIVE MEDICINE AND TRANSLATIONAL RESEARCH**
Evaluation of zebrafish saposin-like proteins as antimicrobials
Role on grant: PI $10,000

2013 **NCSU CENTER FOR COMPARATIVE MEDICINE AND TRANSLATIONAL RESEARCH**
Salinity induced transcriptomic changes in the gill of eastern oyster, Crassostrea virginica
Role on grant: PI $14,000

2012-2013 **NCSU RESEARCH AND INNOVATION SEED FUND PROGRAM.**
Immunogenomics of the Endangered Wyoming Toad
Role on grant: PI $38,500

2012 **NCSU CENTER FOR HUMAN HEALTH AND THE ENVIRONMENT.**
Exp. to environmental toxicants, a mechanism of hypermutability of cardiomyopathy-linked genes
Role on grant: Co-PI (PI: Kate Meurs) $24,592

2008-2009 **NCSU COLLEGE OF VETERINARY MEDICINE RESEARCH GRANT**
Determining the barrier function of the chorion in the fish embryo test
Role on grant: co-I (PI: Mac Lac) $7,500

2007-2008 **NCSU COLLEGE OF VETERINARY MEDICINE RESEARCH GRANT**
Immune-related, lectin-like receptor 3 (Illr3) and hematopoietic lineages in zebrafish
Role on grant: PI $15,000

2007-2008 **NCSU CENTER FOR COMPARATIVE MEDICINE AND TRANSLATIONAL RESEARCH**
Assessing immune response genes as biomarkers for infection
Role on grant: PI. $15,000

2006-2007 **NCSU CENTER FOR COMPARATIVE MEDICINE AND TRANSLATIONAL RESEARCH**
Novel immune-type receptors and immune response in trout
Role on grant: PI $15,000

2006-2007 **NCSU FACULTY RESEARCH AND PROFESSIONAL DEVELOPMENT FUND**
A small molecule approach to gene regulation in zebrafish.
Role on grant: PI $20,000

2005 **NCSU FACULTY RESEARCH AND PROFESSIONAL DEVELOPMENT FUND**
Hematopoietic expression of immune-related, lectin-like receptors in zebrafish
Role on grant: PI $8,000

2003 **AMERICAN CANCER SOCIETY INSTITUTIONAL RESEARCH GRANT (USF/Moffitt):** 93-032-07
Mechanisms of tumor cell recognition by cytotoxic cells
Role on grant: PI $19,265

Scholarships, Awards and Honors

2021 **Nominee**, Michael Dickey Outstanding Research Mentor Award, NC State University
2017 **Travel Award**, Zebrafish Disease Models Conference
2016 **Laboratory Travel Award,** American Association of Immunologists annual meeting
2016 **Finalist**, NC State University Outstanding Graduate Faculty Mentor Award
2015 **Laboratory Travel Award,** American Association of Immunologists annual meeting
2011 **Laboratory Travel Award,** American Association of Immunologists annual meeting
2007 Named 1 of 31 **"TOMORROW'S PIS"** by *Genome Technology* magazine
2002 **TRAVEL SCHOLARSHIP**, Keystone Symp.: *Innate Immunity: Evolution and Link to Adaptive Immunity*
1999-2002 **NIH INDIVIDUAL NATIONAL RESEARCH SERVICE AWARD,** F32 GM20231
1993-1994 **SCHOLARSHIP**, Jeffries Wyman (Harvard University)
1990 **HONORABLE MENTION**, National Science Foundation Graduate Fellowship Competition
1990 **AWARD**, ***Sigma Xi*** Outstanding Senior Research (Worcester Polytechnic Institute)
1990 **AWARD**, **Stephen Salisbury** (awarded to one student each year; Worcester Polytechnic Institute)
1988 **AWARD**, ***Tau Beta Pi*** Outstanding Sophomore (Worcester Polytechnic Institute)

Patents

BIVM (Basic, Immunoglobulin-Like Variable Motif-Containing) Gene, Transcriptional Products, and Uses Thereof. Patent No. US 7,038,030 B2. Awarded May 2, 2006.

Original peer-reviewed research articles

**** Indicates co-first authorship***

1. Mallik R., D.J. Wcisel, **J.A Yoder**, T.J. Near, A. Dornburg. 2024. Investigating the impact of whole genome duplication on transposable element evolution in ray-finned fishes. *Mol. Biol. Evol.* Submitted. Preprint: https://doi.org/10.1101/2023.12.22.572151
2. Efromson J., G. Ferrero, A. Bègu, T.J.J. Doman, C. Dugo, A. Barker, V. Saliu, P. Reamey, K. Kim, M. Harfouche, **J.A. Yoder**. 2023. Automated, high-throughput quantification of EGFP-expressing neutrophils in zebrafish by machine learning and a highly-parallelized microscope. *PLoS ONE.* 18(12): e0295711. DOI: https://doi.org/10.1371/journal.pone.0295711 PMID: 38060605
3. Carlson K.B., C. Nguyen, D.J. Wcisel, **J.A. Yoder**, A. Dornburg. 2023. Ancient Fish Lineages Illuminate Toll-Like Receptor Diversification in Early Vertebrate Evolution. *Immunogenetics*. 75(5):465-478. DOI: 10.1007/s00251-023-01315-7. PMID: 37555888
4. Mallik R., K.B. Carlson, D.J. Wcisel, M. Fisk, **J.A. Yoder**, A. Dornburg. 2023. A chromosome level genome assembly of longnose gar, *Lepisosteus osseus*. *G3: Genes|Genomes|Genetics*. 13(7):jkad095 DOI: 10.1093/g3journal/jkad095. PMID: 37119803
5. Phelps D.W., A.I. Palekar, H.E. Conley, G. Ferrero, J.H. Driggers, K.E. Linder, S.W. Kullman, D.M. Reif, M.K. Sheats, J.C. DeWitt, **J.A. Yoder**. 2023 Legacy and emerging per- and polyfluoroalkyl substances suppress the neutrophil respiratory burst. *J Immunotoxicology*. 20(1):2176953. DOI: https://doi.org/10.1080/1547691X.2023.2176953 PMID: 36788734
6. Wcisel, D.J., A. Dornburg, S.C. McConnell, K.M. Hernandez, J. Andrade, J.L.O. de Jong, G.W. Litman, **J.A. Yoder**. 2023 A highly diverse set of novel immunoglobulin-like transcript (NILT) genes in zebrafish indicates a wide range of functions with complex relationships to mammalian receptors. *Immunogenetics*. 75:53-69. DOI: https://doi.org/10.1007/s00251-022-01270-9 PMID: 35869336

7. Block J., C. Rashkova, I. Castanon, S. Zoghi, J. Platon, R.C. Ardy, M. Fujiwara, B. Chaves, R. Schoppmeyer, C.I. van der Made, R. Jimenez Heredia, F.L. Harms, S. Alavi, L. Alsina, P. Sanchez Moreno, R. Ávila Polo, R. Cabrera-Pérez, S. Kostel Bal, L. Pfajfer, B. Ransmayr, A.K. Mautner, R. Kondo, A. Tinnacher, M. Caldera, M. Schuster, C. Domínguez Conde, R. Platzer, E. Salzer, T. Boyer, H.G. Brunner, J.E. Nooitgedagt-Frons, E. Iglesias, A. Deyà-Martinez, M. Camacho-Lovillo, J. Menche, C. Bock, J.B. Huppa, W.F. Pickl, M. Distel, **J.A. Yoder**, D. Traver, K.R. Engelhardt, T. Linden, L. Kager, J.T. Hannich, A. Hoischen, S. Hambleton, S. Illsinger, L. Da Costa, K. Kutsche, Z. Chavoshzadeh, J.D. van Buul, J. Antón, J. Calzada-Hernández, O. Neth, J. Viaud, A. Nishikimi, L. Dupré, K. Boztug. 2023. Systemic Inflammation and Normocytic Anemia in DOCK11 Deficiency. *N Engl J Med*. 389(6):527-539. DOI: 10.1056/NEJMoa2210054. PMID: 37342957
8. Romanet, J.L., K.L. Cupo, **J.A. Yoder**. 2022. Knock-down of Transmembrane Protein 150A (*TMEM150A*) results in increased production of multiple cytokines. *J Interferon Cytokine Res.* 42(7):336-342. DOI: 10.1089/jir.2022.0063 PMID: 35834652
9. Carlson, K.B., D.J. Wcisel, H.D. Ackerman, J. Romanet, E.F. Christiansen, J.N. Niemuth, C. Williams, M. Breen, M.K. Stoskopf, A. Dornburg, **J.A. Yoder**. 2022. Transcriptome annotation reveals minimal immunogenetic diversity among Wyoming toads, *Anaxyrus baxteri*. *Conserv Genet*. 23: 669–681. DOI: https://doi.org/10.1007/s10592-022-01444-8. PMID: 37090205
10. Laukkanen S., A. Bacquelaine Veloso C. Yan, L. Oksa, E.J. Alpert, D. Do, N. Hyvärinen, K. McCarthy, A. Adhikari, Q. Yang, S. Iyer, S.P. Garcia, A. Pello, T. Ruokoranta, S. Moisio, S. Adhikari, **J.A. Yoder**, K.M. Gallagher, L. Whelton, J.R. Allen, A.H. Jin, S. Loontiens, M. Heinäniemi, M.A. Kelliher, C.A. Heckman, O. Lohi, D.M. Langenau. 2022. Therapeutic targeting of LCK tyrosine kinase and mTOR signaling in T-cell acute lymphoblastic leukemia. *Blood*. 140(17):1891-1906 DOI: https://doi.org/10.1182/blood.2021015106 PMID: 35544598
11. Dornburg A., Wcisel D.J., Zapfe K., Ferraro E., Roupe-Abrams L., Thompson A.W., Braasch I., Ota T., **Yoder J.A.** 2021. Holosteans contextualize the role of the teleost genome duplication in promoting the rise of evolutionary novelties in the ray-finned fish innate immune system. *Immunogenetics*. 73:479–497. DOI: 10.1007/s00251-021-01225-6 PMID: 34510270
12. Thompson A.W., Hawkins M.B., Parey E., Wcisel D.J., Ota T., Kawasaki K., Funk E., Losilla M., Fitch O.E., Pan Q., Feron R., Louis A., Montfort J., Milhes M., Racicot B.L., Childs K.L., Fontenot Q., Ferrara A., David S.R., McCune A.R., Dornburg A., **Yoder J.A.**, Guiguen Y., Crollius H.R., Berthelot C., Harris M.P., and Braasch I. 2021. The genome of the bowfin (*Amia calva*) illuminates the developmental evolution of ray-finned fishes. *Nature Genetics*. 53:1373–1384. DOI: 10.21203/rs.3.rs-92055/v1 PMID: 34486651
13. Wyatt, B.H., Amin, N.M., Bagley, K., Wcisel, D., Dush, M.K., **Yoder, J.A**., Nascone-Yoder, N.M. 2021. Single-minded 2 is required for left-right asymmetric stomach morphogenesis. *Development*. 148(17):dev199265. DOI: 10.1242/dev.199265 PMID: 34486651
14. Allen, T., M.M. Cullen, H. Mochizuki, N. Hawkey, L. Nguyen, E. Schechter, L. Borst, **J.A. Yod**er, J. Freedman, S.R. Patierno, K. Cheng, W. Eward, J. Somarelli. 2021. A zebrafish model of metastatic colonization pinpoints cellular mechanisms of circulating tumor cell extravasation. *Front. Oncol*. 11:641187. DOI: 10.3389/fonc.2021.641187 PMID: 34631514
15. Wcisel, D.J., J.T. Howard, **J.A. Yoder**, A. Dornburg. 2020. Transcriptome Ortholog Alignment Sequence Tools (TOAST) for Phylogenomic Dataset Assembly. *BMC Evol. Biol.* **20**:41. PMID: 32228442
16. Phelps, D.W., A.A. Fletcher, I. Rodriguez-Nunez, M.R. Balik-Meisner, D.A. Tokarz, D.M. Reif, D.R. Germolec, **J. A. Yoder**. 2020. In vivo Assessment of Respiratory Burst Inhibition by Xenobiotic Exposure Using Larval Zebrafish. *J. Immunotox*. **17**(1):94-104. PMID: 32407153

17. Allen, T.A., D. Asad, E. Amu, M.T. Hensley, J. Cores, A. Vandergriff, J. Tang, P.U. Dinh, D. Shen, L. Qiao, T. Su, S. Hu, H. Liang, H. Shive, E. Harrell, C. Campbell, X. Peng, **J.A. Yoder**, K. Cheng. 2019. Circulating tumor cells exit circulation while maintaining multicellularity augmenting metastatic potential. *J Cell Sci*. 132(17). pii: jcs231563. PMID: 31409692
18. Stafford, E.G., A. Kortum , A. Castel, L. Green, J. Lau, P.J. Early, K.R. Muñana, C.L. Mariani, **J.A. Yoder**, N.J. Olby. 2019. Presence of Cerebrospinal Fluid Antibodies Associated with Autoimmune Encephalitis of Humans in Dogs with Neurologic Disease. *J. Vet. Int. Med.* **33**(5):2175-2182. PMID: 31495976
19. Ganchingco, J.R.C, T. Fukuyama , **J.A. Yoder**, W. Bäumer. 2019. Calcium Imaging of Primary Canine Sensory Neurons: Small Diameter Neurons Responsive to Pruritogens and Algogens. *Brain Behav*. **9**(12):e01428. PMID: 31571393
20. Akuffo, A.A., A.Y. Alontaga, R. Metcalf, M.S. Beatty, A. Becker, J.M. McDaniel, R.S. Hesterberg, W.E. Goodheart, S. Gunawan, M. Ayaz, Y. Yang, M.R. Karim, M.E. Orobello, K. Daniel, W. Guida, **J.A. Yoder**, A.M. Rajadhyaksha, E. Schonbrunn, H.R. Lawrence, N.J. Lawrence, P.K. Epling-Burnette. 2018. Ligand-mediated protein degradation reveals functional conservation among sequence variants of the CUL4-type E3 ligase substrate receptor cereblon. *J Biol Chem*. **293**(16):6187-6200. PMID: 29449372
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Book Chapters

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Invited Seminars

2024 **THE 14TH NORTH AMERICAN COMPARATIVE IMMUNOLOGY WORKSHOP,** Santa Cruz, CA
Investigating the molecular and functional evolution of the CD300 family of innate immune receptors

2024 **UNIVERSITY OF ROCHESTER**, Department of Microbiology & Immunology, Rochester, NY
Deciphering the diversity of vertebrate innate immune receptor families

2023 **16TH ZEBRAFISH DISEASE MODELS CONFERENCE**, Durham, NC
Innate immune receptors in zebrafish: what we know we don't know

2023 **THE 13TH NORTH AMERICAN COMPARATIVE IMMUNOLOGY WORKSHOP**, Auburn, AL
A Survey of Ray-Finned Fish PSMB8 sequences Reveal Novel Holostean Alleles that may Impact MHCI Function

2022 **15TH ZEBRAFISH DISEASE MODELS CONFERENCE**, Sheffield, England
GenX, an emerging perfluoroalkyl substance (PFAS), suppresses the respiratory burst in zebrafish and human

2021 **AMERICAN ASSOCIATION OF IMMUNOLOGISTS ANNUAL MEETING (VIRTUAL),**
A highly diverse set of novel immunoglobulin-like transcript (NILT) genes in zebrafish indicates a wide range of functions

2019 **40TH SOCIETY OF ENVIRONMENTAL TOXICOLOGY AND CHEMISTRY NORTH AMERICA ANNUAL MEETING,** Toronto, ON, Canada
Assessment of immunotoxicity by xenobiotic exposure using larval zebrafish

2019 **12TH ZEBRAFISH DISEASE MODELS CONFERENCE**, Boston, MA
Understanding the molecular diversification of self recognition through ray-finned fish innate immune receptor families

2018 **11TH ZEBRAFISH DISEASE MODELS CONFERENCE**, Leiden, Netherlands
An evolutionary perspective of novel immunoglobulin-like transcripts (NILTS)

2018 **14TH CONGRESS OF THE INTERNATIONAL SOCIETY OF DEVELOPMENTAL AND COMP. IMMUNOLOGY**, Sante Fe, NM
On the Function and Evolution of Novel Immune-Type Receptors (NITRs) in Ray-Finned Fish

2017 **10TH ZEBRAFISH DISEASE MODELS CONFERENCE**, San Diego, CA
Genomic Characterization of Novel Immunoglobulin-Like Transcripts (NILTs) in Teleosts

2017 **BRT-BURLESON RESEARCH TECHNOLOGIES, INC**, Morrisville, NC
Innate immune suppression by exposure to environmental chemicals

2016 **TEXAS A&M UNIVERSITY**, College Station, TX
Disruption of Trim9 Function Abrogates Macrophage Motility In vivo

2016 **H. LEE MOFFITT CANCER CENTER & RESEARCH INSTITUTE**, Tampa, FL
Disruption of Trim9 Function Abrogates Macrophage Motility In vivo

2016 ***Keynote speaker:*** **2ND INTERNATIONAL CONFERENCE** of **FISH & SHELLFISH IMMUNOLOGY**, Portland, ME
The astounding and confounding complexity of innate immune receptor gene families in fish

2016 **THE 7TH NORTH AMERICAN COMPARATIVE IMMUNOLOGY WORKSHOP**, Charlottetown, PE, Canada
Disruption of Trim9 Function Abrogates Macrophage Motility In vivo

2015 **INSTITUTE OF MARINE AND ENVIRONMENTAL TECHNOLOGY**, Baltimore, MD
Zebrafish as a model for teleost and tetrapod immunity

2015 **NC STATE UNIVERSITY - GENETIC PROGRAM SEMINAR SERIES**, Raleigh, NC
From microarrays to functional assays: the story of TRIM9

2015 **THE 8TH ZEBRAFISH DISEASE MODELS CONFERENCE**, Boston, MA
Trim9 Mediates Zebrafish Macrophage Chemotaxis in a RING-dependent Manner

2015 **6TH NORTH AMERICAN COMPARATIVE IMMUNOLOGY WORKSHOP**, Toronto, Canada
Polymorphic and gene content variation of zebrafish MHC class I genes

2015 **GENETIC ENGINEERING AT NC STATE UNIVERSITY SYMPOSIUM**, Raleigh, NC
Genome engineering in zebrafish for elucidating gene function and modeling disease

2014 **TOXICOLOGICAL APPLICATIONS OF ZEBRAFISH**, National Institute of Environmental Health Sciences, RTP, NC
Immunotoxicity screens with zebrafish embryos

2014 **THE 7TH ZEBRAFISH DISEASE MODELS CONFERENCE**, Madison, WI
Differential expression and ligand binding indicate alternative functions for zebrafish polymeric immunoglobulin receptor (pIgR) and a family of pIgR-like (PIGRL) proteins

2014 **COLLABORATIVE WORKSHOP ON AQUATIC MODELS AND 21ST CENTURY TOXICOLOGY**, Raleigh, NC
Strategies for in vivo immunotoxicology assays with zebrafish embyos

2014 **5TH NORTH AMERICAN COMPARATIVE IMMUNOLOGY WORKSHOP**, Albuquerque, NM
Zebrafish larvae reveal a novel mediator of macrophage chemotaxis

2013 **5TH STRATEGIC CONFERENCE OF ZEBRAFISH INVESTIGATORS**, Asilomar, CA
The Z lineage MHCI genes in zebrafish

2013 **NATIONAL TOXICOLOGY PROGRAM, NIEHS**, Research Triangle Park, NC.
In vivo immune assays in zebrafish embryos

2012 **3RD North American Comparative Immunology Workshop,** Rochester, NY
Genomic & functional characterization of the diverse Ig domain-containing protein (DICP) family

2012 **NORTH CAROLINA STATE UNIVERSITY,** Dept. of Molecular and Structural Biochemistry, Raleigh, NC
Microarrays and functional assays: the story of TMEM150A

2011 **4TH STRATEGIC CONFERENCE OF ZEBRAFISH INVESTIGATORS**, Asilomar, CA.
Directly caged morpholino oligomers for the light-regulation of gene function in zebrafish

2011 **98TH ANNUAL MEETING OF THE AMERICAN ASSOCIATION OF IMMUNOLOGISTS,** San Francisco, CA
A complex family of diversified immunoglobulin domain-containing proteins (DICPs) includes inhibitory and activating forms and likely plays a role in zebrafish innate immunity

2011 **SCYNEXIS, INC.,** Durham, NC
Using the zebrafish to identify novel innate immune response genes

2011 **NORTH CAROLINA STATE UNIVERSITY,** Dept. of Environmental and Molecular Toxicology, Raleigh, NC
Microarrays and functional assays: the story of TMEM150A

2010 **DISEASE MODELING IN ZEBRAFISH III: CANCER, BLOOD DEVELOPMENT AND IMMUNE RESPONSES,** Boston, MA
Multi-gene families of innate immune receptors in zebrafish

2010 **UNIVERSITY OF MAINE,** Department of Molecular and Biomedical Sciences, Orono, ME
Natural killer function in zebrafish

2009 **3RD STRATEGIC CONFERENCE OF ZEBRAFISH INVESTIGATORS**, Asilomar, CA.
Light-activatable morpholinos for spatio-temporal gene regulation

2009 **NORTH CAROLINA STATE UNIVERSITY,** Dept. of Molecular Biomedical Sciences, Raleigh, NC
Novel innate immune response genes – fishing for function

2009 **MEMORIAL UNIVERSITY OF NEWFOUNDLAND,** Dept. of Biochemistry, Newfoundland & Labrador, Canada
The form, function and phylogenetics of NITRs in bony fish

2009 **EASTERN CAROLINA UNIVERSITY,** Greenville, NC
The recent and rapid evolution of novel immune-type receptor genes in bony fish

2009 **AMERICAN SOCIETY FOR MICROBIOLOGY – GENERAL MEETING,** Philadelphia, PA
Zebrafish larvae as a whole-organism model for identifying novel innate immune response genes

2009 **DISEASE MODELING IN ZEBRAFISH: CANCER AND IMMUNE RESPONSES,** Spoleto, Italy
The form, function and phylogenetics of NITRs in bony fish

2008 **4TH AQUATIC ANIMAL MODELS OF HUMAN DISEASE CONFERENCE**, Durham NC
Divergence of novel immune-type receptors between model fish species

2008 **NORTH CAROLINA STATE UNIVERSITY,** Department of Microbiology, Raleigh, NC
Using zebrafish as a model for innate immunity

2008 **TRIANGLE ZEBRAFISH GROUP,** University of North Carolina, Chapel Hill, NC
Elevated transcription of complement and coagulation genes in rag1 deficient zebrafish

2008 **8TH INTERNATIONAL MEETING ON ZEBRAFISH DEVELOPMENT AND GENETICS,** Madison, WI
Assessing infection and immunity in zebrafish

2007 **NORTH CAROLINA STATE UNIVERSITY,** Dept. of Molecular Biomedical Sciences, Raleigh, NC
Genes, genomes and immune response in zebrafish

2007 **MODEL SYSTEMS FOR INFECTIOUS DISEASE AND CANCER IN ZEBRAFISH,** Leiden, Netherlands
Form and function of candidate NK cell receptors in zebrafish

2007 **NCSU CENTER FOR MARINE SCIENCES AND TECHNOLOGIES,** Seminar Series**,** Morehead City, NC
Using zebrafish as a model to identify candidate biomarkers for innate immunology

2007 **STUDENT CHAPTER OF THE AMERICAN SOCIETY FOR LAB ANIMAL PRACTITIONERS,** NCSU, Raleigh, NC
Past and present applications of zebrafish in biomedical research

2006 **TRIANGLE ZEBRAFISH GROUP,** Raleigh, NC
Novel immune-type receptors and natural killer cell function in zebrafish

2006 **CENTER FOR COMPARATIVE MEDICINE AND TRANSLATIONAL RESEARCH,** NCSU, Raleigh, NC
Novel innate immune receptors in zebrafish

2006 **INTERNATIONAL SOCIETY FOR DEV. AND COMP. IMMUNOLOGY,** 10th International Congress, Charleston, SC
Natural killer cell receptors in zebrafish

2005 **NORTH CAROLINA TRIANGLE IMMUNOLOGY INTEREST GROUP,** North Carolina Biotechnology Center, N.C.
Innate immunity and NK receptors in zebrafish

2005 **NORTH CAROLINA STATE UNIVERSITY,** Dept. of Environmental and Molecular Toxicology, Raleigh, NC
Novel immune-type receptors (NITR) in zebrafish and natural killer function

2004 **NORTH CAROLINA STATE UNIVERSITY**, Dept. of Molecular Biomedical Sciences, Raleigh, NC
Innate immunity and novel immune-type receptors (NITRs) in zebrafish

2004 **PENN STATE MILTON S. HERSHEY MEDICAL CENTER,** Penn State Cancer Institute, Hershey, PA
Innate immunity and novel immune-type receptors (NITRs) in zebrafish

2004 **KOLLOQUIUM SFB620 - IMMUNODEFICIENCY: CLINICAL AND ANIMAL MODELS,** Max-Planck-Institute for Immunobiology, Freiburg, Germany. *Resolution of the novel immune-type receptor (NITR) gene cluster in zebrafish: variation, regulation and functional specialization*

2004 **UNIVERSITY OF ULSTER, SCHOOL OF BIOMEDICAL SCIENCES,** Coleraine, Northern Ireland
Novel immune-type receptors (NITR) in zebrafish and natural killer function

2003 **UNIVERSITY OF SOUTH FLORIDA**, Department of Biochemistry & Molecular Biology, Tampa, FL
Zebrafish, cancer and immune receptors

2003 **UNIVERSITY OF SOUTH FLORIDA,** Department of Pediatrics, St. Petersburg, FL
Genomic resolution of the novel immune-type receptor gene cluster

2003 **AMERICAN ASSOCIATION FOR LABORATORY ANIMAL SCIENCE,** FL Branch Annual Meeting, Clearwater, FL
Zebrafish as a developmental and genetic model for human disease

2003 **CONFERENCE ON AQUATIC ANIMAL MODELS OF HUMAN DISEASE,** ATCC, Manassas Virginia
Teleost novel Immune-type receptors (NITRs) are related to mammalian Ig-type NK receptors

2002 **UNIVERSITY OF SOUTH FLORIDA**, Department of Biology, Tampa, FL
Novel immune-type receptors; fishing for a function

2002 **UNIVERSITY OF SOUTH FLORIDA,** Department of Pediatrics, St. Petersburg, FL
Functional variation of novel immune-type receptors (NITRs) is predicted by structural diversity and developmentally regulated expression

2001 **ECKERD COLLEGE,** College Program Series and *Sigma Xi* Lecture Series; St. Petersburg, FL
The human genome project: what next?

2001 **UNIVERSITY OF SOUTH FLORIDA,** Department of Pediatrics, St. Petersburg, FL
Zebrafish novel immune-type receptors are putative orthologs of the genes encoded by the mammalian lymphocyte receptor complex

2000 **UNIVERSITY OF PITTSBURGH,** Children's Hospital of Pittsburgh, Pittsburgh, PA
Structure and function of novel immune-type receptors in zebrafish

2000 **SHRINER'S HOSPITAL FOR CHILDREN,** Tampa, FL
Skeletal defects and NITRs in zebrafish: how to use fish to study human genetics

2000 **UNIVERSITY OF SOUTH FLORIDA,** Department of Pediatrics, St. Petersburg, FL
Novel immune-type receptor genes

1999 **UNIVERSITY OF SOUTH FLORIDA,** Department of Pediatrics**,** St. Petersburg, FL
Zebrafish and novel immune-type receptor genes

1998 **Society for Developmental Biology,** Southeast Regional Meeting, Atlanta, GA
Sex-specific exons control DNA methyltransferase in murine germ cells

1997 **H. Lee Moffitt Cancer Center and Research Institute,** Tampa, FL
DNA methyltransferases in mammalian development and host defense

Professional Memberships

2020-pres. **Society of Toxicology**, member
2019-pres. **Society of Environmental Toxicology and Chemistry**, member
2017-2021 **Society for Leukocyte Biology**, member
2016-pres. **International Society of Fish and Shellfish Immunology**, member
2015-pres. **International Zebrafish Society**, member
2014-pres. **Zebrafish Disease Models Society**, member
2007-pres. **The Society of *Phi Zeta*, Honor Society of Veterinary Medicine**, honorary member
2004-pres. **International Society of Developmental and Comparative Immunology,** member
2002-pres. **The American Association of Immunologists,** member
1998-2014 **Society for Developmental Biology,** member
1992-2014 **The American Society of Cell Biology,** member
1990-2013 **Sigma Xi, the Scientific Research Society,** member

External Service

Grant Review Panels

2024 National Science Foundation – Predictive Intelligence for Pandemic Prevention Centers
2023 National Science Foundation – Symbiosis, Infection & Immunity
2020 National Science Foundation – Symbiosis, Defense and Self-Recognition
2018 National Institutes of Health, Special Emphasis Panel/SRG 2018/05 ZRG1 IMM-F (02) M
2017 National Institutes of Health, Special Emphasis Panel/SRG 2017/10 ZGM1 GDB-5 (GM)
2016 National Institutes of Health, Special Emphasis Panel/SRG 2017/01 ZAI1 PA-I
2013 AKC Canine Health Foundation – OAK Grant Review Panel
2012 AKC Canine Health Foundation – Research Infrastructure Study Section
2008 National Institutes of Health, Special Emphasis Panel/SRG 2009/01 AITC
2004 National Science Foundation – Cellular Systems, Signal Transduction & Cellular Regulation

Ad Hoc Grant Reviewer

All Children's Hospital Foundation, St. Petersburg, FL: 2008, 2010
Austrian Science Fund, Vienna, Austria: 2016, 2022
BARD: The US – Israel Binational Agricultural Res. and Development Fund: 2006, 2010
Foundation for Research Science & Technology, New Zealand: 2003
German Israeli Foundation for Scientific Research and Development: 2018
Icelandic Research Fund: 2019
Leverhulme Trust, United Kingdom: 2016
Maine Agricultural and Forest Experiment Station: 2012, 2015
National Science Foundation – Animal Developmental Mechanisms: 2007, 2008
National Science Foundation – Integrative Organismal Systems: 2009, 2016, 2019
National Science Foundation – Molecular and Cellular Biosciences: 2011
National Science Foundation – Systematics and Biodiversity Science Cluster: 2024
Natural Sciences and Engineering Research Council of Canada (NSERC): 2023
Netherlands Genomics Initiative: 2009-2010
Netherlands Organization for Scientific Research (NWO): 2014

Medical Research Council, United Kingdom: 2004
Sheffield Hospitals Charitable Trust, Sheffield, United Kingdom: 2009
United Kingdom Research and Innovation – Medical Research Council 2024
United States Department of Agriculture: 1998-2000
Wellcome Trust/DBT India Alliance Research Fellowship Programme: 2015

EDITORIAL RESPONSIBILITIES

2020-2021 *Immunogenetics,* Co-Guest Editor for Special Issue on "Evolution of Innate Immune Receptors"
2019-2023 *The Journal of Immunology,* Section Editor, Editorial Board
2017-2021 *Developmental & Comparative Immunology,* Editorial Board
2015-pres. *Frontiers in Immunology,* Editorial Board
2014-pres. *Immunogenetics,* Editorial Board
2014-2019 *Biomolecules,* Editorial Board
2013-2014 *Developmental & Comparative Immunology,* Guest Editor for Special Issue on "Zebrafish Immunology and Infection Models"

***AD HOC* MANUSCRIPT REVIEWER** (since 1998)

Aquaculture Reports
Biomedical Microdevices
BMC Genomics
BMC Immunology
Cell and Tissue Research
Cells
Cellular and Molecular Life Sciences
Comparative Biochemistry and Physiology
CRISPR Journal, The
Current Biology
Current Research in Toxicology
Development
Developmental and Comparative Immunology
Developmental Biology
Developmental Cell
Disease Models and Mechanisms
Environmental International
Experimental Hematology
Fish and Shellfish Immunology
Frontiers in Immunology
Future Medicine
Future Microbiology
Gene
Genes
Genes and Evolution
Genome
Genome Biology
Genome Biology and Evolution
Immunogenetics
Immunology & Cell Biology
Infection and Immunity
Infection, Genetics and Evolution
International Journal of Biochemistry & Cell Biology
International Journal of Cancer
iScience
Journal of Biochemical & Molecular Toxicology
Journal of Evolutionary Biology
Journal of Experimental Medicine
Journal of Immunology, The
Journal of Innate Immunity
Journal of Leukocyte Biology
Journal of Visualized Experiments
Marine Biotechnology
MethodsX
Molecular Biology and Evolution
Molecular Immunology
Nature Methods
Nature Reviews Immunology
PLOS ONE
PLOS Pathogens
Science
Scientific Reports
Toxicology and Applied Pharmacology
Trends in Microbiology
Zebrafish

COMMITTEES

2021 Membership Committee, Zebrafish Disease Models Society
2019-2023 Co-Leader, Infection & Inflammation Research Interest Group, Zebrafish Disease Models Society
2013-pres. Zebrafish Nomenclature Committee, ZFIN, The Zebrafish Model Organism Database

MEETINGS AND WORKSHOPS

2023 **CONFERENCE ORGANIZING COMMITTEE**, Zebrafish Disease Models Symposium ZDM16, Oct 2-5, 2023

2023 **MODERATOR**, Session on *Toxicology and Drug Screening*, Zebrafish Disease Models Symposium, ZDM16, Oct 2-5, 2023

2023 **ORGANIZER AND CO-HOST**, Zebrafish Disease Models Virtual Seminar Series, *Infection and Immunity: Tissue- Resident Immune Cells - Throughout the Life Course*, May 10, 2023 (virtual)

2022 **ORGANIZER AND CO-HOST**, Zebrafish Disease Models Virtual Seminar Series: *Genetic Variation of Immune Gene Families*, April 27, 2022 (virtual)

2021 **MODERATOR**, Session on *Infection and Inflammation*, Zebrafish Disease Models Symposium, ZDM14, Oct 11-13, 2021 (virtual)

2021 **MODERATOR**, Session on *Immunoglobulin Superfamily Receptor Evolution*, North American Comparative Immunology Workshop (virtual)

2021 **MODERATOR**, Session on *Veterinary & Comparative Immunology* at the American Association of Immunologists Annual Meeting (virtual)

2021 **ORGANIZER AND CO-HOST**, Zebrafish Disease Models Virtual Seminar Series: *Modeling Immune Function with Zebrafish*, March 23, 2021

2019-2021 **CONFERENCE ORGANIZING COMMITTEE**, Zebrafish Disease Models Symposium ZDM14, Oct 11-13, 2021 (virtual)

2019-2020 **CONFERENCE SESSION ORGANIZER AND MODERATOR**, Immuno(Eco)toxicology Session, Annual Mtg of Society of Environmental Toxicology and Chemistry (SETAC) North America, Nov, 2020 (virtual)

2019-2020 **CONFERENCE ORGANIZING COMMITTEE**, Triangle Zebrafish Symposium, Raleigh, April, 2020, NC (*canceled due to COVID-19*)

2017 **LEAD CONFERENCE ORGANIZER**, North American Comparative Immunology (NACI) Workshop

2011-2020 **CONFERENCE PROGRAMMING CHAIR**, Block Session on *Veterinary & Comparative Immunology* at the American Association of Immunologists Annual Meeting

2008 **CONFERENCE WORKSHOP CHAIR**, *Assessing Infection and Immunity* at International Meeting on Zebrafish Development & Genetics

2007-2008 **CONFERENCE ORGANIZING COMMITTEE**, Aquatic Animal Models of Human Disease Conference

2007 **CONFERENCE WORKSHOP ORGANIZER**, Strategic Conference of Zebrafish Investigators

2006-2013 **LEAD ORGANIZER**, Triangle Area Zebrafish Group Meetings

TENURE AND PROMOTION REVIEWS

2024 Department of Biology, Wilfrid Laurier University

2023 Morsani College of Medicine, University of South Florida,

2022 Department of Biological Sciences, Old Dominion University

2022 Biology, University of Maine at Augusta

2022 Department of Biology, University of North Carolina at Chapel Hill

2021 Department of Biology, University of New Mexico

2021 Department of Biology, Stonehill College

2017 Department of Biomedical Science, Oregon State University

2016 Department of Biology, University of New Mexico

Internal Service

DEPARTMENT LEVEL

2022 *Post Tenure Review Committee*, Department of Molecular Biomedical Sciences, NCSU
2016-2019 *Post Tenure Review Committee*, Department of Molecular Biomedical Sciences, NCSU
2015 *Search Committee*, Teaching Assistant Professor in Biotechnology, Biotechnology Program, NCSU
2010-2013 *Post Tenure Review Committee*, Department of Molecular Biomedical Sciences, NCSU
2010 *Committee for Performance Review of Clinical Faculty*, Dept. of Molecular Biomed. Sciences, NCSU
2006-2013 *Executive Committee*, Department of Molecular Biomedical Sciences, NCSU
2003-2004 *Faculty Planning Committee*, Department of Biology, USF
2003-2004 *Faculty Search Committee*, Physiologist, Department of Biology, USF
2002-2004 *Seminar Committee*; *Safety Committee*, Department of Biology, USF
2002-2003 *Faculty Search Committee*, Environmental Molecular Biologist, Dept. of Biology, USF

COLLEGE LEVEL

2019-pres. *Laboratory Animal Resources Faculty Representative*, Aquatic species, NCSU
2016-2019 *Laboratory Animal Resources Committee*, College of Veterinary Medicine, NCSU
2012-2014 *Committee for College Excellence Hires*, College of Veterinary Medicine, NCSU
2011-2015 *Research Space Allocation and Management Committee*, (Chair, '13-'15) College of Vet. Med., NCSU
2011 *Search Committee*, Dean, College of Veterinary Medicine, NCSU
2009-pres. *Executive Committee*, Combined DVM/PhD Degree Program, College of Veterinary Medicine, NCSU
2006-2009 *Research Committee*, College of Veterinary Medicine, NCSU

UNIVERSITY LEVEL

2022 *Selection Committee*, Alumni Association Outstanding Research Award, NCSU
2020-2021 *Search Committee*, Genetics & Genomics Initiative Director, NCSU
2019 *Committee Member*, Information Security Advisory Group (ISAG), NCSU
2018-pres. *Organizer*, Annual Retreat for Genetics & Genomics Academy (previously G&G Initiative), NCSU
2018-2023 *Organizer*, Annual Symposium for Molecular Biotechnology Training Program, NCSU
2017-pres. *Executive Committee*, Genetics & Genomics Academy (previously G&G Initiative), NCSU
2017-2021 *University Research Committee*, (Chair '20-'21) NCSU
2014 *Internal Grant Pre-Proposal Review Panel*, NSF Major Research Instrumentation Program, NCSU
2013-pres. *Faculty Advisory Board*, Genomic Science Laboratory, NCSU
2012-2023 *Executive Committee*, NIH/NCSU Molecular Biotechnology Training Program
2012-2015 *Search Committee*, Chancellor's Faculty Excellence Program in Systems & Synthetic Biology, NCSU
2012-2013 *Planning Committee*, BASF Frontiers in Biotechnology Seminar Series, NCSU
2012 *Search Committee*, Director, Center for Comparative Medicine and Translational Research, NCSU
2011-2013 *Executive Committee*, Immunology Graduate Program, NCSU
2011-2014 *Leader*, Conservation Genomics Working Group, Center for Comp. Med. & Translational Res, NCSU
2010-2011 *Faculty Search Committee*, Immunology, Dept. of Population Health and Pathobiology, NCSU
2008-pres. *Comparative Biomedical Sciences (CBS) Graduate Program Committee*, NCSU
2008-2011 *Steering Committee*, Center for Comp. Med. & Translational Res. - Clinical Services Core, NCSU
2003-2004 *Graduate Admissions and Policy Committee*, Department of Biology, USF

Outreach

2024 **SPEAKER**, New Kituwah STEM Summer Camp for Cherokee High School Students, Cherokee, NC (June3-6) Presentation & Discussion: *Your Immune Genes Versus the Next Pathogen*

2022-2023 **ADVISOR**, Provide advice for hands-on lab experiments for Biology class at Research Triangle High School

2018 **SPEAKER**, Teen Science Café, NC Museum of Natural Sciences, Raleigh, NC (Nov 2) Presentation and Discussion: *The Struggle Is Real: The Evolutionary Biology of Your Immune System*

2018 **SPEAKER**, Science Café (adult), NC Museum of Natural Sciences, Raleigh, NC (Oct 18) Presentation and Discussion: *Fishing for Answers: How Animals and Pathogens Co-Evolve*

2015 **JUDGE,** 9th Grade Biology Class Presentations on Cures for Cancer, Research Triangle High School, Durham, NC

2015 **SPEAKER**, Rx for Science Literacy, Workshop on Evolution and Medicine, Duke University Presented by the North Carolina Association for Biomedical Research. Oral presentation to high school and middle school science teachers. *The recent and rapid evolution of immune genes. Why so fast?*

2014-2015 **OPEN HOUSE**, For the College of Veterinary Medicine's annual open house, I designed an informational poster and word search game describing the activities of the NCSU Conservation Genomics Working Group

2012-pres. **FACULTY PANEL**, for "Visit NC State Program" which is a diversity-focused recruiting event for the NCSU Graduate School. Panel discussion for prospective graduate students on "Preparing for Graduate Education: Building a Competitive Application"

2012, 2016 **CLASSROOM PRESENTATION,** 4-6th Grade Science Class Presentation on Heredity, Sterling Montessori Academy and Charter School, Morrisville, NC

Teaching Experience

Currently **GRADUATE FACULTY**, in the following NC State University Graduate Programs:

- Comparative Biomedical Sciences
- Functional Genomics
- Genetics
- Microbiology
- Physiology
- Toxicology

2024-pres. **FACILITATOR**, Professional Development & Ethics in Genetics & Genomics, GGS840, NC State.
Peer Review & Authorship, Data Management & Acquisition, Collaboration, Conflicts of Interest

2023-pres. **TRAINER**, NIH/ NC State Environmental Health Bioinformatics (EHB) T32 Training Grant.

2022 **LECTURER**, Animal Models in Comparative and Translational Research, CBS806, NC State University.
Zebrafish as a model for human health

2021-2023 **LECTURER**, Fundamentals of Biomedical Sciences, CBS565, NC State University.
Immunology

2019-pres. **TRAINER**, NIH/ NC State Molecular Pathways to Pathogenesis in Toxicology T32 Training Grant

2018-pres. **FACILITATOR**, Responsible Conduct of Research, CBS662, NC State University.
Publication Practices and Peer Review

2011-pres. **LECTURER,** Comparative Immunology, CBS757, NC State University.
Immunoglobulin gene organization, natural killer cells and their receptors, innate immunity

2010-pres. **CO-COURSE DIRECTOR AND LECTURER**, Methods in Biomedical Research, CBS570, NC State University.
PCR Strategies, cloning cDNAs, expression constructs, transgenics, gene knock-out strategies

2009-pres. **TRAINER**, NIH/ NC State University Interdisciplinary Biomedical Research Training Program for Veterinary Students.

2007-pres. **TRAINER**, NIH/ NC State University Molecular Biotechnology T32 Training Program (MBTP).
2006-2020 **COURSE DIRECTOR AND LECTURER**, Fundamentals of Biomedical Sciences, CBS565, NC State University.
Transcription, translation, protein structure, immunology, functional genomics
2006-2024 **COURSE DIRECTOR AND LECTURER**, Transgenics, VMB 991E, NC State University
Rationale of and methodology for creating transgenic animals
(Not offered in 2020, 2021 due to COVID-19)
2006-2017 **LECTURER**, Cell Biology, CBS770, NC State University. *Cell membranes*; *Cells of the immune system*
2004-2013 **GRADUATE FACULTY**, Immunology Program, NC State University (merged with Comp. Biomedical Sciences Program in 2013)
2007-2013 **LECTURER,** Physiology, VMB913, NC State University, *Gene expression*
2003-2004 **COURSE DIRECTOR**, General Genetics (lecture and labs), PCB3063, PCB3063L, University of South Florida
2003 **COURSE DIRECTOR**, Molecular Genetics, PCB5525, University of South Florida
2003 **COURSE DIRECTOR**, Advances in Cell & Molecular Biology, PCB6920, University of South Florida

Advisees and Trainees

GRADUATE STUDENT ADVISOR, COMMITTEE CHAIR (AT NC STATE UNIVERSITY)

- Violet Resh, Toxicology, MS candidate, 2024-present
- Ian Birchler De Allende, Genetics, PhD candidate, 2024-present
- Emma Hepworth, Toxicology, PhD candidate, 2023-present
- Ashley Connors, Toxicology, PhD candidate, 2021-present
- Barry Hedgepath (Dr. Glenn Cruse, Co-chair), Comp. Biomed. Sci. PhD candidate, 2020-2023
  Manipulating the IgE and KIT Receptors in Mast Cells using Splice-Switching Oligonucleotides
- Kara Carlson, Genetics, PhD candidate, 2019-2023
  From Actinopterygians to Amphibians: Comparative Immunogenetics Across Taxonomic Scales
- Alba Frias (Dr. Elisa Crisci, Co-chair), Comp. Biomed. Sci. PhD candidate, 2020-2022
  Metabolic reprogramming of lung Macrophages and benefit of BIO-PLYTM treatment during PRRSV-2 infection
- David Flaherty (Dr. Belinda Akpa, Co-Chair), Comp. Biomed. Sci. PhD candidate, 2019-2022
  Simulation Based Inference in 'Tiny Data' Biology
- Drake Phelps, Comparative Biomedical Sciences, PhD candidate, 2018 – 2022
  Investigating the Neutrophil Respiratory Burst as a Target of Xenobiotics
- Joy Ganchingco DVM (Dr. W. Bauemer, Co-Chair), Comp. Biomed. Sciences PhD, 2014 – 2019
  Expression and Function of Canine Thymic Stromal Lymphopoietin: Development as a Therapeutic Target for Itch, Allergy, and Atopic Dermatitis
- Amanda Kortum, Comparative Biomedical Sciences DVM/PhD candidate, 2012 – 2019
  Comparative Analysis of Tripartite Motif Containing 9 Protein Expression in Macrophages and Neutrophils
- Dustin Wcisel, Functional Genomics PhD, 2012 – 2017
  An Evolutionary Perspective of Innate Immune Receptor Diversity
- Jessica Romanet, Comparative Biomedical Sciences, DVM/PhD, 2011 – 2017
  A Role for TMEM150A in Cytokine Regulation
- Debra Tokarz, DVM, Comparative Biomedical Sciences PhD, 2011 – 2016
  Tripartite Motif Containing 9 as a Novel Innate Immune Response Gene and Mediator of Macrophage Migration
- Amyn Murji, Physiology MS, 2014-2015
  Transcriptional Response of Zebrafish NK-lysin-like Genes to Infection

- Hayley Dirscherl, Biomedical Engineering PhD, 2009 – 2015
  Characterization of the Major Histocompatibility Complex Class I Genes of Zebrafish
- Laura Ott, (Dr. Sam Jones, Co-Chair), Comparative Biomedical Sciences PhD, 2005-2010
  The Role of Myristoylated Alanine-rich C-kinase Substrate (MARCKS) in Cell Migration
- Amy Heffelfinger, Immunology MS, 2007 – 2010
  Identification and investigation of conserved innate immune response genes between zebrafish and humans.
- Jibing Yang, Immunology PhD, 2005 – 2009
  Immune-related, lectin-like receptors in zebrafish innate immunity
- Radhika Shah, Immunology PhD, 2004 – 2009
  Evaluation of zebrafish novel immune-type receptor 9 (Nitr9)

POSTDOCTORAL FELLOWS

- Dr. Giuliano Ferrero, 2022
- Dr. Dustin Wcisel, 2018-2021
- Dr. Ivan Rodriquez-Nunez, 2009-2015
- Dr. Laila Farsana, 2009-2011

SUMMER RESEARCH INTERNS (DVM STUDENTS)

- Gretchen Scheffe, summer 2016
- Ashley Kirby, summer 2016
- Jamie Gerlach, summer 2015
- Shaina Stewart, summer 2014
- Jessica Romanet, summer 2011
- Carolyn Collier, summer 2011
- Amanda Lehnberg, summer 2010
- Shannon Burroughs, summer 2007

LAB EXPERIENCE STUDENTS (UNDERGRADUATE AND HIGH SCHOOL)

- Logan Bass, NCSU ’25 (2024-present)
- Erica Young, NCSU ’24 (2024-present)
- Brett Shore, NCSU ’26 (2022-present)
- Cindy Argueta, NCSU ’24 (2022-2023)
- Jacob Driggers, NCSU ‘23 (2020-2023)
- Anika Palekar, NCSU ’23 (2020-2022)
- Katherine McVay, NCSU ‘21 (2020)
- Andi Barker, NCSU ’23 (2019-2023)
- Kidus Kudumu-Clavell, HS student (summer 2018)
- Anika Palekar HS student (summer 2018)
- Jacob Driggers, HS student (summer 2018)
- J. Thomas Howard, ’19 (2017-2019)
- Palak Desai, NCSU, ’19 (2017-2018)
- Emma Davis, NCSU ’18 (2016-2018)
- Gabbie Robbins, NCSU ’17 (2015-2017)
- Marco Castro, NCSU ’18 (2015-2016)
- Katherine Cupo, NCSU ’16 (2014-2016)
- Jessica Powell, Univ. of Surrey (summer 2013)
- Hannah Jones, NCSU ’14 (2012-2014)
- Carlos Rivera, HS student (summer 2012)
- Fiona Ryrie, University of Surrey (summer 2012)
- Austin Anzivino, NCSU ’14 (2011-2012)
- Abigail Rife, NCSU ’12 (2010-2012)
- Kendall Smith, NCSU ’12 (summer 2010)
- Philip Wright, NCSU ’10; (2009-2010)
- David “Quint” Reid, NCSU ’11 (2008-2011)
- Salil Desai, Rice University (summer 2008)
- R. Aaron Garner, NCSU ’08; (2006-2008)
- Myra Fulp, NCSU ’09; (2005-2009)
- Kolin Griffin, NCSU ’08 (2004-2005)
- Patoula Panagos, USF ’04 (2003-2004)
- Robert Buzzeo, USF ‘04 (2003-2004)
- Jeff Buidens, USF ‘04 (2003)
- Kathryn Heal, USF ‘03 (2002-2003)
- Matthew Buzzeo, USF ’03 (2002-2003)
- Donald Prather, Eckerd College ’99 (1998-1999)

HONORS AND AWARDS OF MENTEES

- Birchler De Allende, Ian – graduate student:
  - ✓ NCSU Genetics & Genomics Fellow, 2023-2024
  - ✓ Trainee, NIH/NCSU Toxicology Training Grant Fellowship (T32), 2024 – 2025
- Carlson, Kara – graduate student:
  - ✓ 4th annual 'Genomics of Disease in Wildlife' workshop, 2021, Colorado State University
  - ✓ Honorable Mention, NSF Graduate Research Fellowship competition, 2020
- Connors, Ashley – graduate student:
  - ✓ Honorable Mention, NSF Graduate Research Fellowship competition, 2022
  - ✓ NCSU Genetics & Genomics Fellow, 2020-2021
  - ✓ Trainee, NIH/NCSU Toxicology Training Grant Fellowship (T32), 2020 – 2022
- Cupo, Katherine – undergraduate student:
  - ✓ *Sigma Xi* North Carolina State University Chapter Undergraduate Research Award, 2016
- Dirscherl, Hayley – graduate student:
  - ✓ Woods Hole course on *Zebrafish Development & Genetics*, Marine Biological Laboratory, 2014
  - ✓ *Joseph E. Pogue Fellowship*, Royster Society of Fellows, UNC-CH, 2009 – 2014
  - ✓ *Trainee*, NIH/NCSU Biotechnology Training Grant Fellowship (T32), 2010 – 2012
  - ✓ *The Nicholas Cohen Award for Best (Student) Oral Presentation*, 1st Place, North American Comparative Immunology Workshop, Rochester, NY 2012
  - ✓ *Travel Award* for North American Comparative Immunology Workshop, Rochester, NY 2012
- Garner, Aaron – undergraduate student:
  - ✓ *Best Poster for an undergraduate presenter.* 8th International Zebrafish Meeting, Madison, WI, 2008
- Heffelfinger, Amy – graduate student:
  - ✓ *Trainee*, NIH/NCSU Biotechnology Training Grant Fellowship (T32), 2008 – 2010
- Hepworth, Emma – graduate student:
  - ✓ *Dr. Pat McClellan-Green Student Travel Award* to attend the national SETAC meeting in Louisville, Kentucky. Awarded by Carolinas Society of Environmental Toxicology and Chemistry, 2023
- Jones, Hannah – undergraduate student:
  - ✓ *Harkema Award* for summer research project, 2013
- Kortum, Amanda – DVM/PhD dual degree student:
  - ✓ USDA Animal and Plant Health Inspection Service's (APHIS) NBAF Scientist Training Program (NSTP) Fellow, 2019-2021
  - ✓ *Trainee*, NIH/NCSU Biotechnology Training Grant Fellowship (T32), 2015 – 2017
  - ✓ George H. Hitchings New Investigator Award in Health Research, 2015
  - ✓ Attended Center of Excellence for Emerging and Zoonotic Animal Diseases *BSL-3/ Transboundary Animal Disease Summer Program*, 2015
  - ✓ *AVMA/AVMF 2nd Opportunity Research Scholarship*, provided summer stipend support, 2015
- Phelps, Drake – graduate student
  - ✓ 1st in *Best Student Platform Presentation* PhD category, SETAC North America Annual Mtg, 2021
  - ✓ Honorable Mention, NSF Graduate Research Fellowship competition, 2019
  - ✓ *Trainee*, NIH/NCSU Biotechnology Training Grant Fellowship (T32), 2018 – 2020

- Rodriguez, Ivan – post-doctoral fellow:
  - ✓ *AAI Trainee Abstract Award*, provided travel funds to attend AAI conference, New Orleans, LA 2015
  - ✓ *Travel Award* for North American Comparative Immunology Workshop, Rochester, NY 2012
- Romanet, Jessica – DVM/PhD dual degree student:
  - ✓ *Trainee*, NIH/NCSU Biotechnology Training Grant Fellowship (T32), 2013 – 2015
  - ✓ *Travel Award* for North American Comparative Immunology Workshop, Rochester, NY 2012
  - ✓ *George H. Hitchings New Investigator Award in Health Research*, 2012
- Tokarz, Debra – DVM, graduate student:
  - ✓ *Careers in Immunology Fellowship* from the American Association of Immunologists, 2015-2016
  - ✓ *Dr. Monica Menard Award for Excellence in Veterinary Pathobiological Research*, 2015
  - ✓ *Young Investigator Award*, sponsored by the American Veterinary Medical Association and the American Veterinary Medical Foundation, 2013
  - ✓ *Trainee*, NIH/NCSU Comparative Medicine & Translational Research Training Program Fellowship (T32), 2011-2014
- Wcisel, Dustin – graduate student/postdoctoral fellow:
  - ✓ Travel Award for 14th Congress of the International Society for Developmental & Comparative Immunology, Sante Fe, NM, 2018
  - ✓ Travel Award for North American Comparative Immunology Workshop, Toronto, Canada 2015
  - ✓ *Graduate Fellowship in Evolutionary Medicine,* National Evolutionary Synthesis Center, 2015
  - ✓ *Recipient*, Best presentation (1 of 2) by a Functional Genomics graduate student, NCSU Genomics Retreat, Carolina Beach, NC 2013

GRADUATE STUDENT ADVISORY COMMITTEE, MEMBER (AT NCSU)

- Fatema Tuj Jahura, (Dr. Bryan Ormond, Chair), Fiber & Polymer Sci. PhD candidate, 2024-present
- Glenn Jackson, (Dr. Glenn Cruse, Chair), Comp. Biomed. Sci. PhD candidate, 2023-present
- Isabella Livingston, (Dr. Matthew Breen, Chair), Genetics & Genomics PhD candidate, 2023-present
- Ryan Bartone, (Dr. Jamie Bonner, Chair), Toxicology PhD candidate, 2023-present
- Rachel Gagliardi, (Dr. Lauren Schnabel, Chair), Comp. Biomed. Sci. DVM/PhD cand., 2022-present
- Bethanie Cooper, (Dr. Katie Sheats, Chair), Comp. Biomed. Sci. PhD candidate, 2022-present
- Charlotte Manvell, (Dr. Ed Breitschwerdt, Chair), Comp. Biomed. Sci. PhD candidate, 2022-present
- Madison Polera, (Dr. Greg Cope, Chair), Applied Ecology PhD candidate, 2022-present
- Evan Walsh (Dr. Xinxia Peng, Chair), Bioinformatics PhD candidate, 2021-2022
- Morgan Ritter (Dr. Seth Kullman, Chair), Toxicology PhD candidate, 2021-present
- Ho Young Lee (Dr. Jamie Bonner, Chair), Toxicology PhD candidate, 2019-2022
- Katherine Cupo, (Dr. R. Beckstead, Chair), Poultry Science PhD candidate, 2019-2022
- Dana Hodorovich (Dr. K. Marsden, Chair), Genetics PhD candidate, 2019-2023
- Haleigh Conley, (Dr. Katie Sheats, Chair), Comp. Biomed. Sci. PhD candidate, 2019-2022
- Jake Deslauriers (Dr. K. Marsden, Chair), Genetics PhD candidate, 2018-2023
- Sarah Quinlan (Dr. J. Luff, Chair), Comparative Biomedical Sciences PhD, 2018-2022
- Pradeep Neupane (Dr. E. Breitschwerdt, Chair), Comp. Biomed. Sci. PhD, 2018-2021
- Brittany White (Dr. T. Ghashghaei, Chair) Comp. Biomed. Sciences PhD candidate, 2018
- Thomas Jacobsen (Dr. C. Beisel, Chair), Chemical & Biomolecular Eng. PhD, 2016-2019
- Kim Bellingham-Johnstun (Dr. M. Sikes, Chair), Microbiology MS, 2016-2017
- Vassili Kouprianov (Dr. H. Shive, Chair), Comp. Biomedical Sciences M.S., 2015-2019

- Tyler Allen (Dr. K. Cheng, Chair), Comparative Biomedical Sciences PhD, 2015-2018
- Michelle Meisner (Dr. D. Reif, Chair), Bioinformatics PhD, 2015-2017
- Lindsey St. Mary (Dr. A. Planchart, Chair) Biology PhD candidate, 2014-2015
- Shuping Ruan (Dr. D. Nielsen, Chair) Bioinformatics MS, 2013-2014
- Emily Medlin (Dr. S. Jones, Chair), Comparative Biomedical Sci. DVM/PhD, 2013-2016
- John (Jun) Hu (Dr. J-Y. Tzeng, Chair), Bioinformatics PhD, 2013-2014
- Katie Kennedy (Dr. M. Breen, Chair), Comparative Biomedical Sciences PhD, 2012-2016
- Melissa Pickett (Dr. N. Nascone-Yoder, Chair), Toxicology PhD, 2012-2016
- Justin Schilling (Dr. H. Daniels, Chair) Biology PhD, 2012-2015
- Rachael Stebbing, (Dr. B. Sherry, Chair), Comparative Biomedical Sciences MS, 2012-2013
- Clayton Morrison, (Dr. F. Scholle, Chair), Microbiology PhD, 2011-2012
- Kelsey Poorman, (Dr. M. Breen, Chair), Comparative Biomedical Sciences PhD, 2011-2014
- Scott Salger, (Dr. H. Daniels, Chair), Biology PhD, 2011-2013
- Megan Schreeg (Dr. A. Birkenheuer, Chair), Comparative Biomedical Sci. DVM/PhD, 2010-2015
- Eui Jae Sung, (Dr. S. Jones, Chair), Comparative Biomedical Sciences PhD, 2010-2013
- M. Katie Sheats, (Dr. S. Jones, Chair), Comparative Biomedical Sciences PhD, 2010-2014
- Peter Borgheiinck, (Dr. P. Hess, Chair), Immunology PhD, 2009-2012
- Allison Morckel, (Dr. N. Nascone-Yoder, Chair), Comparative Biomedical Sciences MS, 2009-2010
- Liping Meng, (Dr. M. Tompkins, Chair), Immunology PhD, 2009-2012
- Jingjing Li, (Drs. A. Birkenheuer/M. Levy, Co- Chairs), Comp. Biomedical Sciences PhD, 2009-2012
- Shannon Becker, (Dr. M. Breen, Chair), Comparative Biomedical Sciences PhD, 2009-2016
- Rita Simoes, (Dr. G. Dean, Chair), Comparative Biomedical Sciences PhD, 2009-2012
- Justin Bradshaw, (Dr. M. Sikes, Chair) Microbiology PhD, 2008-2013
- Susan Irvin, (Dr. B. Sherry, Chair), Comparative Biomedical Sciences PhD, 2007-2011
- Chad Cecil, (Dr. S. Laster, Chair), Microbiology PhD, 2007-2011
- Steve Bischoff, (Dr. J. Piedrahita, Chair), Comparative Biomedical Sciences PhD, 2006-2011
- Shengdar Tsai, (Dr. J. Piedrahita, Chair), Functional Genomics PhD, 2006-2010
- Jianzhen Xie, (Dr. J. Horowitz, Chair), Comparative Biomedical Sciences PhD, 2006-2010
- I-Hsuan Liu (Dr. R. Anholt, Chair), Comparative Biomedical Sciences PhD, 2006-2007
- Rachel Eckert, (Dr. S. Jones, Chair), Immunology PhD, 2005-2007

GRADUATE STUDENT ADVISORY COMMITTEE, MEMBER (NON-NCSU)

- Krystal Taylor, (Dr. J. DeWitt, Chair), Pharm. & Toxicology PhD, East Carolina Univ., 2021-2023
- Emma Tobin, (Dr. J. DeWitt, Chair), Pharm. & Toxicology MS, East Carolina Univ., 2020-2021

EXTERNAL GRADUATE STUDENT EXAMINER

- Jiahui Wang, Physiology, Cell and Developmental Biology PhD, University of Alberta, Alberta, Canada, 2024 *Identification and functional characterization of a subset of goldfish (Carassius auratus) leukocyte immune-type receptors (CaLITRs) expressed by myeloid cell-types*.
- Tamara Smith, Biochemistry PhD, Memorial University of Newfoundland, St. John's, Canada, 2009 *De novo DNA methyltransferases in zebrafish development*