

CURRICULUM VITAE
Michael F. Criscitiello, PhD
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PRESENT POSITION AND ADDRESS:

Title:	Assistant Professor	Phone:	979 845 4207
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	Comparative Immunogenetics Lab	Email:	mcriscitiello@cvm.tamu.edu
	Veterinary Pathobiology	Lab website:	
	College of Veterinary Medicine		http://vetmed.tamu.edu/comparative-immunogenetics-lab
	and Biomedical Sciences		
	Texas A&M University		

EDUCATION:

<u>Degree/Training</u>	<u>Conferring Institution</u>	<u>Field</u>	<u>Year</u>
B.S.	University of North Carolina - Chapel Hill	Biology	1993
M.S.	East Carolina University	Molecular Biology	1997
Ph.D.	University of Miami	Immunology	2003
Post-doc	University of Maryland - Baltimore	Immunology	2003-2008

PROFESSIONAL EXPERIENCE, ACADEMIC APPOINTMENTS AND ACTIVITIES:

1990-1995; Lab Assistant while undergrad and Technician two years post-bac, Lineberger Comprehensive Cancer Center, Department of Microbiology and Immunology, University of North Carolina Chapel Hill. Supervisor: Dr. Jenny Ting.

1993; Teaching Assistant, Fundamentals of Biology laboratory, University of North Carolina Chapel Hill. Supervisor: Dr. Jean Desaix.

1995-1997; Teaching Assistant, Comparative Botany and Zoology laboratory, East Carolina University. Supervisor: Dr. Vince Bellis.

1998; Teaching Assistant, Microbiology laboratory, University of Miami. Supervisor: Dr. George Schiaberger.

2003; Adjunct Professor, Concepts of Biology, Nova Southeastern University. Dean: Dr. Naomi D'Alessio.

2003; Adjunct Professor, Microbiology and Immunology, General Biology, Miami-Dade Community College. Chair: Dr. Jorge Obeso.

2005-2007; Lecturer, Host Defense and Infectious Disease, medical student immunology and gene therapy small group discussions, University of Maryland at Baltimore. Supervisor: Dr. Dan Schulze.

2008-present; Assistant Professor in Veterinary Pathobiology, College of Veterinary Medicine and Biomedical Sciences, Texas A&M University

2008-present; Ecology and Evolutionary Biology Interdisciplinary Research Program, Texas A&M University

2008-present; Interdisciplinary Graduate Program in Genetics, Texas A&M University

2010-present; Interdisciplinary Program in Toxicology, Texas A&M University

2010-present; Whole Systems Genomics Initiative, Texas A&M University

2010-present; Professional Program in Biotechnology, Texas A&M University

AWARDS AND HONORS:

1995 and 1996; McDaniel Scholarship for Excellence in Graduate Research, East Carolina University Department of Biology

2000; International Society of Developmental and Comparative Immunology travel award to present at International Society for Developmental and Comparative Immunology Congress in Cairns, Australia

2001; University of Miami Department of Microbiology and Immunology Graduate Student Appreciation Award

2001; Margaret Whelan Graduate Student Scholarship Fund Travel Award

2003; Ruth L. Kirchstein National Research Service Award (NIH F32)*

2006; Bectin Dickenson Biosciences travel award to speak at $\gamma\delta$ T Cell Conference, Salk Institute, La Jolla CA

2007; American Association of Immunologists travel award to speak at International Immunology in Rio de Janeiro, Brazil

2010; American Association of Immunologists Junior Faculty Travel Grant to speak at AAI Baltimore

2011; Montague – TAMU Center for Teaching Excellence Scholar Award*

2013; American Association of Immunologists Junior Faculty Travel Grant to speak at AAI Honolulu

2013; SEC Faculty Travel Grant to establish collaboration at Vanderbilt University Medical Center*

* *cross-listed in funding*

EDITORIAL BOARD:

2012-2015; *Experimental Biology and Medicine*

RESEARCH/SCHOLARLY ACTIVITIES:

My Comparative Immunogenetics Laboratory studies immunology and evolution. Most of our research focuses on the early natural history of the vertebrate adaptive immune system, with particular attention given to the genetics of lymphocyte antigen receptors, mucosal immune mechanisms in the gut, antigen presentation and invertebrate innate immunogenomics. Our goals are bipartite, but related. Our first aim is to understand the evolution of our immune system: its genesis, subsequent natural history, and trajectory into the future. We pursue this using the comparative method focusing on evolutionarily strategic poikilothermic vertebrates (frog and shark) and economically important food species (shrimp, cattle and tuna). This work allows us to distinguish what aspects are phylogenetically fundamental in our own system and differentiate those that are merely accessory. Our second aim is to continue to discover and understand the many diverse tools less-studied organisms have evolved in their defensive batteries, which mouse and man often lack. These novel receptors, mechanisms, domains and tissue architectures will inform better vaccine development, biomedical engineering and clinical intervention **for the better health of all animals**. Details of my research and scholarly activities are detailed below.

RESEARCH FUNDING:

CURRENT FUNDING (including indirect costs)						
Years	Type	Sponsor	Role	Title	Total Award	To Me
2013	Internal Competitive	SEC Faculty Travel Program	PI	Immunogenetic Collaboration with between TAMU and Vanderbilt University Medical Center	\$2,500	\$2,500
2013-2016	Federal Competitive	NSF-IOS 1257829	PI	Evolution of loci critical in antigen recognition	\$655,000	\$655,000
2013	Internal Federal Competitive	USDA FAH	PI	Shrimp Immunogenomics	\$19,690	\$9,845

2013	National Competitive	American Association of Immunologists	Mentor	Summer Research Program for Teachers (Young, PI)	\$6,800	\$6,800
2013	Internal Competitive	CVM Student Awards	Mentor	IgL Isotype Function in <i>Xenopus</i> (Peterson PI)	\$5,000	\$5,000
2013	Internal Competitive	CVM Student Awards	Co-Mentor	Cytogenetic Mapping of Immunoglobulins (Avila PI)	\$5,000	\$0
2012-2013	International Federal Competitive	Mexican INAPESCA	Co-PI	Shrimp genomics and structural host defense	\$400,000 (\$94,000 to TAMU)	\$47,000
2012	Internal Federal Competitive	USDA FAH	PI	Shrimp Transcriptomics	\$11,128	\$5,564
Total					\$1,105,118	\$731,709

Pending Proposals:

Co-Investigator: "Development of a Prophylactic and Therapeutic Product for Effective and Uniform Control of BRD Complex." Project Director Surya Waghela, USDA NIFA-AFRI, 2013-2016.

Co-Project Director: "Genomic and structural tools for aquacultured shrimp disease resistance: Special Research Project Proposal." Co-Project Director Rogerio-Sotelo-Mundo, TAMU/CONACYT, 2013-2014.

Sponsor: "Role of NLRs in response to *S. Typhimurium*." Principal Investigator Richard Laughlin, NIH F-32, 2013-2016.

TAMU Subcontract Principal Investigator: "Bovine anti-HIV ultralong CDR3 antibodies." Principal Investigator Vaughn Smider, NIH-R21, 2013-2015.

Principal Investigator: "Immunogenomic tools for aquacultured shrimp disease resistance in Texas." NOAA Texas-SeaGrant, 2014-2016.

TAMU Subcontract Principal Investigator: "Cysteine pattern evolution to reshape protein structure." Principal Investigator Vaughn Smider, NIH-R01, 2013-2017.

Project Director: "Immunogenomic tools for aquacultured shrimp disease resistance." USDA NIFA-AFRI, 2013-2016.

PREVIOUS FUNDING (including indirect costs)						
Years	Type	Sponsor	Role	Title	Total Award	To Me
2011	Internal Competitive	TAMU Computer Access Fee Grant Program	PI	Empowering Students with Practical Experience Working with Next-Generation Sequencing Data	\$21,799	\$21,799
2011-2012	Internal Competitive	Texas Agrilife/ TVMDL (124151)	PI	Genomic and immunogenetic tools for enhancing shrimp disease resistance	\$55,000	\$27,500
2011-2012	Internal/ International Competitive	CONACYT/ TAMU (246889)	Co-PD	Genomic and immunogenetic tools for enhancing shrimp disease resistance	\$24,000 (\$18,000 to TAMU)	\$9,000
2011-2012	Internal Competitive	Montague/ CTE	PI	Enrichment of VTPB415 Immunogenetics and Comparative Immunology and its instructor	\$6,500	\$6500
2008-2011	Federal Competitive	NIH-NIAID (K22 AI56963)	PI	Origins of specialized mucosal lymphocyte subsets and immunoglobulin isotypes	\$270,000	\$270,000
2010-2011	Internal Competitive	CVM Student Awards	Men tor	Origins of T helper cell function in adaptive immunity (Du PI)	\$5,000	\$5,000

2010-2011	Internal Competitive	CVM Student Awards	Mentor	IgX, IgA and immunoglobulin class switch recombination (Mashoof PI)	\$5,000	\$5,000
2004-2007	Federal Competitive	NIH-NIAID (F32 AI56593)	PI	Origins of T helper cell function in adaptive immunity	\$130,972	\$130,972
Total (Current and Previous)					\$1,623,389	\$1,207,480

MEMBERSHIP IN TRAINING PROGRAMS:

NIH R-25 (Kier Project Director, Criscitiello Mentor) Laboratory Animal Medicine Training Grant Funded 2013-2018, budget currently under negotiation.

COLLABORATIVE, INTERDISCIPLINARY RESEARCH PROJECTS 2008-2013:

Evolution of nanoimmunotoxicology. Collaborators: the group of Christie Sayes (Research Triangle Institute, formerly VTPP, TAMU), Amy Romoser (a student co-mentored with Sayes), Ivan Ivanov (VTPP, TAMU), Weston Porter (VIBS, TAMU), Chris Seabury (VTPB, TAMU). This collaboration resulted in four proposals, two publications (Romoser *Mol Immuno* 2011, Romoser *Tox Letters* 2012), and one more manuscript submitted.

Natural history of the S100 gene family in immunology and neurology. Collaborators: Danna Zimmer (University of Maryland School of Medicine, formerly of VTPB, TAMU). This collaboration resulted in one proposal in preparation, one publication (Zimmer *Cell Calcium* 2013), and one more manuscript in preparation.

Evolution of shark TCR immunogenetics. Collaborators: group of Martin Flajnik (University of Maryland School of Medicine). This collaboration has resulted in six publications (Saltis *Immunogen* 2008, Parra *EJI* 2009, Criscitiello *Jl* 2010, Dooley *Mol Immuno* 2010, Criscitiello *DCI* 2012, Flajnik *Immunogen* 2012) and two manuscripts in preparation.

Evolution of tumor infiltrating T cells in adaptive immunity. Collaborators: the group of V.J. Irigavarapu-Charyulu (Florida Atlantic University) and Jennifer Owen (University of Florida College of Veterinary Science). This collaboration resulted in one publication (Owen *Cell Immuno* 2011).

Mucosal immunity in teleost fishes. Collaborators: the group of Del Gatlin (Wildlife and fisheries, TAMU), Waithaka Mwangi (VTPB, TAMU), Roger Smith (VTPB, TAMU). This collaboration has resulted in one publication (Pohlenz *FSI*, 2012), one proposal and one in preparation.

Relationship between T cells and gut flora in evolution. Collaborators: Jan Suchodolski (SACS, TAMU), Ian Tizard (VTPB, TAMU), Jörg Steiner (SACS, TAMU). This collaboration has produced one publication (Mashoof *Muc Immunol* 2013).

MicroRNA modulation of B cells in metabolic diseases. Collaborators: group of Beiyan Zhou (VTPB, TAMU). This collaboration has resulted in one manuscript in preparation.

Origins of adaptive immunity. Collaborators: Paul de Figueiredo (Molecular Pathogenesis, TAMU HSC), Marty Dickman (Plant Pathology and Microbiology, TAMU), David Huston (Molecular Pathogenesis, TAMU HSC), Jim Samuel (Molecular Pathogenesis, TAMU HSC). This collaboration has produced two publications (Criscitiello *PLoS Path* 2012 and Criscitiello *PLoS Path* 2013) and there is one manuscript in preparation.

Convergent evolution of camelid and shark light chain-less antibody loci. Collaborators: Terje Raudsepp (VIBS, TAMU). This collaboration has produced one internal grant.

Structure and function of bovine ultra-long CDR3 antibodies. Collaborators: the groups of Vaughn Smider and Ian Wilson at the Scripps Research Institute, Waithaka Mwangi (VTPB, TAMU), Terje Raudsepp (VIBS, TAMU), Sara Lawhon (VTPB, TAMU), Claire Gill (Animal Sciences, TAMU). This work has resulted in four proposals and a publication that made the cover of *Cell* (Wang *Cell* 2013).

Shrimp immunogenomics. Core Collaborators: Scott Dindot (VTPB, TAMU), Rogerio Sotelo-Mundo (CIAD), Charlie Johnson (Agrilife), Alejandro Sanchez (UNAM). This collaboration is a large genomic project that has resulted in 14 proposals, five funded grants, one manuscript submitted and one in preparation.

Evolution of RNA binding toll-like receptors in lower vertebrates. Collaborator: Koichi Kobayashi (Molecular Pathogenesis, TAMU HSC). This collaboration has yielded one manuscript in preparation.

BIBLIOGRAPHY: (All in chronologic order)

Publications in Refereed Journals (25): h-index = 9 (368 citings, mean 15.33 citings/paper)

AUTHORSHIP KEY: *Corresponding author* in italics. My colleagues in the Criscitiello Comparative Immunogenetics Laboratory are underlined and marked with superscripts as graduate students¹, undergraduates², technicians³, post-docs⁴ and veterinary students⁵.

- Wright, K.L., B.J. Vilen, Y.I. Lindstrom, T.L. Moore, G. Li, **M.F. Criscitiello**, P. Cogswell, J.B. Clarke, and J.P. Ting. "CCAAT box binding protein NF-Y facilitates *in vivo* recruitment of upstream DNA binding transcription factors." *The EMBO Journal* 13, 4042-4053, 1994.
- Criscitiello, M.F.**, R. Benedetto, A. Antao, M.R. Wilson, V.G. Chinchar, N.W. Miller, L.W. Clem, and T.J. McConnell. " β_2 -microglobulin of Ictalurid catfishes." *Immunogenetics* 48, 339-343, 1998.
- Ohta, Y., E.C. McKinney, **M.F. Criscitiello**, and M.F. Flajnik. "Proteasome, transporter associated with antigen processing, and class I genes in the nurse shark *Ginglymostoma cirratum*: evidence for a stable class I region and MHC haplotype lineages." *The Journal of Immunology*, 168, 771-781, 2002.
- Criscitiello, M.F.**, S.M. Kamper, E.C. McKinney. "Allelic polymorphism of TCR α chain constant domain genes in the bicolor damselfish." *Developmental and Comparative Immunology*, 28, 781-792, 2004.
- Criscitiello, M.F.**, N.E. Wermenstam, L. Pilstrom and E.C. McKinney. "Allelic polymorphism of T cell receptor constant domains is widespread in fishes." *Immunogenetics* 55, 818-824, 2004.
- Criscitiello, M.F.**, M. Saltis and M.F. Flajnik. "An evolutionarily mobile antigen receptor variable region gene: doubly rearranging NAR-TcR genes in sharks." *Proceedings of the National Academy of Sciences USA*, 103(13):5036-41, 2006.
- Hsu, E. and **M.F. Criscitiello**. "Diverse immunoglobulin light chain organizations in fish retain potential to revise receptor specificities." *The Journal of Immunology*, 177(4):2452-62, 2006.
- Criscitiello, M.F.** and M.F. Flajnik. "Lambda and kappa are two of four primordial immunoglobulin light chain isotypes." *European Journal of Immunology*, 37(10):2683-94, 2007.
- Saltis, M., **M.F. Criscitiello**, Y. Ohta, M. Keefe, N.S. Trede, R. Goitsuka and M.F. Flajnik. "Evolutionarily conserved and divergent regions of the autoimmune regulator (Aire) gene: a comparative analysis." *Immunogenetics*, 60(2):105-14, 2008.
- Parra, Z.E., Y. Ohta, **M.F. Criscitiello**, M.F. Flajnik, and R.D. Miller. "The dynamic TCRdelta: TCRdelta chains in the amphibian *Xenopus tropicalis* utilize antibody-like V genes." *European Journal of Immunology*, 40(1-11), 2010.
- Criscitiello, M.F.**, Y. Ohta, M. Saltis, E.C. McKinney, and M.F. Flajnik "Evolutionarily conserved TCR binding sites, identification of T cells in primary lymphoid tissues, and surprising trans-rearrangements in nurse shark." *Journal of Immunology*, 184(12):6950-60, 2010.
- Dooley, H., E.B. Buckingham, **M.F. Criscitiello**, and M.F. Flajnik. "Emergence of the acute-phase protein hemopexin in jawed vertebrates." *Molecular Immunology*, 48(1-3):147-152, 2010.
- Romoser, A.A.¹, P.L. Chen³, J.M. Berg, C. Seabury, I. Ivanov, **M.F. Criscitiello**, and C.M. Sayes. "Quantum dots trigger modulation of the NFkappaB pathway in human skin cells." *Molecular Immunology*, 48(12-13):1349-59, 2011.
- Owen, J.L., **M.F. Criscitiello**, S. Libreros, R. Garcia-Areas, K. Guthrie, M. Torroella-Kouri, and V. Iragavarapu-Charyulu. "Expression of the inflammatory chemokines CCL2, CCL5 and CXCL2 and their receptors CCR1-3 and CXCR2 in T lymphocytes from mammary tumor-bearing mice." *Cellular Immunology* 270:172-182, 2011. PMID: 21621198

- Criscitiello M.F.**, Y. Ohta, M.D. Graham, J.O. Eubanks³, P.L. Chen³, and M.F. Flajnik. "Shark class II invariant chain reveals ancient conserved relationships with cathepsins and MHC class II." *Developmental and Comparative Immunology* 36:521-533, 2012. PMID: 21996610
- Du, C.C.¹, S.M. Mashoof¹, and **M.F. Criscitiello**. "Oral immunization of the African clawed frog (*Xenopus laevis*) upregulates the mucosal immunoglobulin IgX." *Veterinary Immunology and Immunopathology* 145:493-498, 2012. PMID: 22100190
- Romoser A.A.¹, D.E. Figueroa, A. Soorash, K. Scribner, P.L. Chen³, W. Porter, **M.F. Criscitiello**, and C.M. Sayes. "Distinct immunomodulatory effects of a panel of nanoparticles in human dermal fibroblasts." *Toxicological Letters* 210:293-301, 2012. PMID: 22342292
- Flajnik, M.F., T. Tlapakova, **M.F. Criscitiello**, V. Krylov, and Y. Ohta. "Evolution of the B7 family: co-evolution of B7H6 and NKp30, identification of a new B7 family member, B7H7, and of B7's historical relationship with the MHC." *Immunogenetics* 64:571-590, 2012. PMID: 22488247
- Pohlenz, C., A. Buentello, **M.F. Criscitiello**, W. Mwangi, R. Smith, and D. Gatlin. "Synergies between vaccination and dietary arginine and glutamine supplementation improve the immune response of channel catfish against *Edwardsiella ictaluri*." *Fish and Shellfish Immunology* 33:543-551, 2012. PMID: 22728565
- Criscitiello, M.F.** and P. de Figueiredo. "Fifty shades of immune defense." *PLoS Pathogens*, 9(2) e1003110, 2013. PMID 23408882
- In this short perspective Paul de Figueiredo and I make a rather bold prediction of how adaptive immunity will need to be redefined as more sophisticated systems are understood from invertebrates, plants, and bacteria. PLoS Pathogens has an impact factor of 9.17.*
- Zimmer, D.B., J.O. Eubanks³, D. Ramakrishnan¹, and **M.F. Criscitiello**. "Evolution of the S100 family of calcium sensor proteins." *Cell Calcium* 53(3):170-9, 2013. PMID: 23246155
- Mashoof, S.¹, A. Goodroe⁵, C.C. Du¹, J.O. Eubanks³, N. Jacobs¹, J.M. Steiner, I. Tizard, J.S. Suchodolski, and **M.F. Criscitiello**. "Ancient T-independence of mucosal IgX/A: gut microbiota unaffected by larval thymectomy in *Xenopus laevis*." *Mucosal Immunology* 6(2):358-68, 2013. PMID: 22929561
- The paper that I am most proud of, we connect the dots phylogenetically and functionally of how mammalian IgA evolved from IgX, showed the ancient independence of mucosal antibody class switch of T cell help, and defined the frog gut microbiota. A figure from this paper showing the evolution of IgA has already been used in a forthcoming textbook edition. Mucosal Immunology is a relatively new journal of the Nature Publishing Group and currently has an impact factor of 7.01.*
- Wang, F., D.C. Ekiert, I. Ahmad, W. Yu, Y. Zhang, O. Bazirgan, A. Torkamani, T. Raudsepp, W. Mwangi, **M.F. Criscitiello**, I.A. Wilson, P.G. Schultz, V.V. Smider. "Reshaping antibody diversity." *Cell* 153: 1379-1393, 2013.
- Featured on the cover of Cell, this paper describes the structure, immunogenetics, and binding of a truly novel form of antibodies in cattle that use the third complementarity determining loop of the heavy chain (CDR3H) to form a projecting, highly diverse mini domain. I performed immunogenetic analysis, cattle experiments, and coordinated the TAMU collaborators (Mwangi and Raudsepp) on this project. Cell's impact factor is 32.40.*

Criscitiello, M.F., M.B. Dickman, J.E. Samuel and P. de Figueiredo. "Tripping on acid: trans-kingdom perspectives on the use of acids in immunity and pathogenesis." in press at *PLoS Pathogens* for July 18th 2013 publication.

López-Zavala, A.A., J.S. Carrasco-Miranda, K.D. Garcia-Orozco, R. Sugich-Miranda, J.M. Hernandez-Flores, **M.F. Criscitiello**, Luis G. Brieba, Rogerio R. Sotelo-Mundo and *Enrique Rudiño-Piñera*. "Crystal structure of shrimp arginine kinase in binary complex with arginine - a molecular view of the phosphagen precursor binding to the enzyme." Accepted at *Journal of Bioenergetics and Biomembranes* July 3rd 2013.

Manuscripts submitted or in preparation

Romoser, A.A.¹, D.E. Figueroa, **M.F. Criscitiello**, and C.S. Sayes. "Engineered nanoparticles induce DNA damage in primary human skin cells, even at low doses." In revision at *NanoLIFE Journal*.

Mashoof, S.M.¹, C. Pohlenz, P.C. Chen³, D. Gatlin, A. Buentello and **M.F. Criscitiello**. "Expressed IgH μ and τ transcripts share diversity segment in ranched *Thunnus orientalis*." In revision at *Developmental and Comparative Immunology*.

Laitner, E.S., J.H. Hansen, **M.F. Criscitiello** and *K.S. Kobayashi*. "TLR13 is an ancient sensor of prokaryotic RNA that has forced invertebrate and vertebrate symbiont evolution." In preparation.

Chen, P.L.³, J.O. Eubanks³, M.F. Flajnik and **M.F. Criscitiello**. "Use of Immunoglobulin-T cell receptor trans-rearrangements in shark thymus and periphery." In preparation.

Eubanks, J.O.³, C.D. Castro, A.C. Wallace², Y. Ohta, M.F. Flajnik and **M.F. Criscitiello**. "Somatic hypermutation for $\alpha\beta$ primary T cell repertoire generation in shark." In preparation.

Criscitiello, M.F., J.E. Samuel, D.P. Huston and P. de Figueiredo. "Trends in One Health." In preparation.

AUTHORSHIP KEY: *Corresponding author* in italics. My colleagues in the Criscitiello Comparative Immunogenetics Laboratory are underlined and marked with superscripts as graduate students¹, undergraduates², technicians³, post-docs⁴ and veterinary students⁵.

Theses

Criscitiello, M.F. 1997. "Characterization of β_2 -microglobulin in the catfish family Ictaluridae." Thesis. Department of Biology, East Carolina University, Greenville, NC. Major advisor: Dr. Tom McConnell.

Criscitiello, M.F. 2003. "Polymorphism of T cell receptor α chain constant domains." Dissertation. Department of Microbiology and Immunology, University of Miami Miller School of Medicine, Miami, FL. Major advisor: Dr. Churchill McKinney.

Book chapters (invited, peer reviewed):

Criscitiello, M.F. T cell receptors. In *Immunobiology of the Shark*. Editor Sylvia L. Smith. To be published in 2014.

Criscitiello, M.F. Immunoglobulin light chains. In *Immunobiology of the Shark*. Editor Sylvia L. Smith. To be published in 2014.

Abstracts of oral and poster presentations

Antao, A.B., M.R. Wilson, T.B. Stuge, U.B. Godwin, M.F. Criscitiello, T.J. McConnell, N.W. Miller, L.W. Clem and V.G. Chinchar. "Expression of MHC genes in the channel catfish." *Developmental and Comparative Immunology* **21**, 109, Williamsburg VA, 1997.

Criscitiello M.F., R. Benedetto, A.B. Antao, M.R. Wilson, V.G. Chinchar, N.W. Miller, L.W. Clem and T.J. McConnell. "Glycosylation signal sequence for β_2 -microglobulin in the channel catfish, *Ictalurus punctatus*." *Developmental and Comparative Immunology* **21**, 199, Williamsburg VA, 1997.

Hogan, R.J., A.B. Antao, M.R. Wilson, N.W. Miller, L.W. Clem, U.B. Godwin, M.F. Criscitiello, T.J. McConnell, C. Goudie, G. Waldbeiser, W. Wolters and V.G. Chinchar. "Molecular and immunological characterization of gynogenetic channel catfish." *Developmental and Comparative Immunology* **21**, 103, Williamsburg VA, 1997.

Criscitiello M.F., S.M. Kamper, L. Rumpfelt, M.F. Flajnik and E.C. McKinney. "Search for T cell receptor signaling apparatus in a primitive vertebrate." Mid Atlantic Society of Comparative and Developmental Immunology Conference, George Washington University, Washington D.C., 1999.

Criscitiello M.F., S.M. Kamper and E.C. McKinney. "Evolution of polymorphic T cell receptor β 'constant' domain genes." Comparative Immunology Minisymposium, Florida International University, Miami FL, 2000.

Criscitiello M.F., S.M. Kamper and E.C. McKinney. "Evolution of polymorphic T cell receptor β 'constant' domain genes in damselfish." *Developmental and Comparative Immunology* **24**, S34, Cairns, Australia, 2000.

Criscitiello M.F., S.M. Kamper and E.C. McKinney. "Evolution of polymorphic T cell receptor constant domain genes." Comparative Immunology Symposium, Florida International University, Miami FL, 2002.

Criscitiello M.F., S.M. Kamper and E.C. McKinney. "Evolution of polymorphic T cell receptor constant domain genes." American Association of Immunology Annual Meeting, New Orleans, LA, 2002.

Criscitiello M.F., S.M. Kamper and E.C. McKinney. "Evolution of polymorphic T cell receptor constant domain genes." Comparative Immunology Symposium, Florida International University, Miami FL, 2003.

Criscitiello M.F., Niklas E. Wermestam, S.M. Kamper, Lars Pilstrom and E.C. McKinney. "Polymorphism of TCR constant domain genes in teleost fish." *Developmental and Comparative Immunology*, St. Andrews, Scotland 2003.

Criscitiello M.F., M. Saltis and M.F. Flajnik. "An evolutionarily mobile antigen receptor variable

- region gene: doubly rearranging NAR-TcR genes in sharks." FASEB/AAI, San Diego, CA 2005.
- Criscitiello M.F.**. "T cell receptor diversity in the nurse shark." 13th International Congress of Immunology, Montreal, Canada, 2005.
- Criscitiello M.F.**, M. Saltis and M.F. Flajnik. "An evolutionarily mobile antigen receptor variable region gene: doubly rearranging NAR-TCR genes in sharks." $\gamma\delta$ T Cell Conference, Salk Institute, La Jolla CA, 2006.
- Criscitiello M.F.** "Genomic plasticity at the shark TCR delta locus." Developmental and Comparative Immunology, Charleston, SC, 2006.
- Criscitiello M.F.** "New shark Ig light chain reveals lambda and kappa to be two of four ancestral isotype radiations." Developmental and Comparative Immunology, Charleston, SC, 2006.
- Criscitiello M.F.**, and M.F. Flajnik. "New shark Ig light chain reveals lambda and kappa to be two of four ancestral isotype radiations." 13th International Congress of Immunology, Rio de Janeiro, Brazil, 2007.
- Criscitiello M.F.**, Y. Ohta, M.D. Graham and M.F. Flajnik. "Evolution of the MHC Class II Associated Invariant Chain." Congress of the International Society of Developmental and Comparative Immunology, Prague, Czech Republic, 2009.
- Criscitiello M.F.**, Y. Ohta, M.D. Graham and M.F. Flajnik. "Evolution of the MHC Class II Associated Invariant Chain." Cold Spring Harbor Laboratories Symposium: Evolution, Cold Spring Harbor NY, 2009.
- Criscitiello M.F.**, Eubanks³, J.O., A.B. Coots² and M.F. Flajnik. "Evidence for somatic hypermutation at shark T cell receptor alpha locus." American Association of Immunology Annual Meeting, Baltimore MD, 2010.
- Romoser¹ **A.**, **M.F. Criscitiello** and C. Sayes. "Modulation of the NF- κ B Pathway After Exposure to Nanoparticles in an *In Vitro* Dermal Model." Gulf Coast Chapter Society of Toxicology Annual Meeting, Houston TX, 2010.
- Romoser¹ **A.**, D.E. Figueroa, A. Soorsh, K Scribner, P.L. Chen, W. Porter, **M.F. Criscitiello**, and C.M. Sayes. "Distinct immunomodulatory effects of a panel of nanoparticles in human dermal fibroblasts." Gulf Coast Toxicology Symposium, New Orleans LA, 2011.
- Figueroa D.E., A.A. Romoser¹, **M.F. Criscitiello** and C.M. Sayes. "Low dose exposures with ROS-producing metal oxide nanoparticles cause DNA damage in human dermal fibroblasts." Gulf Coast Toxicology Symposium, New Orleans LA, 2011.
- Romoser¹ **A.**, **M.F. Criscitiello** and C.S. Sayes. "Modulation of the NF- κ B pathway after exposure to nanoparticles in an *in vitro* dermal model." Gordon Conference, Waterville Valley NH, 2011.
- Goodroe⁵ **A.**, S. Mashoof¹ and **M.F. Criscitiello**. "Analysis of immunoglobulins secreted by *Xenopus* in response to oral and intraperitoneal immunization." Merit-NIH National Veterinary Scholars Symposium, Orlando FL, 2011.
- Mashoof¹ **S.**, C. Du¹ and **M.F. Criscitiello**. "Reliable and consistent method for small volume blood collection from *Xenopus laevis*." Forum of the American College of Laboratory Animal Medicine, San Antonio TX, 2011.
- Du¹ **C.**, S. Mashoof¹, and **M.F. Criscitiello**. "Investigation of IgH isotypes in an ancestral immune model of class switch." American Association of Immunology 98th Annual Meeting, San Francisco CA, 2011.
- Mashoof¹ **S.**, C. Du¹ and **M.F. Criscitiello**. "Effect of larval thymectomy on T cell development and immunoglobulin class switch in *Xenopus laevis*." American Association of Immunology 98th

Annual Meeting, San Francisco CA, 2011.

Romoser¹ A., **M.F. Criscitiello**, C. Sayes. "Cytotoxicological and Pathway-focused Perturbations in Dermal Cells Exposed to Quantum Dot Systems." Society of Toxicology Annual Meeting, Washington DC, 2011.

Eubanks, J.O.³, C. Doremus, A.B. Wallace², Y. Ohta, M.F. Flajnik, **M.F. Criscitiello**. "Somatic Hypermutation for primary $\alpha\beta$ T cell repertoire generation in shark." 12th Congress of the International Society of Developmental and Comparative Immunology, Fukuoka Japan, 2012.

Wei, Y, C. Meng, S. Mashoof¹, G. Zhuang, P.S. Cheruku, L. Shi, F.W. Bazer, G. Wu, S. Safe, **M.F. Criscitiello**, B. Zhou. "A novel paradigm of microRNA regulated B cell functions on insulin resistance: miR-150 regulates insulin sensitivity through controlling antibody production." American Heart Association Annual Meeting, Los Angeles CA, 2012.

Eubanks, J.O.³, C. Doremus, A.B. Wallace², Y. Ohta, M.F. Flajnik, **M.F. Criscitiello**. "Somatic Hypermutation for primary $\alpha\beta$ T cell repertoire generation in shark." North American Comparative Immunology Workshop, Rochester NY, 2012.

Wei, Y, S. Mashoof¹, P.S. Cheruka, G. Zhuang, F.W. Bazer, G. Wu, S. Safe, **M.F. Criscitiello**, B. Zhou. "A novel paradigm of microRNA regulation of insulin resistance: miR-150 regulates insulin sensitivity through controlling B cell functions." American Diabetes Association, Chicago IL, 2013.

Criscitiello, M.F., J.O. Eubanks³, P.L. Chen³, C.D. Castro, A.B. Wallace², Y. Ohta, M.F. Flajnik "B cell immunogenetics in the T cell receptor repertoire generation of shark." American Association of Immunology 100th Meeting, Honolulu HI, 2013

Mashoof, S.¹, C. Pohlenz, P.L. Chen³, D. Gatlin, A. Buentello, **M.F. Criscitiello**. "Expressed IgM and IgZ/T transcripts in ranched *Thunnus orientalis*." Eastern Fish Health Workshop, Gettysburg PA, 2013.

Criscitiello, M.F., J.O. Eubanks³, P.L. Chen³, C.D. Castro, A.B. Wallace², Y. Ohta, M.F. Flajnik. "B cell immunogenetics in the T cell receptor repertoire generation of shark." North American Comparative Immunology Workshop, Santa Barbara CA, 2013.

KEY: *Presenting author* in italics. My colleagues in the Criscitiello Comparative Immunogenetics Laboratory are underlined and marked with superscripts as graduate students¹, undergraduates², technicians³, post-docs⁴ and veterinary students⁵.

INVITED PRESENTATIONS, SYMPOSIA, COLLOQUIA AND NAMED LECTURES:

National

1997; "Glycosylation signal sequence for β_2 -microglobulin in the channel catfish, *Ictalurus punctatus*." Congress of International Society of Developmental and Comparative Immunology, Williamsburg VA

- 1999; "Search for T cell receptor signaling apparatus in a primitive vertebrate." Mid Atlantic Society of Comparative and Developmental Immunology Conference, George Washington University, Washington D.C
- 2000; "Evolution of polymorphic T cell receptor β 'constant' domain genes." Comparative Immunology Minisymposium, Florida International University, Miami FL
- 2002; "Evolution of polymorphic T cell receptor constant domain genes." Comparative Immunology Symposium, Florida International University, Miami FL
- 2002; "Evolution of polymorphic T cell receptor constant domain genes." Immunology 2002 (American Association of Immunologist Annual Meeting), New Orleans LA
- 2002; "Evolution of polymorphic T cell receptor constant domain genes." University of Mississippi Medical Center, Jackson MS
- 2003; "Evolution of polymorphic T cell receptor constant domain genes." Comparative Immunology Symposium, Florida International University, Miami FL
- 2005; "An evolutionarily mobile antigen receptor variable region gene: doubly rearranging NAR-TcR genes in sharks." FASEB/ American Association of Immunologist Annual Meeting, San Diego, CA
- 2005; "An evolutionarily mobile antigen receptor variable region gene: doubly rearranging NAR-TcR genes in sharks." University of Maryland, Baltimore, MD
- 2006; "Genomic plasticity at the shark TcR delta locus." Congress of International Society of Developmental and Comparative Immunology, Charleston, SC
- 2006; "New shark Ig light chain reveals lambda and kappa to be two of four ancestral isotype radiations." Congress of International Society of Developmental and Comparative Immunology, Charleston, SC
- 2006; "An evolutionarily mobile antigen receptor variable region gene: doubly rearranging NAR-TCR genes in sharks." College of William and Mary, Williamsburg, VA
- 2007; "Sharks and the evolution of antigen receptors." Department of Pathobiology, Louisiana State University, Baton Rouge, LA
- 2007; "Sharks and the evolution of antigen receptors." Harvard Digestive Disease Center, Harvard Medical School, Boston, MA 2007.
- 2007; "Sharks and the evolution of antigen receptors." Department of Biology, New Mexico State University, Las Cruces, NM
- 2007; "Sharks and the evolution of antigen receptors." Department of Biology, University of Louisiana, Lafayette, LA
- 2007; "Sharks and the evolution of antigen receptors." Department of Microbiology and Immunology, University of Illinois-Chicago, Chicago, IL
- 2007; "Sharks and the evolution of antigen receptors." Department of Biomedical Sciences, Mercer University School of Medicine, Savannah, GA
- 2007; "Sharks and the evolution of antigen receptors." Department of Pathology, Case Western Reserve University, Cleveland, OH
- 2007; "Sharks and the evolution of antigen receptors." Department of Veterinary Pathobiology, Texas A&M University, College Station, TX

2007; "Sharks and the evolution of antigen receptors." Department of Animal Sciences, University of Delaware, Newark DE

The above ten presentations were part of invited job interviews.

2009; "Evolution of the MHC Class II Associated Invariant Chain" FIU Comparative Immunology and Biomedical Research Symposium, Miami FL

2009; "Evolution of the MHC Class II Associated Invariant Chain" Cold Spring Harbor Laboratories Symposium: Evolution, Cold Spring Harbor NY

2010; "Evidence for somatic hypermutation at shark T cell receptor alpha locus", Immunology 2010 (American Association of Immunology Annual Meeting), Baltimore MD

2012; "Somatic Hypermutation for primary $\alpha\beta$ T cell repertoire generation in shark." North American Comparative Immunology Workshop, Rochester NY

2013; "B cell immunogenetics in the T cell receptor repertoire generation of shark." American Association of Immunology 100th Meeting, Honolulu HI

2013; "B cell immunogenetics in the T cell receptor repertoire generation of shark." North American Comparative Immunology Workshop, Santa Barbara CA

2013; "Overview of work in the Comparative Immunogenetics Lab." Rollins-Smith Laboratory. Department of Microbiology and Immunology, Vanderbilt University Medical Center, Nashville TN

International

2000; "Evolution of polymorphic T cell receptor β 'constant' domain genes in damselfish." Congress of International Society of Developmental and Comparative Immunology, Cairns, Australia

2003; "Polymorphism of TCR constant domain genes in teleost fish." Congress of International Society of Developmental and Comparative Immunology, St. Andrews, Scotland

2007; "New shark Ig light chain reveals lambda and kappa to be two of four ancestral isotype radiations." International Immunology, Rio de Janeiro, Brazil

2009; "Evolution of the MHC class II associated invariant chain." Congress of the International Society of Developmental and Comparative Immunology, Prague, Czech Republic

2011; "Sharks and the evolution of antigen receptors." Symposium of Aquatic Immunology and Pathology, Hermosillo, Mexico

2012; "Somatic Hypermutation for primary $\alpha\beta$ T cell repertoire generation in shark." Congress of the International Society of Developmental and Comparative Immunology, Fukuoka, Japan

2013; "Shrimp immunogenomics." INAPESCA progress meeting, Mexico City, Mexico.

Some of these presentations have cross-listed published abstracts

OTHER EVIDENCE OF SCHOLARLY RECOGNITION:

Review work:

Manuscripts:

BMC Evolutionary Biology
BMC Immunology
Developmental and Comparative Immunology
European Journal of Immunology
Fish and Shellfish Immunology
Frontiers in Innate Molecular Immunology
Immunogenetics
Journal of Fish Biology
Journal of Immunology
Journal of Innate Immunology
Molecular Biology and Evolution
Molecular Immunology
PLoS
PLoS One
Proceedings of the National Academy of Sciences USA (PNAS)

Proposals

2008-present ad-hoc reviewer, National Science Foundation (Genes and Genome Systems, Symbiosis Defense and Self Recognition)

2009; Florida international University Access to Biomedical Research, Faculty Research Enhancement Awards (FREA)

2011; Czech Science Foundation ad hoc review, Immunology and Microbiology

2012; Texas CPRIT Incentive Grant Program

2013; panelist, National Science Foundation, Integrative Organismal Systems Cluster

2013; reviewer, TAMU/CONACYT Collaborative Research Program

2013-present; NIH Early Career Reviewer Program

Sessions Chaired at National/International Meetings:

- 2009- “Immunoglobulin Genetics” 11th Congress of the International Society of Developmental and Comparative Immunology, Prague, Czech Republic
 2012- “T Cell, MHC and Antigen Presentation” 12th Congress of the International Society of Developmental and Comparative Immunology, Fukuoka, Japan
 2013- “Veterinary Immunology” 100th Annual Meeting of the American Association of Immunologists, Honolulu HI

CAREER ENHANCEMENT ACTIVITIES:

Completed Faculty Teaching Academy, Fall 2009

Completed semester-long grant writing course offered through the Office of Proposal Development, Spring 2009

TEACHING ACTIVITIES:

At Texas A&M my teaching focuses on training students in molecular immunology at the bench in my laboratory as well as teaching a complete semester long immunology class every spring. The teaching in my lab has extended not only to graduate students and undergraduates, but also to veterinary students, high school students, post-doctoral fellows, visiting national and international scholars and one high school teacher. I alternate my spring teaching: even years I teach a large undergraduate general immunology class for juniors and seniors (VTPB409) with basic biology and microbiology prerequisites, odd years my unique Comparative Immunology and Immunogenetics (VTPB415VMTI615) for a few seniors but targeted to graduate students and residents who have strong fundamentals in immunology and genetics, and possibly comparative, veterinary or evolutionary interests. I also run and teach an immunology block for a techniques laboratory course (BIOT602) for students in the Professional Program in Biotechnology, teach a three-week module of the graduate Advanced Immunologic Concepts (VMTI662), and give many guest lectures in other courses. I appreciate that I have a light classroom based teaching load in which I can strive for excellence and individualized attention to my students without the need for teaching assistants.

TEXAS A&M TEACHING EXPERIENCE:

<i>Undergraduate</i>	Course No.	Lectures/Labs Contributed	Semester	Contact Hours	No. of Students
Intro to Immunology	VTPB 409 (Mwangi)	3	Spring 2009	3	50
Biomedical Microbiology	VTPB 405 (Omran)	2	Summer 2009	4	50
Biomedical Genetics	GENE 320 (Murphy)	1	Fall 2009	1.5	50
Mammalian Genetics	GENE 405 (Womack)	1	Fall 2009	1.5	50
Immunogen & Comp Immun	VTPB 415 (Criscitiello)*	all (29)	Spring 2010	39	3
Intro to Immunology	VTPB 409 (Omran)	3	Spring 2010	3	50
Biomedical Microbiology	VTPB 405 (Omran)	2	Summer 2010	4	50
Biomedical Genetics	GENE 320 (Seabury)	3	Summer 2010	6	30
Intro to Immunology	VTPB 409 (Omran)	3	Fall 2010	3	50
Disease Mgmt Fish Aquacul	WFSC 427 (Buentello)	1	Fall 2010	1.5	20
Biomedical Genetics	GENE 320 (Murphy)	1	Fall 2010	1.5	50

Mammalian Genetics	GENE 405 (Womack)	1	Fall 2010	1.5	50
Immunogen & Comp Immun	VTPB 415 (Criscitiello)	all (29)	Spring 2011	39	3
Intro to Immunology	VTPB 409 (Omrans)	3	Spring 2011	3	50
Biomedical Genetics	GENE 320 (Derr)	1	Spring 2011	1.5	30
Biomedical Microbiology	VTPB 405 (Omrans)	2	Summer 2011	4	50
Biomedical Genetics	GENE 320 (Murphy)	1	Fall 2011	1.5	50
Mammalian Genetics	GENE 405 (Womack)	1	Fall 2011	1.5	50
Biomedical Genetics	GENE 320 (Dindot)	1	Fall 2011	1	50
Biomedical Genetics	GENE 320 (Seabury)	1	Spring 2012	1	30
Intro to Immunology	VTPB 409 (Criscitiello)	all (42)	Spring 2012	42	61
Biomedical Genetics	GENE 320 (Derr)	1	Spring 2012	1.5	30
Biomedical Microbiology	VTPB 405 (Omrans)	2	Summer 2012	4	50
Mammalian Genetics	GENE 405 (Womack)	1	Fall 2012	1.5	50
Immunogen & Comp Immun	VTPB 415 (Criscitiello)	all (29)	Spring 2013	39	3
Biomedical Genetics	GENE 320 (Seabury)	1	Spring 2013	1.5	30

Graduate	Course No.	Lectures/Labs Contributed	Semester	Contact Hours	No. of Students
Adv Immunologic Concepts	VTMI 662 (Criscitiello)	6	Fall 2009	12	12
Immunogen & Comp Immun	VTPB 615 (Criscitiello)*	all (34)	Spring 2010	49	5
Disease Mgmt Fish Aquacul	WFSC 689 (Buentello)	1	Fall 2010	1.5	20
Immunogen & Comp Immun	VTMI 615 (Criscitiello)	all (34)	Spring 2011	49	5
Theory of Research	VIBS 690 (Skow)	1	Spring 2011	1.5	4
Adv Immunologic Concepts	VTMI 662 (Criscitiello)	6	Fall 2011	12	9
Biotech Princip & Tech II	BIOT 602 (Criscitiello)	6	Spring 2012	24	3
Immunogen & Comp Immun	VTMI 615 (Criscitiello)*	all (37)	Spring 2013	51	8
Biotech Princip & Tech II	BIOT 602 (Criscitiello)	6	Spring 2013	24	4

* developed unique new course whose enrollment is increasing with each offering

Student evaluations

Median scores: range 1-5 (very poor/strongly disagree-excellent/strongly agree) for courses taught

Course	Term	Average	Department Average
Undergraduate			
VTPB415 Immunogenetics	Spring 2010	4.60	4.31
VTPB409 Intro to Immuno	Spring 2011	4.57	4.33
VTPB415 Immunogenetics	Spring 2011	4.86	4.33
VTPB409 Intro to Immuno	Spring 2012	4.33	4.21
VTPB415 Immunogenetics	Spring 2013	4.77	4.35
Graduate			
VTMI615 Immunogenetics	Spring 2010	4.48	4.47
VTMI615 Immunogenetics	Spring 2011	4.86	4.41

BIOT602 Biotech II	Spring 2012	4.82	4.57
VTMI615 Immunogenetics	Spring 2013	4.77	4.53
BIOT602 Biotech II	Spring 2013	4.64	4.52

Student comments on teaching

VTPB409 *Articulates the information in a way that is easily understood by students, which is very important when teaching difficult material.*

VTMI615 *One of my favorite classes and professor I've ever taken. Would recommend him to other student's and take another class with him if offered.*

VTPB409 *I've had him guest lecture in three of my classes in BIMS (biomedical sciences) and have loved his teaching every time.*

VMTI615 *Passionate about material. Post notes and returns tests in a very timely manner.*

VTMI615 *Will stay after class to answer questions and discuss difficult material. He understands students and their busy schedules, easy to talk to. Passionate about subject which makes it interesting for me as a student. Makes abstract material understandable. Makes time for students and is almost always available in office. Clear and easy to understand speaking voice. Always asks if anyone has questions and reviews material.*

BIOT602 *Immunology part could include hands on experience in flow cytometry.*

VMTI615 *Great at explaining concepts.*

VTPB409 *Dr. Criscitiello is perhaps the best professor I've had at A&M. He is extremely knowledgeable and helps everyone understand the material. He always goes above and beyond to help us learn and challenges us to think critically.*

VTPB415 *Appreciates class discussion and receptive to questions/challenges.*

VMTI615 *Could improve upon fitting everything into allotted time.*

VTPB415 *This was a great class! Even though for me the molecular part was a bit more difficult to grasp since I don't have that background, I learned a lot more than many other classes I've taken with other professors.*

VTPB409 *Very friendly and approachable, very knowledgeable on subject matter.*

AT THE BENCH:

High School Summer Students

2009 Audrey Vitter, High School Summer Student, currently Notre Dame undergraduate student

Undergraduate Research

2008-2009 Andrea Coots, Genetics/Biochemistry & Biophysics Undergraduate Research Student, currently grad student in Stephen O'Brien lab NCI/University of Maryland

2009 Brendan Jacobs, Genetics/Biochemistry & Biophysics Undergraduate Research Student, currently chemist with St. Gobain Inc. Houston TX

2010-2011; Zach Olschwanger, BIMS Undergraduate Research Student, currently enrolled in Texas Tech Medical School

2010-2011; Jonathan Walker, Biology Undergraduate Research Student, currently in Texas A&M Nursing School

2011; Natalie Jacobs, BIMS Undergraduate Research Student, currently in BIMS Non-thesis Option MS student

2013; Mikaela Gondolfe, BIMS Undergraduate Research Student, currently Animal Science M.S. program Texas A&M University

Graduate Directed Studies

2009-present; Camilo Pohlenz-Castillo, Wildlife & Fisheries PhD Student, currently post-doc at Texas A&M

2009-2010 Dhivya Ramakrishnan, Biotechnology Program MS Student, currently Research Associate at Caris Life Sciences Phoenix AZ

2011-2012; Christina Du, Comparative Medicine Resident, currently interim director of Comparative Medicine, Scott and White Hospitals, Temple TX

2011; Shehnaz Lokhandwala, Biotechnology Program MS Student, currently Ph.D. student in immunology, Texas A&M University

2011-2013; Natalie Jacobs, BIMS Non-thesis Option MS student, currently theses MS student in my laboratory

2012-2014; Ashley Peterson, Comparative Medicine Resident, currently theses MS student in my laboratory

DVM Student Research

2011; Anna Goodroe, Veterinary Medical Scientist Research Training Program

2013, Ashley Heard-Ganir, Veterinary Medical Scientist Research Training Program

High School Teachers

2013; Matt Young, A&M Consolidated, American Association of Immunologists High School Teacher's Program Fellow

Visiting Scholars

2010; Dr. Helen Dooley, Wyeth, Aberdeen, United Kingdom
 2013; Alex Salazar, University of Sonora, Hermosillo, Mexico

Graduate Students and Resident Advisory Committees

Graduate Students

Name	Degree	Institution	Advisor or Committee Member	Grad Date
Wooki Kim	PhD (Nutrition)	TAMU	Member	2008
Dhivya Ramakrishnan	MS (Biotechnology)	TAMU	Res Advisor	2010
Christina Du, DVM	MS (Comp Med)	TAMU	Advisor	2011
Negin Mirhosseini	PhD(Vet Micro)	TAMU	Member	2011
Rachel Wright	PhD (Genetics)	TAMU	Advisor	2011
Shehnaz Lokhandwala	MS (Biotechnology)	TAMU	Advisor	2011
Amy Romoser	PhD (Toxicology)	TAMU	Co-Advisor	2012
Colleen Fisher	MS (Vet Micro)	TAMU	Member	2012
Christine Vuong	MS (Vet Micro)	TAMU	Member	2012
Xinxin Wang	PhD (Immunology)	U of New Mexico	Member	2012
Smriti Shankar	MS (Biotechnology)	TAMU	Member	2013
Aditi Kaushik	MS (Biotechnology)	TAMU	Member	2013
Greg Vo	BIMS (NTO MS)	TAMU	Member	2013
Cody Martin	BIMS (NTO MS)	TAMU	Member	2013
Sara Mashoof	PhD (Vet Micro)	TAMU	Advisor	(2013)
Brenna Shannahan	BIMS (NTO MS)	TAMU	Member	(2013)
Sarah Herlihy	PhD (Biology)	TAMU	Member	(2013)
Natalie Jo Jacobs	MS (Vet Micro)	TAMU	Advisor	(2014)
Ivy Zichao	MS (Biology)	TAMU	Member	(2014)
Katie Zychowski	PhD (Toxicology)	TAMU	Member	(2014)
Geddy Hamblin	MS (Biotechnology)	TAMU	Member	(2015)
Ashley Peterson, DVM	MS (Comp Med)	TAMU	Advisor	(2015)
Shehnaz Lokhandwala	PhD (Vet Micro)	TAMU	Member	(2015)
Christine Vuong	PhD (Vet Micro)	TAMU	Member	(2015)
Natalie Castell	BIMS (NTO MS)	TAMU	Member	(2014)
Jeffrey Kim	BIMS (NTO MS)	TAMU	Member	(2014)
Yvette Hailey	PhD (Genetics)	TAMU	Member	(2015)
Maria Mendoza- Rodriguez	PhD (Fisheries)	TAMU	Member	(2016)
Thad Deiss	PhD (Vet Micro)	TAMU	Advisor	(2017)
Stacie Seelye, DVM	MS (Comp Med)	TAMU	Advisor	(2016)

Honors won by students while under advisement

(see Research Funding for research grants won by my students that went to my lab)

2013	Thad Deiss	CVM Advanced Developmental Training Travel Award (\$2000)
2013	Sara Mashoof	CVM High Impact Achievement Publication Award (\$1000)
2013	Thad Deiss	CVM Merit Fellowship (\$144,000)
2013	Natalie Jacobs	CVM BIMS Non-thesis MS Award (before switching to thesis, \$200)
2012	Sara Mashoof	John Paul Delapane Scholarship (\$700)
2012	Amy Romoser	ASF Distinguished Graduate Student for Research (\$1000)
2011	Sara Mashoof	George Bush Presidential Library Foundation Grant (\$500)
2011	Rachel Wright	Faculty Senate Aggie Spirit Award (\$1000)
2011	Amy Romoser	Ethel Ashworth-Tsutsui Award for Research (\$600)
2011	Rachel Wright	US Senator Phil Gramm Doctoral Fellowship (\$5000)
2010	Rachel Wright	NIH National Graduate Student Research Festival (\$1250)
2010	Rachel Wright	TAMU OGS Travel Grant (\$500)
2010	Rachel Wright	Graduate Genetics Travel Grant (\$400)

SERVICE ACTIVITIES:

While research and teaching best characterize the bulk of my efforts at Texas A&M, I strive to do more than my share of the service work necessary for the effective operations of the Department of Veterinary Pathobiology, the College of Veterinary Medicine and Biomedical Sciences, Texas A&M University, and the A&M System. Moreover, I am active in promoting immunology, genetics, and comparative medicine education research in groups as diverse as the International Society of Developmental and Comparative Immunology to the local classrooms of A&M Consolidated High School and Pebble Creek Elementary School.

Committee and Other Service Work:

Departmental:

- 2008 - present; Graduate Advisory Committee
- 2008 - present; participant in discussions of immunology curriculum (Omran chair)
- 2010 - 2012; organize monthly research meetings amongst cell/pathology/molbiol investigators
- 2010 Graduate Review Committee
- 2010 Graduate Review Subcommittee – Lab Rotations
- 2010 Graduate Review Subcommittee – Goals and Expectations (Chaired)
- 2011 Neotropical Psitticine Ecologist Search Committee
- 2012 - present; manage VTPB VMR Autoclave and Dishwashing Facility
- 2013 Graduate Coordinator Search Committee (Chaired)
- 2013 VTPB Website Revamp Committee

College:

2008 interview applicants for DVM program
2008 participant in discussions for Infectious Disease Center (Adams)
2008 participant in discussions for Homeland Security Certificate Program (Adams)
2009 - 2010 VTPB Department Head Search Committee (elected by VTPB faculty)
2010-present CVM mentor for Undergraduate Research Scholars Program
2011 review CVM Trainee Grant proposals
2011 - 2016 CVM IT Services Advisory Committee (renewed term)
2011 - present CVM BIMS Non-thesis MS Advisory Committee
2012 - present CVM Graduate Instruction Committee

University:

2009 participant in discussions for Whole Systems Genomics Institute (Riggs)
2009-2010 organized weekly Immunology Journal Club (w/ Jane Welsh)
2011 review Genetics Program posters
2011-present Executive Committee of Professional Program in Biotechnology
2012- IDEA system evaluator
2012-present Charter member TAMU Immunology Consortium
2013 evaluator of Howdy Committee Chair Degree Evaluation System pilot
2013-2016 Institutional Review Board

OTHER SCHOLARLY ACTIVITY:

Member:

1997-present; International Society of Developmental and Comparative Immunology
2001-present; American Association of Immunology
2009; Texas Genetics Society
2010; Sigma Xi
2011-present; International Society of Fish and Shellfish Immunology
2012-present; Society of Experimental Biology and Medicine
2012-present; International Society of Mucosal Immunology