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Education:

Ph.D. University of Missouri, **05/1993**.
- Molecular Biology/Reproductive Physiology (R. M. Roberts, PI)
M.S. The Ohio State University, **08/1989**.
- Molecular Growth and Development/Animal Science (M White, PI)
B.S. The Ohio State University, **03/1987**.

Research and Work Experience:

02/2021 Professor and Dean, College of Sciences, Auburn University at Montgomery
01/2020 Interim Provost and Executive VP for Academic Affairs, Wright State University
10/2016 Professor and Dean, College of Science and Mathematics, Wright State University
08/2010 Professor and Chair, Department of Biological Sciences, University of Toledo
02/2009 Associate Professor and Chair, Dept. of Biological Sciences, University of Toledo
08/2001 Associate Professor of Biological Sciences, University of Toledo (Tenured in 06/07)
09/1999 Project Staff, Cleveland Clinic Taussig Cancer Center. (E. Borden, PI)
10/1997 Scientific Director, Gemini Technologies Inc.
01/1993 Postdoctoral Fellow, The Cleveland Clinic Foundation. (G. Stark, PI)
08/1989 Graduate Research Fellow, University of Missouri (NIH Predoctoral Fellowship)
06/1987 Graduate Research Fellow, The Ohio State University (OARDC Fellowship)

Administrative Leadership Experience:

Interim Provost and Executive VP for Academic Affairs, Wright State University
~12,000 students, 10 colleges currently (Medical School and Branch Campus inclusive)

Highlights/Major initiatives:

- **Develop a new College of Health, Education and Human Services**
 - Moved project from concept to implementation
 - Oversaw kickoff event to mark the beginning of the planning process
 - Hosted a visioning event to imagine the possibilities of new entity
 - Established working groups to plan the logistics
 - Accelerated launch in light of COVID pandemic

- **Retention Initiatives**
 - Based on work outlined in our campus completion plan we have planned for a campus-wide “Retention Summit”
 - Bringing together representatives from support areas, curricular design, and academic units to redefine efforts on all aspects of student success and persistence
 - Restructured student affairs and student success to enhance student focus

- **COVID-19 response – Examples of items under my oversight:**
 - Movement of courses to remote delivery – Spring, Summer
 - Suspension of all but most essential research
 - Alteration of grading to Pass/Unsatisfactory (UG and Grad separately)
 - Extension of remote delivery into Summer terms
 - Campus re-opening strategies, fall planning
 - Budget prioritization in light of enrollment and state changes in support
- **Faculty Engagement**
 - Probationary Period extension (tenure clock) due to COVID-19
 - Summer Instruction Change to Remote Delivery due to COVID-19
 - Grading Alteration (P/U student option) due to COVID-19
 - Campus reorganization/restructuring discussions
 - Oversight of all colleges including professional schools and branch campus
- **Administrative Searches**
 - Dean, Boonshoft School of Medicine - completed
 - Dean, WSU Lake Campus - planned
 - VP for Faculty Affairs - completed
 - VP for Accreditation and Assessment – completed
 - Dean, New College – In Progress

2016-2019: Dean, College of Science and Mathematics, Wright State University

Highlights:

- 165 faculty and staff, 1800 UG majors, 200 graduate majors, >8000 students taught annually;
- \$22.6M budget (FY19);
- 8 departments (Biochemistry and Molecular Biology; Biological Sciences; Chemistry; Earth and Environmental Sciences; Mathematics and Statistics; Neuroscience, Cell Biology and Physiology; Physics; Psychology);
- ~\$7M external funding across all departments
- Areas of Emphasis: Programmatic growth, Experiential learning/Innovative strategies/Entrepreneurship; Diversity in STEM; Recruitment/Retention

Programmatic Initiatives (examples):

- New Programmatic and Course Offerings - Undergraduate:
 - Biochemistry and Molecular Biology BS (Offered Jan 2107)
 - Neuroscience BS (offered Fall 2017)
 - Public Health Science BS/BA (Offered Fall 2017)
 - Actuarial Science Concentration (Offered Fall 2017)
 - Transition of Gen Ed science courses to online format (Spring/summer 2019)
- New Programmatic and Course Offerings - Graduate
 - Data Science MS (Offered Fall 2018)
 - Initiated complete overhaul of Integrated Applied Science and Mathematics (IASM) PhD program
 - Pulled oversight into college office in order to revamp program for viability
- Non-academic Student Initiatives
 - Experiential Learning Initiatives – within 5 years, hope to guarantee every CoSM major an experiential opportunity

- Applying Scientific Knowledge (ASK) Program – provides a regimented training and entry into undergraduate research
- ASK supported by NSF S-STEM grant (Deibel, Traxler, Rogers PIs)
- Expanding assistance for internship possibilities
- Innovation/Entrepreneurship Opportunities (see later)
- Diversity in STEM – LS AMP grant oversight, oSTEM (Out in STEM) support, Women in STEM initiatives (Considine Scholars, Seminar series);
- Campus-wide events supported by CoSM
 - Ohio Science Olympiad (2017), National Science Olympiad (2017)
 - International Symposium for Aviation Psychology (2017)
 - DNA Repair Research Symposium (2017)
 - Women in STEM Research Conference (2016)
 - WSU Research Celebration (2017, 2018)
 - Ohio Miami Valley Society Neuroscience Day (2017)
 - HAPI Lab, ChemDemo and NeuroLab – Hands-on campus experience for HS students

Faculty and Staff Initiatives:

- Faculty – New 5 year Hiring Prioritization Plan developed (Note – Hiring freeze in place)
 - Coordinated with School of Medicine
- Administrative Appointments as Dean–
 - Dept. Chair Physics (2017)
 - Dept. Chair in Chemistry, Biology, Psychology (2017, 2018 re-appointments)
 - Interim Earth and Environmental Sciences chair appointed (2018)
 - Director of UG Research, ASK Program Director (both 2017)
 - New Director for Clinical Laboratory Science (2017)
- Advising Restructuring – Pulled all advisors centrally from units
 - Removed from department offices to centralized office – piloted for campus
 - Direct report to central admin with dotted line reporting to college office (Assnt Dean)
 - Mapped out role for Workforce Development Person, Hire due spring 2019
- College Staffing – Reduced college staff from 16 to 6
 - Hired new Business and Financial Officer
 - Hired a new Associate Dean and new Assistant Dean
 - Hired Pre-Professional Program Coordinator and Workforce Development Coordinator

Budget Oversight:

- Allocate College Budgets to 8 departments and 3 doctoral programs
 - Current budget - ~\$22.6M; Experienced 5%-10% annual cuts each of last 3 years
 - Able to scale back expenditures with minimal impact on revenue or courses
 - College research expenditures add another \$7M to total
 - Re-vamped college graduate funding to centralize program allocations - 2018
 - Met target budget each year and stayed within budget (peak budget \$27.3M)

Student Success Initiatives:

- Math Co-requisite Remediation –
 - “Math in the Modern World” (Liberal Arts Math), Statistics and College Algebra
 - Pilot programs showed success, scaled up in Fall 2018
 - Contemplating similar approaches in other gateway course (ie Biology)
- Recruitment/marketing

- Establishing campus visit days where students mentor prospective recruits on campus
- Development of more informative, standardized and economical brochures/flyers that highlight our programs more effectively
- Updated and standardized websites, expanded social media outreach
- Updated articulation agreements with regional Community Colleges (Sinclair, Clark State) to attract more transfer students
- Retention
 - New mentoring program for first year students (upper division student and faculty mentors) - 2018
 - Working to revamp BA programs to aid in first year success on underprepared students
 - Focus energy on first year block schedules and innovative science courses (SM1010)
 - Review success data from past 10 years to identify sticking points in Yr1/2 success
- Student Innovation Initiatives. Developed “Innovation Weekend” events, 2018-present. Goals:
 - Enhance the entrepreneurial/innovative mindset of WSU students
 - Foster closer ties with the private sector, expose students to regional workforce needs
 - Enforce the role of Wright State University as an economic engine for the region
 - Help students understand how experiential learning can help identify new career goals

Committees, Searches, Advisory Boards, Other:

- University Strategic Planning Steering Committee Member (2018)
- Council of Deans – member (2016-present)
- Chairs and Directors Council (CoSM) (2016-present)
- Dean’s Circle – Director (2016-present)
- Scientific Advisory Board – Wright State Research Institute (2018-present)
- Research Advisory Council – Wright Brothers Institute (2018-present)
- University Leadership Team (VPs, Deans, Chairs) (2016-present)
- President and Provost Searches – Core constituent group – 2017, 2018
- AVP Finance/Controller search committee, 2018
- VP for Research and Innovation search committee - chair – 2018/19
- Business Officer Search, CoSM – chair - 2017
- Pre-professional coordinator search, CoSM – chair – 2018
- Student Success Director search, CoSM – chair – 2019
- Assessment (program/core/etc.) – ongoing in preparation for HLC review in 2020

Institutional Advancement Work:

- Identify and expand internship opportunities
 - Ball Aerospace – Five internships in Math/STATs, Physics and Psychology;
 - Hereaus – Chemistry internship (organic chemistry - 2018);
 - Kettering Health Network – Funding for 10 internships in Medical Lab Science (2018);
- Funding for Innovation Weekend Events (hackathons)
 - Funds for these events raised from private donors
 - To date, have covered expenses for four events – all private funds
 - Couple with recruiting external mentors/experts and judges to engage students
- Connections with Alumni pursued on monthly basis
- Connections with regional business partners Connections with Wright Patterson Air Force Base and Wright Brothers Institute
- Establish college advisory committee - external
- Work through foundation with donors on endowments – Both immediate and estate plans

2009-2016: Chair, Biological Sciences, University of Toledo.

Department overview: 20 faculty, 52 graduate students (mostly Ph.D.), 650 UG majors

Highlights (abbreviated):

- Grew UG majors from 390 to 650 in 7 years;
- Hired 7 tenure track faculty; Note – Over 15 years (starting before becoming chair), helped grow department from 5 active researchers to 20 researchers
- Developed several high-profile new programs that contributed to growth;
- Designed and renovated teaching labs; Assessed and re-vamped full curricula
- Implemented active learning strategies and first distance learning lab course;
- Fostered growth in funding and infrastructure investment

University Committee Service (examples throughout):

- Arts and Sciences/Natural Sciences and Mathematics - Chair Council (2009-2016); Faculty Council; Technology Fee Committee (2008-2011);
- Search Committee – Founding Dean, College of Natural Sciences and Mathematics (2011); Dean, College of Language Literature and Social Sciences (2012); Vice President for Research (2013);
- Presidential Commission for Faculty Input on Institutional Transformation;
- Outstanding Research Award Selection Committee (2008, 2010, 2012);
- Key Contributor, UT Center of Excellence in Biomarker Research and Individualized Medicine;
- Criterion 1 member, HLC preparation team

Strategic Planning and Programmatic Changes:

- Experience in preparing departmental vision and mission statements for research and teaching;
- Assist in establishment and organization of the new College of Natural Sciences and Mathematics
- Development of new departmental degree programs and curricular offerings:

Faculty/Staff Oversight Experience:

- Seven tenure track hires 2010-2016. Hired Visiting Assistant Professors and Adjuncts as needed
- Involved in search and hiring of Medical Technology Director and Instructors
- Oversaw five faculty retirements, handled 6 promotion and/or tenure cases (positive outcomes), two Dean's Merit recommendations and one Master Teacher nomination;
- Annual merit reviews for all tenured/tenure track and superannuate faculty, as well as classified/unclassified staff; conducted annual tenure progress reviews for faculty;
- Seven New Departmental Staff Positions Negotiated/hired:

Undergraduate Program Experience:

- Oversaw period of exponential growth – 390 majors (2009) to 653 majors (2015)
- Developed four new UG degree programs mentioned under programmatic section;
- Coordinated and participated in all of the Natural Sciences Open House Days for the department 2009-2016;
- Met with prospective students and parents on a weekly basis;
- Strong proponent of Salford International Exchange Program;
- Sponsor the annual Biology Undergraduate Research Symposium (2009-2016);
- Obtained funding for UG paid internships (26/year) through OMIC grant (see “funded grants”);
- Helped design first “Active Learning” teaching space in college. Sought funding approval through presentations to Academic Affairs committee of Board of Trustees;
- Helped design and oversee construction of all new teaching labs in the department – first upgrade in 45 years.

Teaching and Pedagogical Development including Online Courses:

- Incentivizing introduction of new pedagogical approaches in curriculum;
- Attended (and then communicated back to home institution) summer week-long course on “Active Learning in STEM”, sponsored by HHMI;
- Submitted proposal on “*Expansion of active learning and summer enhancement courses in STEM areas*” to HHMI in October 2013;
- Introduced numerous new courses to curriculum focused on retention of STEM students;
- First examples of online laboratory courses in department/college (BIOL1220).

Professional Highlights:

Publications – (5251 citations, 37 h-index: Google Scholar)

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2. C. K. Wolverson, D. W. Leaman, M. E. White, T. G. Ramsay (1990) Relative IGF-1 and IGF-2 gene expression in maternal and fetal tissues from diabetic swine. *FASEB J.* 4(3).
3. White, M.E., T.G. Ramsay, J.M. Osborne, K.A. Kampman and D.W. Leaman. (1991). Effects of Weaning at Different Ages on Serum Insulin-Like Growth Factor-I (IGF-I), IGF Binding Proteins and Serum In Vitro Mitogenic Activity in Swine. *J. Anim. Sci.* 69:134-145.
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5. Roberts, R.M., S.W. Klemann, D.W. Leaman, J.A. Bixby, J.C. Cross, C.E. Farin, K. Imakawa and T.R. Hansen. (1991). The Polypeptides and Genes for Ovine and Bovine Trophoblast Protein-1. In: Lamming, Flint and Weir (eds.), *Reproduction in Domestic Ruminants II*. *J. Reprod. Fert. Suppl.* 43:3-12.
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10. Roberts, R.M., J.C. Cross and D.W. Leaman. (1992). Interferons as Hormones of Pregnancy. *Endocrine Reviews.* 13:432-452.
11. Roberts, R.M., D.W. Leaman, J.J. Hernandez-Ledezma and N.C. Cosby. (1993). Trophoblast Interferons: Expression During Development and Gene Organization. In: Soares, M.J., S. Handwerger and F. Talamantes (eds.), *Trophoblast Cells*. Serono Symposia, USA.

12. White, M.E., D.W. Leaman, T.G. Ramsay, K.A. Kampman, C.W. Ernst and J.M. Osborne. (1993). Insulin-Like Growth-Factor Binding Protein (IGFBP) Serum Levels and Hepatic IGFBP-2 and -3 mRNA Expression in Diabetic and Insulin-Treated Swine (*Sus scrofa*). *Comp. Biochem. Physiol.* 106(2):341-347.
13. Leaman, D.W., J.C. Cross and R.M. Roberts. (1994). Multiple Regulatory Elements are required to Direct Trophoblast Interferon Gene Expression in Choriocarcinoma Cells and Trophectoderm. *Mol. Endocrinol.* 8:456-468.
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15. Han, Y., D.W. Leaman, D. Watling, N. Rogers, B. Groner, I.M. Kerr, W.I. Wood, and G.R. Stark. (1996). Participation of JAK and STAT proteins in Growth Hormone-induced Signaling. *J. Biol. Chem.* 271:5947-5952.
16. Liu, L., D.W. Leaman and R.M Roberts. (1996). A type I ovine interferon with limited similarity to IFN- α , IFN- ω and IFN- τ : Gene structure, biological properties and unusually narrow species specificity. *Biochim. Biophys. Acta.* 1294:55-62.
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61. Stepien, C.A., Pierce, L.R., Leaman, D.W., Niner, M.D. and Shepherd, B.S. (2015) Gene Diversification of an Emerging Pathogen: A Decade of Mutation in a novel Fish Viral Hemorrhagic Septicemia (VHS) substrain since its first appearance in the Laurentian Great Lakes. *PLoS One*.
62. Lin, B., H. Zhou, D.W. Leaman, V.K. Goel, A.K. Agarwal, S.B. Bhaduri. (2015) Sustained Release of Small Molecules from Carbon Nanotube-reinforced Monetite Calcium Phosphate Cement. *Materials Science and Engineering C*. 43:92-96.
63. Clark, M.P., Leaman, D.W., Hazelhurst, L.A., Hwang, E.S. and A.Q. Quinn (2016) An aza-anthrapyroazole negatively regulates Th1 activity and suppresses experimental autoimmune encephalomyelitis. *International Immunopharmacology*. 31:74-87.
64. Lin, B. and D.W. Leaman. (2017) Role of X-linked Inhibitor of Apoptosis Protein (XIAP) Associated Factor-1 (XAF-1) in regulating Tumor Necrosis Factor Receptor-1 (TNFR1) complex stability. *FEBS Lett*. 590:4381-4392.
65. Ke, Q., W. Weaver, A. Pore, B. Gorgoglioine, J. Wildschutte, P. Xiao, B.S. Shepherd, A. Spear, K. Malathi, C.A. Stepien, V.N. Vakharia, and D.W. Leaman. (2017) Role of Viral Hemorrhagic Septicemia Virus matrix (M) protein in suppressing host transcription. *J. Virology*. 91(19):e00279-17.

Completed Funding (\$5.8 M total)

- NSF IOS-1354806/ 1354684 (Leaman PI) "*The Emerging VHS Fish Virus - Gene Diversity Related to Cellular Immune Response Regulation*" 2014-2019 (\$720,000)
- "Ohio Means Internships and Co-ops" grant (Leaman co-PI) 2014-2016 (\$110,000)
- USDA ARS CRADA (Leaman co-PI) "*Yellow Perch Aquaculture and VHS Fish Virus*" 2010-2016 (\$960,000)
- NIAID 5 R01AI068133-09, Leaman (PI) "Impact of the IFN regulated proteins XAF1....." 8/1/06-7/31/13 (\$1.08M)
- NIH R21 1R21 AI063014-01 (Leaman PI) "Role of ISG12 in cellular innate immune responses", 6/1/09-5/31/12 (\$360,000)
- Major Research Instrumentation (MRI) award from the NSF (co-PI: Ashburner, PI) – 8/15/08 (\$207,000)
- AHA Ohio Valley Grant, # 0655387B (Leaman PI) "Role of ISG12 in cellular innate immune responses." 7/1/06-6/30/08 (\$132,000)
- University "D'Arce Medical Research Grant" (Leaman PI), 5/06-6/07 (\$15,000)
- NCI 1-R01-CA90837, Leaman (PI) 4/1/01-6/30/06 "Regulators of Interferon-induced apoptosis" (\$900,000)
- NCI STTR 1-R41-CA92979, Leaman (PI) 9/1/03-7/31/04 "2-5A Antisense Targeting of Telomerase RNA" (\$50,000)
- 2 funded URAF (internal) proposals - 2005 – Co-investigator (Akkus PI, Bachmann PI) (\$200,000)
- Schering-Plough Lab Research Award, Leaman (PI) 3/01/02– 12/31/02 (\$25,000)
- Schering-Plough Lab Research Award, Leaman (PI) 6/01/00– 5/31/01 (\$25,000)
- NIH SBIR Grant – Phase I: 1999-2000 (original PI); Phase II (consultant): 2000-2002. (\$850,000)

Service on NIH Grant Study Sections:

- NIH/NIAID, ZAI1-BDP-I-J3 and ZAI1-BDP-I-J4 study panels, January 2009
- NIH/NCI RAID Review panel, November 2005
- NIAID ZAI VSG-1 (S2) Special Emphasis Panel, June 30, 2004
- NCRR/NIH Comparative Medicine Rev. Cmttee, Study Section, Ad Hoc, Feb. 2003, Jun. 2002

Other Ad Hoc Grant Peer Reviews:

- National Science Foundation (2006, 2007)
- Philip Morris Research Grants Program (2003-2005)
- Research Grants Council of Hong Kong (March 2005)
- Medical University of Ohio Stranahan pilot grants (2005)
- U.S. Civilian Research and Development Foundation (2007), (2010)

Editorial Board: Translation: The University of Toledo Journal of Medical Sciences (2014-2016)

Manuscript Peer Reviewer (examples):

| | |
|-------------------------------------|--------------------|
| J. Biological Chemistry | BMC Genomics |
| BMC Cancer | BMC Immunology |
| Proc. Natl. Acad. Sci. | J. Neuroscience |
| J. Interferon and Cytokine Research | Cytokine |
| International. J. Nanotechnology | IUBMB Life |
| Oncogene | Oncotarget |
| British Journal of Cancer | <i>PLOS One</i> |
| FEBS Letters | Scientific Reports |
| Experimental Cell Research | Vaccine |

Invited Talks – examples (last 12 years only):

- Role of Science and Mathematics in Dayton Workforce Development, Dayton Engineers Club Dayton, 2018
- Proteins regulating innate immune responses to RNA viruses in humans, mice and fish, Pharmacology/Toxicology, Wright State University, 2017
- Understanding Fish Innate Immunity to Emerging Viral Threats, Biological Sciences, Wright State University, 2017
- Proteins regulating innate immune responses to RNA viruses in humans, mice and fish. IMET (U. Md), 2015
- Proteins regulating innate immune responses to RNA viruses in humans, mice and fish. BGSU Biology Department, 2012
- Proteins regulating innate immune responses to RNA viruses in humans, mice and fish, Med. Micro and Immunology Dept, UT HSC, 2011.
- A novel RING finger protein implicated in host response to viral infections, Cleveland State University Dept. Chemistry, 2009.
- Characterization of IFN-regulated mitochondrial proteins involved in limiting virus spread, Cleveland State University Dept. Biology, 2008.
- Novel virus- and interferon-regulated genes implicated in host response to viral infections, Case Western Reserve University, 2008

Panel Discussion Groups:

- Pub Science – “Viral Epidemics, from Influenza to Zika”, 2016, Sponsored by Sigma Xi,
- Dayton Defense Club – “Innovation, Entrepreneurship and Workforce Development”, 2018 Wright Brothers Institute 444 Building.
- Path to Health Professions – “Careers in Epidemiology and Infectious Disease Research”, 2018, Wright State University.

Consulting Activities:

Consultant for Gemini Technologies/Ridgeway Biosciences – 2002-2004

Meeting Organization Committees:

- Program Committee, 2008 OCCBIO meeting, University of Toledo (6/2008)
- Program Committee, 2009 OCCBIO meeting, Case Western Reserve University (6/2009)

Published abstracts, preliminary communications, panel discussions - Over 90 total – Examples only of recent IFN-related abstracts provided.

- Shelby Kesterson, Qi Ke, Adam Pore, Vikram Vakharia, Douglas Leaman, Malathi Krishnamurthy. Impact of the VHSV Nonvirion (NV) Protein on Host Antiviral Responses. American Society of Virology Meeting, 2018 (U. Maryland).
- Bartolomeo Gorgoglione, Megan Denise Niner, Wade G. Weaver, Vikram N. Vakharia, Carol Stepien, Douglas W. Leaman. Immunogenicity modulation of VHSV-IVb upon natural changes in the Great Lakes and by Matrix protein mutation EAFP2017, Ireland. (Poster)
- Wade G. Weaver, Bartolomeo Gorgoglione, Qi Ke, Vikram N. Vakharia, Douglas W. Leaman. Assessing pathogenicity and innate immune modulatory activity of Viral Hemorrhagic Septicemia virus upon Matrix protein mutation. EHFV Conference 2017, MSU. (Talk)
- M.D. Niner, B. Gorgoglione, D.W. Leaman, C. Stepien. Genetic changes in VHSV-IVb across time in the Great Lakes and pathogenicity modifications. EAFP2017, Ireland. (Poster)
- Wade G. Weaver, Bartolomeo Gorgoglione, Qi Ke, Vikram N. Vakharia, Douglas W. Leaman (2017). Effect of VHSV M-mutants on viral replication and host antiviral signaling. EAFP International Conference on Diseases of Fish and Shellfish
- Role of Noxa in Mediating Endoplasmic Reticulum Stress Responses in Virus Infected Cells. Kuladeep R. Sudini, Douglas W. Leaman. ISICR Meeting, 2010.

Graduate Students Mentored (those underlined completed degree with me):

| <u>Student Name</u> | <u>Degree Program</u> | <u>Dates</u> | <u>Comments/Placements:</u> |
|---------------------------|-----------------------|--------------|-----------------------------------------------|
| <u>Monila Rehemam</u> | M.S. | 8/01-5/03 | XAF1-ZNF cloning/Dentist |
| <u>Mark Fox</u> | M.S. | 8/01- 5/04 | Gene Array IFN/Intellectual property attorney |
| <u>Shaun Rosebeck</u> | Ph.D. | 8/01-12/06 | ISG12 /Res Assnt Prof: Univ. Chicago |
| <u>Haiying Li</u> | Ph.D. | 8/02-8/07 | ZNF313 function/Postdoc: UTSW University |
| Tong Zhang | Ph.D. | 8/02-5/03 | Rotation Student |
| <u>Da Xu</u> | Ph.D. | 8/03-6/08 | XAF1 function/Wake Forest (Phys Assnt) |
| Shan Shan Wan | Ph.D. | 8/04-12/04 | Rotation Student/Postdoc |
| Harpreet Kaur | Ph.D. | 8/04-12/04 | Rotation Student/Postdoc |
| Mahdi Jahangir-Blourchian | Ph.D. | 1/05-5/05 | Rotation Student |
| <u>Tiannan Chen</u> | M.S. | 8/06-12/08 | Noxa function/Research Technician |
| <u>Suchitra Subramani</u> | M.S. | 1/07-7/10 | Non-thesis MS/Research Technician |
| <u>Adam Pore</u> | M.S. | 8/08-5/12 | VHSV Gene Anal/Anesthesiologist Assnt. |
| <u>Kuladeep Sudini</u> | Ph.D. | 8/08-7/12 | Noxa response/Postdoc: Johns Hopkins |
| Megan Anderson | M.S. | 8/09-5/10 | ISG12 Function/Med Tech |
| <u>Ke (Bruce) Qi</u> | Ph.D. | 8/10-1/16 | ZNF313 innate immunity (Postdoc, UNC) |
| <u>Samantha Stefl</u> | M.S. | 8/13-8/15 | MLKs and innate immunity/Res. Tech. |
| <u>Wade Weaver</u> | M.S. | 8/14-12/16 | VHSV M Protein Function/Res. Technician |
| Shelby Powell | Ph.D. | 8/14-8/20 | VHSV Nv Protein Function (Postdoc, UT) |
| Anna Tzenova | Ph.D. | 8/14-3/15 | Rotation Student |
| <u>Loc Pham</u> | M.S. | 8/15-5/16 | Non-thesis MS |
| Mariah Guthrie | M.S. | 1/16-1/17 | Rotation Student |
| Vidita Reddy | M.S. | 1/16-8/16 | Rotation Student |
| Jeff Ringiesn | Ph.D. | 9/19 start | IHNV Vaccine Dev. |

Graduate Committees:

Shaoyong Chen (Ph.D.), Graduated December 2002 (L. Shemshedini, Advisor)
 Nancy Koile (M.S.), Graduated May 2004 (B. Ashburner, Advisor)
 Alex MacRae (M.S.), Graduated December 2004 (F. Dong, Advisor)
 KoriAnne Mann (M.S./J.D.), Graduated Summer 2004 (P. Komuniecki, A&S Advisor)
 Maureen Olszewski (M.S.), Graduated Fall 2005 (D. Vestal, Advisor)
 Cara Jacobs (M.S.), Graduated May 2005 (W. Taylor, Advisor)
 Nicole Ellis (M.S.), Graduated May 2010 (P. Erhardt, Advisor)
 Amanda Korchank (M.S.), Graduated 12/08 (D. Chadee, Advisor)
 Harpreet Kaur (Ph.D.), Graduated 5/09 (W. Taylor, Advisor)
 Shan Shan Wan (Ph.D.), Graduated May 2009 (B. Ashburner, Advisor)
 Suchitra Basu (Ph.D.), Graduated 12/08 (F. Dong, Advisor)
 Joseph Marino (Ph.D.), Graduated 5/09 (F. Pizza, Advisor)
 Jason French (M.S./J.D.), Started Fall 2006 (D. Sawicki, Advisor)
 Sarah Rasche (Ph.D.), Graduated December 2010 (A. Quinn, Advisor)
 Shu Xu (Ph.D.), Graduated December 2011 (M. Funk, Advisor)
 Widian Abisaab (Ph.D.), Graduated Spring 2013 (D. Chadee, Advisor)
 Lindsey Pierce (Ph.D.), Graduated Summer 2013 (C. Stepien, Advisor)
 Adnan Siddiqui (Ph.D.), Graduated Aug. 2015 (M. Krishnamurthy, Advisor)
 Alan Hammer (Ph.D.), Started Fall 2011 (M. Diakonova, Advisor)
 Jenny Jay (Ph.D.), Graduated May 2015 (M. Diakonova, Advisor)
 Matt Clark (Ph.D.), Graduate Aug. 2015 (A. Quinn, Advisor)
 Shubham Dayal (Ph.D.), Graduated May 2017 (M. Krishnamurthy, Advisor)
 Hang Zhang (M.S.), Graduated May 2014 (S-T Liu, Advisor)
 Megan Niner (Ph.D.), Graduated Fall 2019 (C. Stepien, PI)

Undergraduate Research Projects: (Placement after grad)

1. Selva Musa (SPR 2002), Project "Toll-like Receptor 3 expression construct"
2. Jennifer Carroll (SPR 2003), Project "Expression of XAF-1/GST in E. coli". (CSU Law School)
3. Marco De Santis (SU, FALL 2003), Project "Expression of Tandem ISG12/GST protein in E. coli".
4. David Korostyshevsky (SPR 2003), Project "Site-directed Repair of WSB-1"
5. Jennifer Barton (SU 2004), Project "Antigrowth effects of 2-5A Anti telomerase compounds".
6. Mike Pinto (FALL-SPR 04-05), Project "Production of recombinant ISG12".
7. Marco De Santis (SU, FALL 2003), Project "Expression of ISG12/GST fusion protein in E. coli".
8. Joe Sanders (SU 2004), Project "Assessing XAF1 through in silico analysis, production of rXAF".
9. John Fenner (SPR 2005), Project "Antigrowth effects of 2-5A Anti telomerase compounds"
10. Leah Palladino (2006-2008), Project "Function of ZNF313 and XAF1". (Grad School - UTMC)
11. Stephanie Coomes (2006/2007), Project "ISG12 purification strategies". (Grad School – U. Mich)
12. Aileen Searles (2008/2009), "ISG12a as a putative tumor suppressor". (Med School - UTMC)
13. Robert Rominski (2009-2011), "VHSv protein/innate immune avoidance" (Med School - UTMC)
14. Daniel Hettel (2010-2013), "ISG12 as a putative tumor suppressor". (Med School – CCF)
15. Tyler Williams (2011-2013), "VHSv P protein in innate immune avoidance" (Med School - UTMC)
16. Tyler Popil (2013-2015), "VHSv M protein in cellular disruption" (PA School – U. Findlay)
17. Ali Abou-Alawi (2014-2015), "VHSv M protein in cellular disruption" (Med School – UT)
18. Sydney Yoho (2015), "RNF114 RING finger analysis" (Med School – OU)
19. Emily Scott (2015-2016), "Fish IRF3/7 characterization"
20. Brian Hibbard (2015-2017), "IHNv Protein Expression in RTG-2 Cells" (Grad School – UT)
21. Laura Miguez-Vietiez (2016), "Rhabdoviral M proteins and Apoptosis"
22. Kwodwo Ofori (2016), Summer REU student. (applying for PhD programs)
23. Fatima Boumahchad (2019), "IHNv protein studies"
24. Jessica Saini (2019, 2020), "IHNv protein studies"
25. Betina Dobles (2019), "IHNv protein studies"

Courses Taught (as instructor of record or co-instructor - date range included):

- **UH1010:** Honors Pre-Health first semester orientation course ("Honors Seminar"). A first-year experience course to integrate incoming freshmen with a pre-health focus. Fall 2018, 2019.
- **ARS/NSM1000:** Beginning the Academic Journey, Fall 2010-2016, plus Academic Advisor to these students and all continuing students with last names starting with K-O. (Sole instructor)
- **BIOL 4700:** Instructor, "Writing Across the Curriculum", Dept. Biological Sciences, University of Toledo, Fall 2003-2007, 2009, 2014. (Sole Instructor for entire 3 cr. hr. course)
- **BIOL 6090/8090:** Lecturer, "Advanced Cell Biology" (Lecture on Innate Immunity), Spring 2009.
- **BIOL 6100/8100:** Instructor, "Research Methodologies", Dept. Biological Sciences, University of Toledo, Spring 2003-2009. (**NOTE:** Developed course from scratch, Sole Instructor for entire 3 cr. hr. course during above period of time).
- **BIOL 6200/8200:** Instructor/Organizer, "Advanced Signal Transduction", Dept. Biological Sciences, University of Toledo, Fall 2008. Presented lectures on "Innate Immune Signaling" and "NFκB and TNF signaling", Spring 2009-2016.
- **BIOL 6930/8930:** Seminar in Biology, Instructor and organizer, Spring 2011, 2012, 2014, Fall 2014, 2015.
- **BIOL 6980:** Lecturer, "Fundamentals of Bioinformatics, Proteomics and Genomics", Jointly offered by Medical University of Ohio (now part of UT), the University of Toledo, and Bowling Green State University, Fall 2003-2008.
- **BIOL 6980:** Lecturer, "Application of Bioinformatics, Proteomics, and Genomics", Jointly offered by Medical University of Ohio (now part of UT), the University of Toledo, and Bowling Green State University, Spring 2005-2011.

- **BIOL 6990/8990:** Co- Instructor (with Dr. Brian Ashburner), “Signal Transduction” Advanced Readings Course, Spring 2002. Instructor, “Current Topics in Molecular Biology” Advanced Readings Course, Fall 2002.
- **BIOL 4060:** Immunology Laboratory. Fall 2015, 2016

Awards and Honors:

- OARDC Competitive Graduate Fellowship – 1987-1989
- F21C Competitive Graduate Fellowship – 1989-1990
- NIH Predoctoral Fellowship – 1990-1992
- Society for the Study of Reproduction New Investigator Award - 1992
- NIH Postdoctoral Grant (F32) – 1993-1996
- F. Merlin Bumpus Award – Finalist – 1995
- Outstanding Researcher Award – University of Toledo – 2007
- Undergraduate Research Mentor Excellence Award - 2011

Specialized Training in Program Development, Recruitment/retention, Fundraising:

- National Professional Science Masters (PSM) Association (NPSMA) conference (Tampa, FL), March 2013
- National Academies Scientific Teaching Alliance (NASTA), Northstar Midwest Summer Institute, University of Minnesota, July 2013
- Academic Impressions “Aligning STEM Programming and Support” Conference (New Orleans, LA), October 2014
- “Deans and Development”, CASE conference, Ft. Myers, FL, Jan. 2017

Research Interests:

Research Career Summary: I value greatly the breadth of research opportunities I have been fortunate enough to experience over the course of my career, from agricultural-based work (OSU, Missouri), to human medicine (Cleveland Clinic) to private sector therapeutic development (Gemini Technologies), to basic scientific objectives (University of Toledo) to applied work on aquatic issues, including aquaculture (Toledo and Wright State). Much of this work has centered around innate immunity and molecular virology, two areas that continue to grow in importance. Although the administrative role under consideration may not be amenable to a full-fledged research presence, my laboratory continues to function productively based on strategic hires of strong researchers who allow the group to make progress with minimal oversight from me.

Current activities: A primary emphasis of my active research has been to study virus-host interactions, focusing primarily on interferons (IFNs) and IFN-stimulated genes (ISGs) that regulate apoptotic or antiviral responses. We have studied many factors involved in IFN actions, including TNF-Related Apoptosis Inducing Ligand (TRAIL), Noxa and XIAP-associated factor-1 (XAF1), several of which are described briefly below. We also are actively involved in identifying determinants of pathogenicity and virulence of an invasive fish virus, Viral Hemorrhagic Septicemia virus (VHSV). This project has been important for the Great Lakes region and has provided excellent opportunities to collaborate with researchers across the US. A brief description of several of our current research projects is included below.

VHSV/IHNV: Viral Hemorrhagic Septicemia virus (VHSV) is one of the world’s most important finfish diseases, exerting severe economic and ecological damages on our fisheries and freshwater ecosystems. The virus recently emerged as a new and novel genogroup to kill a wide variety of key fishery species throughout the North American Great Lakes, whose outbreaks threaten fishing, transport, aquaculture, and tourism. Our investigation will integrate: (A) Evolutionary patterns of gene diversification in VHSV strains, genogroups and genotypes, including tests for relative virulence and

infectivity of viral variants on cell lines and laboratory-challenged fish, with (B) Host cellular immune response laboratory investigations, and with (C) Assessment of the variability among Great Lakes VHSV isolates from wild caught samples related to pathogenicity in cell-based and fish challenge studies. The work is a collaborative effort with Brian Shepherd (USDA, Milwaukee), Malathi Krishnamurthy (Univ. Toledo), Mark McBride (UM-Milwaukee) and previously involved Carol Stepien (NOAA, Seattle). It is our hypothesis that naturally occurring viral mRNA and protein variations will influence host-virus interactions and pathogenicity, which are critical determinants of disease severity and propagation dynamics. Current work is aimed at transferring the results of these studies into a pathogen of further economic importance, Infectious Hematopoietic Necrosis Virus (IHNV), as a means of developing protective immunization or infection strategies with attenuated virus. ***This project has been supported by grants/CRADAs from the USDA/ARS (still active), NIFA and an NSF IOS proposal funded from 2014-2017 (In NCE until 5/19). The next ARS five-year plan (2020-2025) was approved for funding. We have deferred the start until 2021 to complete the final studies proposed under the existing plan.***

Adenovirus Work: Assessment of how modulating the human adenoviral receptor (“CAR8”) is regulated in its localization to the apical or basolateral surface of human airway epithelia should yield clues on how infections are controlled. More importantly, however, we are interested in understanding how modulation of CAR8 localization, or perturbation of CAR8/MAGI-1 association, can lead to the development of novel therapeutic strategies to reduce adenovirus infections. The studies focus on development of cell-penetrating peptides that can disrupt these associations, which will then be tested for effectiveness in both *in vitro* and *in vivo* studies. ***These studies are supported by NIH 5R01AI127816, through at least 2022.***

Postdoctoral Fellows: I have had six postdocs over the past 18 years, the most recent being Bartolomeo Gorgoglione, who joined me at Wright State in 2017. In March 2019, he accepted a tenure track Assistant Professor position at Michigan State University. In February 2020, I hired a Research Assistant Professor (Ola Kolawole) to oversee my lab and keep the research moving while I tended to my administrative duties.