

TEXAS STATE VITA

I. Academic/Professional Background

A. Name: **DANA M. GARCIA**

Title: **PROFESSOR**

B. Educational Background

<i>Degree</i>	<i>Year</i>	<i>University</i>	<i>Major</i>	<i>Thesis/Dissertation</i>
Ph. D.	1993	University of California, Berkeley	Physiology/ Cell Biology	Pigment Granule Aggregation in Retinal Pigment Epithelium of Green Sunfish
B.S.	1986	Texas A&M University	Zoology	Undergraduate Thesis: Effects of Lead on C6 Astrogloma

C. University Experience

<i>Position</i>	<i>University</i>	<i>Dates</i>
Professor	Texas State University-San Marcos	2004-present
Guest Professor	Johannes Gutenberg University/ Universität Mainz	2001
Associate Professor	Texas State University-San Marcos (formerly Southwest Texas State University)	1999-2004
Assistant Professor	Southwest Texas State University	1993-1999

D. Relevant Professional Experience

<i>Position</i>	<i>Entity</i>	<i>Date</i>
Associate Editor	BMC Research Notes	2008-present
Associate Dean for Research	Texas State University-San Marcos	2006-present
Advisory Panel for Bridges to the Baccalaureate Program	National Institutes of Health	2006
Core Ph. D. Faculty in Aquatic Biology	Texas State University-San Marcos	2003-present

E. Other Professional Credentials

N/A

II. TEACHING

A. Teaching Honors and Awards:

2005	Nominated for STAR award
2001-2002	Honored Member America's Registry, Edition 2001-2002
2001	Faculty Senate nominee to serve on Master Teacher Committee
2001	AAAS Mentor Award Nominee
1997	Bonus Award as a member of the Microscopy Project Team
1996, '97	Alpha Chi National Honor Society Favorite Professor
1996	SWT Mentor Award

B. Courses Taught:

<i>Course Number (Dates taught)</i>	<i>Course Title</i>
Biology 1430 (Summer 2005)	Functional Biology (freshman majors)
US 1100 (Fall 2001)	University Seminar
Biology 5110Q (Spring 2000 – Fall 2008)	Cell, Micro and Molecular Biology
Biology 3421 (Fall 1999 – Spring 2005, Spring 2007)	Vertebrate Physiology
Biology 4441/5441 (Spring 1998 – 2002; 2005-2006)	Cell Physiology
Biology 5110Q (Spring 1995)	Biology of Pigmented Cells
Biology 5110Q (Fall 1995)	Last Week in Science
Biology 5110Q (Fall 1997)	Departmental Seminar
Biology 3351 (Spring 1995 – 1997)	General Genetics (non-majors)
Biology 5350 (Spring 1996)	Cell Motility and Cytoskeleton
Biology 5350 (Fall 1996)	Departmental Seminar
Biology 5350 then 4300/5300 (Fall 1997 - present)	Neurobiology
Biology 2460 (Fall 1993 – Spring 1999)	Cell Biology

GRADUATE THESES/DISSERTATIONS OR EXIT COMMITTEES

Advisees to MS degree

Student	Date MS	Thesis Title
Nihar deb Adhikary	12/10 (exp)	Down-regulation of Vision-related Genes in Response to Optic Nerve Injury
Elizabeth Capalbo	12/09 (exp)	Diurnal Regulation of Expression of Muscarinic and Dopaminergic Receptor Genes
Shobhit Sharma	8/09 (exp)	Microarray Analysis of Diurnal Changes in Gene Expression in Zebrafish Retina
Katherine Saul (w. Joseph Koke)	8/08	Gene Expression During Optic Nerve Regrowth in Zebrafish
Elizabeth Crittenden	5/08	Mechanism of Acetylcholine-induced Pigment Granule Dispersion in Bluegill RPE
Adam Johnson	8/07	Intracellular Messengers Involved in Carbachol-induced Pigment Granule Dispersion
Varsha Radhakrishnan	5/07	Molecular Characterization and Expression of G _{q/11} Protein in Fishes
Richard Nuckels	12/06	Isolation and Expression Study of Muscarinic Receptors in Zebrafish
Chad Copeland	5/05	Muscarinic Receptor Subtypes Involved in Pigment Granule Dispersion in Retinal Pigment Epithelium

Advisees to MS degree continued

Prasad Phatarpekar	8/04	Isolation and Sequencing of Muscarinic Receptor Genes from Fishes
Jamie D. Dixon	12/01	Evolution of the Alpha-Actinin Gene Family
Jack N. Needham, Jr.	8/01	Molecular Characterization of Alpha-Actinin
Alfredo González, III	12/00	Muscarinic Regulation of Pigment Granule Dispersion in Teleost Retinal Pigment Epithelium
Corey Waller (w/D. Feakes)	5/99	Synthesis of Polyhedral Boranes for Use in Boron Neutron Capture Therapy for Cancer
Ernesto Pérez, Jr.	5/99	Characterization of the Intermediate Filament Cytoskeleton in Teleost Retinal Pigment Epithelium
David Zamora	8/97	Localization of Cytoskeletal Elements in Teleost Retinal Pigment Epithelium

Graduate Student Committees

Student/Advisor	Thesis Title	Date of Graduation
Mya Patel/ Koke	Increased J1-31 Labeling due to Cyclic Nucleotide-gated Channels	August 2009 (exp)
Chamindika Siriwardana/ Dharmasiri	Identification and Characterization of Two Novel <i>Arabidopsis</i> Mutants that are Resistant to Auxin	May 2009 (exp)
Nirmala Karunarathna/ Dharmasiri	Isolation and characterization of <i>Arabidopsis</i> mutants with altered response to auxin (Picloram)	Dec 2008
Ali Abedi/ Koke	G3.5 Antigen Appears to be a Form of which Co-isolates and Co-localizes with Type III Intermediate Filaments	December 2005
Greg Ramsey/ Koke	Monoclonal Antibody J1-31 Recognizes an Epitope that Occurs on Both GFAP and Lamin B that Appears to be Phosphorylated during Astrocyte Activation	May 2005
Nina Jaffarzad/ Koke	Ultrastructural Changes in Earthworm (<i>Eisenia fetida</i>) Nephridia Resulting from Symbiotic Association with Bacteria (<i>Acidovorax</i>)	August 2004
Jaci Meyers/ Koke	Glucose-induced Apoptosis of Schwann Cells in Vitro	May 2004
Carlene Worthington/ Koke	Secretion of IL-6 by Astrogloma Cells in Response to Stimulation by TNF	May 2004
Jodi Scott/ Letty Flores (Psychology)	Self-Efficacy as a Factor in Weight-Loss	August 2002
Shannon Kinder/ Koke	Phosphorylated Intermediate Filaments in the Nucleus	May 2002

Graduate Student Committees cont'd

Brian Corbin/Aron	Biofilm Susceptibility to Bacteriophage Infection	May 2000
Tracy Merkel/Koke	Three Dimensional Cultures of Neuroblastomas	May 2000
Mark Hahn/Koke		December 1998
Juan Herrera/ Koke	Characterization of the Expression of Intermediate Filament Proteins During Astrogliosis	May 1997
Sandra Bolanos/ Koke	The G.3.5 Antigen, a Novel IFAP, Is Not α -Actinin	May 1997
Haiying Li/ Walter	Inheritance of Parental Methylation Patterns in Interspecies Hybrids of <i>Xiphophorus</i> Fishes	December 1996
Ari Kahn/ Horne	Analysis of Genetic Diversity in the Rice Genus <i>Zizania</i> using RAPD's and rDNA IGS Regions	December 1996
Steve Gilmer/ Walter	Isolation, Sequence Determination, and Mapping of the junB Homologue in <i>Xiphophorus</i> Fishes	August 1996
Gabriel Intano/ Walter	Spontaneous Mutation Frequencies of Spermatogenic Stages in Transgenic Mice	August 1996
Patricia Stevenson/ Koke	Purification of an Astrocyte Specific Protein	May 1996
Fariba Javadi/ Koke	The Angiotensin Receptor (AT1) Inhibitor, Losartan, Slows Post-natal Thickening of the Left Ventricle	Fall 1994
Sullivan Fitzgerald/ Koke	Detection and Localization of Angiotensinogen in Cardiac Muscle	August 1994

COURSES PREPARED AND CURRICULUM DEVELOPMENT

Neurobiology (Biol 4300/5300/7300)
Cell and Molecular Biology (Biol 3300)
Topics in Biology (Biol 4350)

FUNDED EXTERNAL TEACHING GRANTS AND CONTRACTS (Total = \$992,730)

2000-2002	Texas Higher Education Coordinating Board. Eisenhower Program - A Summer Research Experience for Science Teachers, \$74,838 (PI Julie Westerland)
1998-2002	Texas Higher Education Coordinating Board. Eisenhower Program - A Summer Research Experience for Science Teachers, \$88,196. (co-PI Joe Koke)
1998-2004	National Science Foundation. Teacher Enhancement Proposal - A Summer Research Experience for Science Teachers, \$728,952 (PI Joe Koke)

- 1996-1998 National Science Foundation. ILI Grant - An integrated and networked microscopy center for undergraduate education, \$99,994 (PI Joe Koke)
- 1996 American Society for Cell Biology. Summer Teacher Research Fellowship. Isolation and Characterization of Circumferential Microfilament Bundles from Teleost Retinal Pigment Epithelium, \$750

PENDING EXTERNAL TEACHING GRANTS AND CONTRACTS

SUBMITTED, BUT NOT FUNDED, EXTERNAL TEACHING GRANTS AND CONTRACTS

- NSF (9/2008) Building our Baccalaureates through Community, Academics and Technology, \$1,999,998 (co-PIs Moonis Ali, Bahram Asiabanpour, David Donnelly and Debra Feakes)
- HEAF (Spring 98) Scanning Electron Microscope, \$200,000
- NSF (10/97) Mobile Microscopy Lab, \$68,000.
- GTE FOCUS Program (10/96) Recruitment of Inner-city Minority Students into Bachelor's Programs in Science, \$30,000

III. SCHOLARLY/CREATIVE

A. WORKS IN PRINT

Chapters in Books

- García, D. M. and J. R. Koke. 1996. The cytoskeleton of the retinal pigment epithelium. In: S. K. Malhotra, ed. *Advances in Structural Biology*, vol. 4, Greenwich, Connecticut: JAI Press, Inc., pp. 151-174.

Refereed Journal Articles

- Schwartz, R. J. Westerland, D. García and T. Taylor. The impact of full immersion scientific research experiences on teachers' views of the nature of science. *Electronic Journal of Science Education*. Submitted.
- Saul, K. E., J. R. Koke and D. M. García. Activating Transcription Factor 3 and Noggin 2: Early responders in zebrafish retina to optic nerve injury. *Neuroscience*, submitted August 8, 2008. In revision.
- García, D. M. and J. R. Koke. 2009. Astrocytes as gate-keepers in optic nerve regeneration – a mini-review. *Comparative Biochemistry and Physiology* 152(2):135-138.
- Johnson, A. S. and D. M. García. 2007. Carbachol-mediated pigment granule dispersion in retinal pigment epithelium requires Ca^{2+} and calcineurin. *BMC Cell Biology* 8:53.
- Keith, T. A., V. Radhakrishnan, S. Moredock and D. M. García. 2006. Uptake of 3H-cAMP by retinal pigment epithelium isolated from bluegill sunfish (*Lepomis macrochirus*). *BMC Neuroscience* 7:82.
- Phatarpekar, P. V., S. F. Durdan, C. M. Copeland, E. L. Crittenden, J. D. Neece and D. M. García. 2005. Molecular and pharmacological characterization of muscarinic receptors in retinal pigment epithelium. *J. Neurochem.* 95(5):1504-1520.

- García, D. M., H. Bauer, T. Dietz, T. Schubert, J. Markl and M. Schaffeld. 2005. Identification of keratins and analysis of their expression in carp and goldfish: comparison to the zebrafish and trout keratin catalog. *J. Cell and Tissue Research*. 322(2):245-256.
- González, A. III., E. Crittenden and D. M. García. 2004. Carbachol-induced pigment granule dispersion in RPE. *BMC Neuroscience*5:23.
- García, D. M., S. E. Weigum and J. R. Koke. 2003. GFAP and nuclear lamins share an epitope recognized by monoclonal antibody J1-31. *Brain Research* 976(1):9-21.
- Weigum, S. E., D. M. García, T. R. Raabe, N. Christodoulides and J. R. Koke. 2003. Discrete nuclear structures in actively growing neuroblastoma cells are revealed by antibodies raised against phosphorylated neurofilament proteins. *BMC Neuroscience* 4:6.
- Dixson, J. D., M. R. J. Forstner and D. M. García. 2003. Evolutionary history of the alpha-actinin gene family: a phylogenetic study. *J. Molecular Evolution* 56(1):1-10.
- Glass, T. L., T. R. Raabe, D. M. García and J. R. Koke. 2002. Phosphorylated neurofilaments and SNAP-25 in SH-SY5Y neuroblastoma cells in vitro. *Brain Research* 934(1):34-48.
- Westerlund, J. F., D. M. García, J. R. Koke, T. A. Taylor and D. S. Mason. 2002. Summer scientific research for teachers: the experience and its effect. *J. Science Teacher Education* 13(1):63-83.
- García, D. M. 1998. Carbachol-induced pigment granule dispersion in teleost RPE. *Cytobios* 94:31-37.
- Bolanos, S. H., D. O. Zamora, D. M. García, and J. R. Koke. 1998. An α -actinin isoform that may cross-link intermediate filaments and microfilaments. *Cytobios* 94:39- 61.
- King-Smith, C., P. Chen, D. M. García, H. Rey and B. Burnside. 1996. Calcium-independent regulation of pigment granule aggregation and dispersion in teleost retinal pigment epithelial cells. *Journal of Cell Science* 109:33-43.
- García, D. M. and B. Burnside. 1994. Suppression of cAMP induced pigment granule aggregation by inhibitors of organic anion transport. *Investigative Ophthalmology and Visual Science* 35:178-188.
- Tiffany-Castiglioni, E., D. M. García, J.-N. Wu, J. Zmudzki, G. R. Bratton. 1988. Effects of lead on viability and intracellular metal content of C6 rat glioma cells. *Journal of Toxicology and Environmental Health* 23(2): 267-279.

ABSTRACTS

Peer-reviewed

- Saul, K. E., J. R. Koke and D. M. García. 2008. Dissection of specific genetic signals from a background of tissue repair and inflammatory response noise during optic nerve regeneration in *Danio rerio*. *17th Biennial Meeting of the International Society for Development Neuroscience June 1-4, 2008, Asilomar, CA, USA*

Others

- Capalbo, E. L. and D. M. García. 2009. Diurnal rhythms of muscarinic receptor expression in the eye of zebrafish. *The FASEB J.*, Abstract number 7114.

- Patel, M. P., G. R. Ramsey, D. M. García and J. R. Koke. 2009. Phosphorylation of GFAP and lamin B is an early event in reactive astrocytes and may be stimulated by cAMP. *The FASEB J.*, Abstract number 6695 .
- Crittenden, E. L., E. L. Capalbo and D. M. García. 2008. Expression of M_{odd} muscarinic acetylcholine receptors in the retinas of bluegill and zebrafish. *The FASEB J.*
- Sharma, S. and D. M. García. 2008. Exploration of gene changes in circadian rhythm in zebrafish eyes using microarray technology. *The FASEB J.*
- Mosier, A., K. Saul, J. R. Koke and D. M. García. 2008. Optic nerve re-growth in *Danio rerio*. *The FASEB J.*
- Crittenden, E. L. and D. M. García. 2007. Snake venom containing M5 muscarinic receptor activity inhibits carbachol-induced pigment granule dispersion in retinal pigment epithelium isolated from bluegill sunfish. *The FASEB J.*
- Johnson, A. and D. M. García. 2006. Calcium is required in pigment granule dispersion in bluegill RPE. *Molecular Biology of the Cell*. Abstract edition.
- Radhakrishnan, V., S. Becerra, P. Nguyen and D. M. García. 2006. Molecular characterization of G-proteins in bluegill. *The FASEB J.* 20(5):A919.
- Radhakrishnan, V. and D. M. García. 2005. Isolation and partial sequencing of protein G α 11 from bluegill. *Neuron Meeting*, Washington, D. C., November 10-11, 2005.
- Abedi, A., D. M. García and J. R. Koke. 2005. The G3.5 antigen appears to be a form of *Molecular Biology of the Cell*, abstract edition.
- Neece, J., P. Phatarpekar and D. M. García. 2005. Isolation and sequencing of fugu muscarinic acetylcholine receptor genes. *The FASEB J.* 19(4):A200.
- Copeland, C., E. L. Crittenden and D. M. García. 2005. Muscarinic receptors in *Lepomis macrochirus*: a pharmacological approach. *The FASEB J.* 19(5):A1201.
- Ramsey, G. R., D. M. García and J. R. Koke. 2005. Is reactive astrogliosis mediated by a cAMP-dependent CaMK pathway? *The FASEB J.* Abstract number
- Neece, J., P. Phatarpekar and D. M. García. 2004. Isolation and sequencing of fugu muscarinic acetylcholine receptor genes. *Mol. Biol. Cell* 15: 342A.
- Phatarpekar, P. V., S. Durdan, C. Copeland, E. L. Crittenden and D. M. García. 2004. Activation of muscarinic receptors on fish RPE induces pigment granule dispersion. *Mol. Biol. Cell* 15: 342A
- Ramsey, G.R., D. M. García and J. R. Koke. 2004. Forskolin treatment of F98 glioblastoma cells increases J1-31 nuclear antigen levels. *The FASEB J.* 18(5):A1066.
- Phatarpekar, P. V., J. D. Neece and D. M. García. 2004. Molecular characterization of muscarinic acetylcholine receptor genes in fish. *The FASEB J.* 18(4):A338.
- Westerlund, J. F., D. M. García, R. S. Schwartz and T. A. Taylor. 2004. The effects of summer scientific research experiences with or without Nature of Science (NOS) instruction upon the NOS views of secondary science teachers. Seventh International History, Philosophy, and Science Teaching (IHPST) Conference, Winnipeg, Ontario, Canada.
- Westerlund, J. F., D. M. García, R. S. Schwartz and T. A. Taylor. 2004. The effects of summer scientific research experiences with or without Nature of Science (NOS) instruction upon the NOS views of secondary science teachers. AETS Meeting, Nashville, TN.
- Westerlund, J. F., D. M. García, R. S. Schwartz and T. A. Taylor. 2003. Explicit NOS

- instruction and authentic science research: Effects on teachers' NOS views. NC-AETS Meeting, Rochester, MN.
- Saleem, S., A. González, E. Crittenden and D. M. García. 2002. Muscarinic receptors in fishes: pharmacological and molecular analyses. Annual meeting of the American Society for Cell Biology, San Francisco.
- Dixson, J. D., M. R. J. Forstner and D. M. García. 2001. Cloning and characterization of rat alpha-actinin 3: a phylogenetic investigation. *Mol. Biol. Cell* 12S:286a.
- Needham, J. N., Jr., M. R. J. Forstner and D. M. García. 2001. Cloning and characterization of rat alpha-actinin 3: structural analysis. *Mol. Biol. Cell* 12S:1564.
- García, D. M. and A. Guerra. 2001. A research-oriented Bridges to the Baccalaureate program. *Mol. Biol. Cell* 12S:525.
- Taylor, T., J. Westerlund, D. M. García and J. R. Koke. 2001. Teachers as researchers: Does a summer research experience improve education in science? *Mol. Biol. Cell* 12S:94a.
- Cen, E. O., Jr. and D. M. García. 2001. Further analysis of vimentin intermediate filaments in teleost retinal pigment epithelial cells. Annual Meeting of the Society for the Advancement of Chicanos and Native Americans in Science, A New Tapestry of Science: Woven across Cultures and Disciplines, p. 133.
- Westerlund, J., J. Koke, D. García. 2001. A model for retention and preparation of teachers. 17th Annual Recruitment and Retention Conference "Closing the Gaps," Austin, Texas.
- García, D. M. and R. J. C. McLean. 2001. NIH Bridges to the Baccalaureate Program at Southwest Texas State University. Bridges Program Directors' Meeting, Ellicott, MD.
- García, D. M. and R. J. C. McLean. 2001. NIH Bridges to the Baccalaureate Program at Southwest Texas State University. Grants Resource Center, American Association of State Colleges and Universities Meeting, Washington DC.
- Dixson, J. D., M.R.J. Forstner, D.M. García and J.R. Koke. 2001. Molecular genetic characterization of alpha-actinin isoforms. Texas Academy of Science Meeting, Southwest Texas State University.
- Needham, J. N., D. M. Garcia, J. R. Koke, and M. R. J. Forstner. 2001. Molecular characterization of a possible alpha-actinin isoform. Texas Academy of Science Meeting, Southwest Texas State University.
- Cen, E. O. and D. M. García. 2000. Localization of vimentin intermediate filaments in light- and dark-adapted RPE from bluegills. *Mol. Biol. Cell* 11S:352a-353a.
- Dixson, J., J. Needham, J. R. Koke and D. M. García. 2000. Molecular characterization of a possible a-actinin isoform. *Molecular Biology of the Cell* 11S:76a.
- González, A., III and D. M. García. 2000. Cholinergic mechanisms of light adaptation in teleost retinal pigment epithelium. *Molecular Biology of the Cell* 11S:412a.
- González, A., III and D. M. García. 2000. Cholinergic mechanisms of light adaptation in teleost retinal pigment epithelium. Presented at ASPET meeting in Boston.
- González, A., III and D. M. García. 2000. Cholinergic mechanisms of light adaptation in teleost retinal pigment epithelium. Proceedings of the 2000 103rd Annual Meeting of the Texas Academy of Sciences, Kingsville, Texas.

- Westerlund, J.F., T. Taylor, D. M. García and J. R. Koke. 2000. Teachers as summer scientific researchers: Transformative experiences. Proceedings of the 2000 103rd Annual Meeting of the Texas Academy of Sciences, Kingsville, Texas.
- Westerlund, J.F., T. Taylor, D. M. García and J. R. Koke. 2000. Teachers as summer scientific researchers: Transformative experiences. Proceedings of the 2000 National Association of Research in Science Teaching Annual Meeting, New Orleans, Louisiana.
- Pérez, Jr., E. and D. M. García. 1999. Teleost retinal pigment epithelial cells express vimentin. *The FASEB Journal* 13(4):A349.
- Pérez, Jr., E. and D. M. García. 1998. Immunolabeling of cytoskeletal elements in teleost retinal pigment epithelial cells. *The FASEB Journal* 12(5):A729.
- Zamora, D., J. R. Koke and D. M. García. 1997. Localization of cytoskeletal elements in teleost retinal pigment epithelium by confocal microscopy. *Mol. Biol. Cell* 8s.
- Zamora, D., E. Pérez, Jr., J. R. Koke and D. M. García. 1996. Localization of cytoskeletal elements in teleost retinal pigment epithelium. *Mol. Biol. Cell* 7s:382a.
- LeMaster, A. and D. M. García. 1995. Uptake of 3H-cAMP by isolated teleost RPE. *Molecular Biology of the Cell* 6s:130a.
- McCalip, B., D. O. Zamora, E. Pérez, Jr., J. R. Koke and D. M. García. 1995. Localization of an intermediate filament associated protein and identification of intermediate filament proteins in the retinal pigment epithelium of bluegill fish. *Molecular Biology of the Cell*. 6s:377a.
- Zamora, D., J. R. Koke and D. M. García. 1994. Immunolocalization of a putative intermediate filament associated protein in fish retinal pigment epithelium. *Molecular Biology of the Cell* 5:299a.
- García, D. M. and B. Burnside. 1992. Organic anion transport inhibitors block cAMP-induced pigment aggregation in RPE. *Molecular Biology of the Cell* 3:338a.
- Burnside, B. and D. M. García. 1992. Inhibition of cAMP-induced pigment aggregation in green sunfish RPE by an organic anion transport inhibitor probenecid. *Investigative Ophthalmology and Visual Science* 33(4):910.

B. WORKS NOT IN PRINT

INVITED TALKS, LECTURES, PRESENTATIONS

April 4, 2008	Light- and Dark-Adaptation in Fish Retinal Pigment Epithelium	Texas Lutheran University
March 29, 2008	Getting Hooked on Fish Eyes	MAES Science Extravaganza, Texas State University-San Marcos
February 14, 2007	Presentation on Careers in Science	UT-Austin
January 30, 2007	Embryonic Stem Cell Research	Texas State University-San Marcos, SACA debate
October 27, 2005	Faculty Presentation Workshop on Careers in Science	H-LSAMP Program, Texas State -San Marcos
March 18, 2005	Minority Student Recruitment to Biomedical Research	ASM -Texas Branch, John Knox Ranch

February 20, 2003	Light Adaptation in Fishes	San Antonio College, Bridges Program
October 3, 2002	Light Adaptation in Fishes	NMSU, Dept Biology
April 1, 2002	Prions	SWT, Department of Biology
February 22, 2002	Light Adaptation in Fishes	St. Philip's College, San Antonio, Bridges Program
June 19, 2001	A Model for Retention and Preparation of Teachers	17 th Annual Recruitment and Retention Conference "Closing the Gaps"
June 8, 2001	Bridges at Professional Meetings	Bridges Program Directors' Meeting, Ellicott, MD
January 16, 2001	Fish Retinal Pigment Epithelium as a Model for Studying the Function of Intermediate Filaments	Johannes Gutenberg - Universität Mainz, Germany
October 23, 2000	Fish Eye Cells - A Model for Studying Cell Structures and Cellular Communications	St. Philip's College, San Antonio
Sept 16, 2000	Giving Back: How (or Why) I Became a Scientist	St. Mary's University, San Antonio
April 1, 1999	Teleost RPE: Cytoskeleton and Cell Motility	Texas A&M University, Kingsville, Texas
November 9, 1998	Teleost RPE: Cytoskeleton, Cell Motility and Cell Signaling	Southwest Texas State University, San Marcos
January 24, 1997	Pigment Granule Aggregation in the Retinal Pigment Epithelium: A cAMP Story with a Twist	University of Texas at San Antonio
October 28, 1996	Pigment Granule Aggregation in the Retinal Pigment Epithelium: A cAMP Story with a Twist	Trinity University, San Antonio
March 9, 1996	You Want to do What?	Women's History Week, St. Phillip's College, San Antonio
December 5, 1994	Intermediate Filament Associated Proteins in RPE	Toxicology Group, Texas A&M, College Station
February 4, 1994	Pigment Granule Aggregation in the Retinal Pigment Epithelium: A cAMP Story with a Twist	University of Texas Marine Sciences Institute, Port Aransas
December 3, 1993	Cyclic AMP-induced Pigment Granule Aggregation in the Retinal Pigment Epithelium	Department of Zoology, University of Texas, Austin

WORKSHOPS GIVEN

Spring 2008	CAREER Proposal Writing Workshop series (with Carolyn Pate)
February 29, 2008	Science Education Grant Proposal Writing Workshop
October 26, 2007	Grant Proposal Writing Workshop presented by Bob McLean and Bob Slocum

October 5, 2007	Grant-Writing Workshop for Math Department (with Carolyn Pate and Steve Wilson)
Spring 2007	CAREER Proposal Writing Workshop series (with Carolyn Pate)
September 30, 2006	Grant Proposal Writing Workshop (with numerous speakers)
August 16, 2006	Grant Proposal Writing Workshop (with numerous speakers)
Spring 2006	CAREER Proposal Writing Workshop series (with Carolyn Pate)
October 27, 2005	Faculty Presentation Workshop on Careers in Science Houston-LSAMP Scholarship Program, Texas State University- San Marcos

C. GRANTS AND CONTRACTS

FUNDED EXTERNAL RESEARCH GRANTS (\$1,202,431 total)

2008-2009	National Science Foundation. Major Research Instrumentation Program. Acquisition of a Multiphoton-ready Microscope at Texas State University, \$234,360 (plus \$100,440 in matching funds from the University – not counted in above total) (PI Joe Koke)
2007-2009	Hope for Vision Award, \$15,000 (This was an unsolicited award.)
2006-2009	National Science Foundation. Career Advancement Award: FISH and chips: Applying microarray technology and in situ hybridization to understanding light-adaptation in zebrafish, \$168,646 (Award number IOB-0615762).
2006	National Science Foundation. REU supplement to RUI: Pigment Dispersion in Teleost Retinal Pigment Epithelium: Cholinergic Mechanisms, \$6000 (Award number IOB 06- 34704).
2005-2006	National Science Foundation. REU supplement to RUI: Pigment Dispersion in Teleost Retinal Pigment Epithelium: Cholinergic Mechanisms, \$6000 (Award number IOB 05-33445)
2003-2005	National Science Foundation. RUI: Pigment Dispersion in Teleost Retinal Pigment Epithelium: Cholinergic Mechanisms, \$152,653 (Award number IOB-0235523)
2000-2005	National Science Foundation. International: Role of Vimentin in RPE, \$16,000 (Award Number INT-0078261)
2000-2003	National Science Foundation. RUI: Pigment Granule Dispersion in Teleost Retinal Pigment Epithelium: Cholinergic Mechanisms, \$62,099, including \$11,612 for an REU supplement (Award number IBN-0077666)
1999-2003	National Institutes of Health. NIGMS – Research-Oriented Bridges to the Baccalaureate, \$514,773 (total costs) (co-PI Bob McLean)
1994-1996	National Science Foundation. Minority Research Initiatives Planning Grant, \$26,900 (including a Research Enhancement for Undergraduates supplement)

SUBMITTED BUT NOT FUNDED EXTERNAL GRANTS AND CONTRACTS

NSF (1/06) - Linking G-protein coupled receptors to pigment granule movement in retinal pigment epithelium, \$256,790

NSF (7/05) - Pigment Dispersion in Teleost Retinal Pigment Epithelium: Cholinergic Mechanisms (\$531,552)

NSF (2/05) - Acquisition of a Multiphoton, Confocal Microscope for Nanotechnology Research, Student Training, and Education in Chemistry, Physics, and Biology (\$749,613.00)

NSF (7/04) – Pigment Dispersion in Teleost Retinal Pigment Epithelium: Cholinergic Mechanisms (~\$600,000)

THECB (7/03) – ATP: An Inexpensive Bioassay System for Testing Alzheimer's Therapeutics (\$205,570)

THECB (7/01) - ARP: Molecular Characterization of Muscarinic Receptors in Fish RPE, (\$100,000)

NSF (1/02) – RUI – Pigment Dispersion in Teleost Retinal Pigment Epithelium: Cholinergic Mechanisms (~\$200,000)

NSF (1/99) – RUI – Pigment Dispersion in Teleost Retinal Pigment Epithelium: Cholinergic Mechanisms (\$66,713)

NIH (1/98) - Bridges to the Baccalaureate Proposal - Research-Oriented Bridge to Baccalaureate, (\$289,136)

NSF (10/97) - Mobile Microscopy Lab (\$68,000)

THECB (7/97) - ARP: Regulation of RPE Pigment Movements by Cyclic AMP

NSF RUI (1/97) - Regulation of Pigment Granule Aggregation in Teleost Retinal Pigment Epithelium (\$129,959)

NSF RUI (7/96) - Characterization of Intermediate Filaments and an Intermediate Filament Associated Protein in Fish Retinal Pigment Epithelium (\$256,287)

GTE FOCUS Program (10/96) - Recruitment of Inner-city Minority Students into Bachelor's Programs in Science (\$30,000)

NIH AREA (6/96)- Intermediate Filaments in the Retinal Pigment Epithelium (\$75,000)

NSF (1/96) - RUI: Structural and functional characterization of the G.3.5 antigen, an intermediate filament-associated protein (\$242,616)

THECB (7/95) - ARP: The cytoskeleton of the fish retinal pigment epithelium (\$200,000)

NSF (7/95) - RUI: Regulation of pigment granule aggregation in teleost retinal pigment epithelium (\$216,076)

NSF (1/95) - C-RUI: Structure, function, and evolution of neural-specific proteins in fishes (\$1,026,588)

NSF (6/94) - RUI: Characterization of novel cytoskeletal proteins (\$859,968)

NSERC (4/94) - Novel cytoskeletal proteins: their molecular characteristics (\$356,940)

FUNDED INTERNAL GRANTS AND CONTRACTS (\$68,663 total)

2006 Research Enhancement Program Grant. FISH and Chips. \$5917.26

2001 Research Enhancement Program Grant. Phylogenetic Characterization of Alpha-Actinin. \$15,990 (PI Mike Forstner)

1999-2000 Faculty Research Enhancement Grant. \$15,996 (co-PI Joe Koke)

1999-2000 Faculty Research Enhancement Grant. \$7000

1998 Office of Research and Sponsored Programs. Synthesis of Fluoresceinated Cyclic Adenosine Monophosphate, \$1760

1996 Faculty Research Enhancement Grant. \$6000

1994-1995 Faculty Research Enhancement Grant. \$6000

1994 Faculty Research Enhancement Grant. \$6000

1994 Indirect Cost Research Project. \$4000

SUBMITTED BUT NOT FUNDED INTERNAL GRANTS AND CONTRACTS*

HEAF (Spring 98) - Scanning Electron Microscope (\$200,000)

*This may not be a complete list since I stopped keeping track of what wasn't getting funded, especially in the case of internal grants.

D. FELLOWSHIPS, AWARDS, HONORS

2008 Dean Nominee for Presidential Award in Scholarly and Creative Activity

2007 Nominated for Presidential Award in Scholarly and Creative Activity

2007 Selected to receive Hope for Vision Award

2005 Nominated to give Presidential Seminar

2005 Nominated for STAR award

2005 Nominated for Outstanding Woman Faculty Award

2004 Merit Raise

2001-2002 Honored Member America's Registry, Edition 2001-2002.

2001 Nominated by Faculty Senate to serve on Master Teacher Committee

2001 Nominated for AAAS Mentor Award

1998 President's Excellence in Service Award runner-up (SOS nominee)

1997 Bonus Award as member of Integrated Microscopy Facility Team

1997 Merit Raise

1997 Alpha Chi National Honor Society Favorite Professor

1996 Merit Raise

1996 Southwest Texas State University Mentoring Program Outstanding Mentor

1996 Alpha Chi National Honor Society Favorite Professor

IV. SERVICE

University:

- Served in Dean Flores's place on graduation platform party in December 2008
- Provided an interview for Youniversity TV (see URL) in January 2008.
- Represented University on Austin Bio (Greater Austin Chamber of Commerce working group to "grow" biotechnology sector in the Austin area).
-
- Assisted with evaluation of proposals intended to increase interactions between the University and SMCISD while enhancing STEM education for all students, but particularly for traditionally underserved students.
- Visited UTHSCSA's Peter Fox and Angela Laird with Heather Galloway (Director of Honors) and Larry Price (CoEd) to explore the possibility of starting a neurobiology honors course at Texas State in January 2008.
- Served in Dean Flores's place on graduation platform party in May 2007
- Debated merits of human embryonic stem cell research for SACA debate January 2007
- Acted as Marshall at May 2005 Commencement
- Made multiple recruitment trips to the Annual Meeting of the Society for the Advancement of Chicanos and Native Americans in Science in an effort to

increase the ethnic diversity of our graduate student body. These trips occurred in October of 1996, 1997 and 2004

- Acted as Marshall at August 2004 Commencement
- Participated in panel discussion in the Philosophy Dialogue series about (1) ethics of human embryonic stem cell research in Spring 2002 and (2) women in science in Spring 2003
- Traveled with delegation to NASA and the office Kay Bailey Hutchinson in June 2001
- Acted as Usher at December 2000 Commencement (undergraduate)
- Acted as Marshall at December 1999 Commencement (undergraduate)
- Acted as Marshall at December 1998 Commencement (undergraduate)
- Acted as Marshall at December 1997 Commencement (undergraduate)
- Attended workshop on Retention in California to try to figure out ways to improve retention. I formulated an attendance strategy for the meetings that allowed us to have at least two people at each concurrent session while permitting people to attend sessions in which they were interested.
- University Committees
 - Dean of College of Science Search Committee (Fall 2008 – Spring 2009)
 - Exercise Sports Science Faculty Search Committee (Fall 2008 – Spring 2009)
 - Research Advisory Council (2006 – 2007)
 - STEM Task Force (2006 – 2007)
 - Mitte Chair in Water and GIScience Search (2006-2007)
 - Sponsored Projects Advisory Committee (2006-2007)
 - Department of Biology Chair Search Committee (2004 – 2006)
 - Institutional Animal Care and Use Committee (1995 – 2007)
 - President’s Council for Women (1995-1999)
 - Suspension Appeals Committee (Don’t remember the dates)
 - Morning Student Commencement Speaker Committee (1998)
 - Dean of General Studies Search Committee (1998-1999)
 - Writing Intensive Committee (1998)

College:

- Participated in Dean’s interview with various faculty and chair job candidates throughout the college.
- Participated in monthly Materials Science lunches intended to foster research collaborations among materials science researchers in the different departments in the College of Science. My participation helps familiarize me with research outside my department, which in turn helps me identify potential funding opportunities for these faculty.
- Began work in Fall 2008 with Associate and Assistant Deans of the College of Education to host a Science, Technology and Engineering Education Event for Spring 2009.
- College of Education Attended graduation (platform party) in Dean’s place in December 2008.

- Visited Emerging Technologies with Reddy Venumbaka, Tom Myers and Terry Golding to investigate opportunities for collaboration in December 2008.
- Worked individually with faculty interested in submitting CAREER proposals (Spring/Summer 2008).
- Attended workshop on Living Learning Communities (LLC) in November 2008, which helped the team of faculty who had worked on the NSF-STEP proposal move forward on developing an additional LLC for the College of Science which will be focused on premedical students, particularly those eligible for JAMP funding.
- Worked with Reddy Venumbaka (IEIS) to organize an intercollegial, biomedically focused “life sciences” research group, which now (2009) meets monthly to discuss shared research interests and shareable equipment,
- Attended ribbon-cutting ceremony for the Ingram School of Engineering in April 2008.
- Attended the Department of Computer Science’s Internal Advisory Board meeting in April 2008.
- Hosted Bruce Leander (former CEO at ABI), who gave a talk to undergraduates on Careers in Biotechnology in April 2008.
- Attended Dean’s List reception on behalf of Dean in February 2008..
- Was a keynote speaker at Science Extravaganza, which was held as a memorial event marking the passing of MAES’s president in a car accident in March 2008.
- Visited Southwest Research Institute with a team from the College of Science in San Antonio to explore possible collaborations.
- Attended Graduate College Information Fair (Fall 2007, 1/07)
- Attended Graduate Student Recruitment Workshop (1/07)
- Function as Media Liaison for the College of Science (2007-present)
- Function as Faculty Advisor (with Jaime Hernández) for MAES
- Function as mentor for a variety of LS-AMP students (~2001 – present)
- Arranged and conducted Grant Proposal Writing Workshops (8/06, 9/06, 10/07)
- Arranged and conducted a series of CAREER proposal writing workshops (Spring 2006, 2007)
- Participated as a judge in the Louis Stokes Alliances for Minority Participation Undergraduate Research Conference (July 2001)
- Participated as a judge in the Louis Stokes Alliances for Minority Participation Undergraduate Research Conference (July 2000)

- College Committees
 - Materials Science Chemistry Search Committee II (Summer 2008 – Spring 2009)
 - Materials Science Chemist Search Committee (Summer 2007 – Spring 2008)
 - Promotion and Tenure Task Force (Fall 2007 – Spring 2008)
 - Materials Science and Engineering Search Committee for Director and 2 Associate/Full Professors (Fall 2007 – Spring 2008)
 - College Council (1/06 – present)

Departmental:

- Co-hosted Annual Physiology Party with Joe Tomasso and Joe Koke in April 2008.
- Contributed financially to the Colene Drace Award along with Joe Koke and Nihal Dharmasiri to increase the award from \$100.
- Participated in Wildlife Ecology search by meeting individually with candidates and (of course) attending their seminars – except for Veech’s because I was out of town.
- Hosted Biology Seminar Speaker Manuel Torres in March 2008. Did not recommend him for further consideration for faculty position.
- Hosted Biology Seminar Speaker Janice Moore in March 2008.
- Hosted Biology Departmental Seminar Speaker Nanci Mangini (Indiana University Medical School) – January 2008.
- Using a combination of grant and departmental funds, acquired an Eppendorf RealPlex quantitative PCR machine, which supports not only research in my lab, but also in the Koke and McLean labs as well as teaching in Cell Physiology (Biol 4441/5441) – January 2008.
- Nominated Joe Koke for Mariel Muir Mentoring Award. (January 2008)
- Co-administer the Biology Department’s Integrated Microscopy Facility with Joe Koke
- Produced Department of Biology Graduate Brochure with Jim Ott and help from Gloria Maier (Media Relations and Publications) 1996
- Functioned as mentor in SWT Mentoring Program to Leslie Harper (1995-1996)

• Departmental Committees	
Independence Committee (Chair)	Fall 2008
Aquatic Toxicologist Search Committee	Spring 2008
General Science Lecturer Search Committee (Chair)	Spring 2006 – Summer 2006
Development Committee	Spring 2006 – Summer 2008
Graduate Committee (<i>ex officio</i> from 1/06-9/08)	Fall 2005 - present
Departmental Space Committee (Chair, Fall 2005)	Fall 2005; Fall 2008-present
Departmental Planning Committee	Summer 2005
Program Review Committee	Fall 2004 – Spring 2007 (?)
Developmental Biology Search Committee (Chair)	Fall 2004 – Spring 2005
Annual Review Committee (chair)	Fall 2003 – Fall 2004
B3I Liaison Committee	Fall 2003-Spring 2005
Tenure/Promotion/Continuance Committee	Fall 2003 – Fall 2005
Restricted Chemicals Committee (chair)	Summer 2003 – Fall 2004
Howard D. Schultze Biology Scholarship Committee (Chair)	Spring 2003 – Spring 2008
Colene Drace Scholarship Committee	Spring 2002 – present
Scholarship CEC (PMC Chair, 2005)	Spring 2003 – Spring 2005
Planning Committee	Fall 2002
Developmental Biology Search Committee	Spring 2002
Developmental Biology Recruitment Task Force (Chair)	Fall 2001
Sally Karnau Scholarship Committee	Fall 2001, Spring 2003
Biology Ph. D. Curriculum Committee (Chair)	Spring 2000 – Fall 2000
Service CEC (Chair, 2002)	Spring 2000 – Spring 2002
Steering Committee for Aquatic Resources Ph. D.	Spring 2000 – Fall 2000
Public Relations Committee	Spring 2000 – Fall 2000
Budget Committee, Chair (Fall 1999-Fall 2005)	Spring 1994 – Fall 2005
Seminar Committee, Chair (May 1996 – Dec 2000)	Fall 1994 – Dec 2000
Safety Committee	Fall 1995 - Spring 1996; Fall 1999 – Spring 2002
Departmental Post-tenure Review Committee	February 1997 - May 1997; Fall 1998 – Spring 1999
Physiologist Search Committee	Fall 1997- Spring 1998
Lecturer Search Committee	Spring 1998

Community:

- Served on panel in the Common Experience series about Courage in Religion and Science

Professional:

- March 2009 - Served as panel reviewer for Ford Foundation Diversity Fellowships
- January 2009 – reviewed manuscript for *American Journal of Physiology: Cell Physiology*
- Fall 2008 – appointed associate editor for *BMC Research Notes*

- August 2008 - reviewed manuscript for *American Journal of Physiology: Cell Physiology*
- July 2008 – reviewed manuscript for *Comparative Biochemistry and Physiology*
- May 2008 – reviewed materials for promotion for Nancy Mangini, Indiana University
- April 2008 – Served as *ad hoc* reviewer for National Science Foundation’s Division of Integrative and Organismal Systems, Physiological and Structural Systems Cluster
- March 2008 – Served as *ad hoc* reviewer for National Science Foundation’s Neural Systems Cluster
- February 2008 – Reviewed manuscript for the journal *Microgravity Science and Technology*
- January 2008 to present - in STEM working group organized by the Sloan Foundation and the American Association of Hispanics in Higher Education
- Fall 2007 – Invited to serve on SEM Working Group to increase the number Hispanic Professors at Top Tier Universities, funded by a Sloan Foundation grant to the American Association of Hispanics in Higher Education
- Fall 2007 – Served as *ad hoc* reviewer for National Science Foundation Integrative and Organismal Biology program.
- Spring 2007 – Reviewed manuscript for the journal *Molecular Biology and Evolution*
- October 2006 – NSF Panel review. Reviewed 6 proposals as primary reviewer and 6 as secondary reviewer. As a panel, we reviewed about 90 proposals.
- February 2006 – National Institutes of Health Bridges Panel Reviewer. Reviewed 3 proposals as primary reviewer, 2 as secondary and 3 as discussant. As a panel, we reviewed 40 proposals.
- April 2005 –NSF ASM Panel Reviewer. Reviewed 6 proposals as primary reviewer, 7 as secondary reviewer. The panel considered about 90 proposals.
- October 2004 – Served as poster judge at LS-AMP meeting in Houston.
- September 2004 – Served as abstract reviewer for ABRCMS. Reviewed 16 abstracts.
- Summer 2004 – Served on Women in the Natural Sciences Panel at The University of Texas, discussing the tenure process at various types of universities.
- Summer 2004 – Served as abstract reviewer for the Society for the Advancement of Chicanos and Native Americans in Science. Reviewed 5 abstracts.
- Spring 2004 – Wrote test bank questions for Wadsworth Publishing Company’s new physiology textbook (under contract).
- Fall 2003 – Reviewed Purves et al., *Neuroscience* (Sinauer) as a volunteer, making multiple corrections to the text.
- Spring 2003 – Served as a panel reviewer for the National Science Foundation Integrative Animal Biology Program. Primary reviewer on 7 grants, secondary on 7. Overall about 80 grants were reviewed.
- Spring 2003 – Served as a panel reviewer for the National Institutes of Health. Primary reviewer on three grants, secondary on 3 and reader on 3. Overall, 31proposals were reviewed.

- Fall 2001 – Served as panel reviewer for the National Science Foundation Sensory Systems Panel, which reviewed 70 proposals.
- Spring 2001 – Reviewed numerous abstracts and manuscripts for German colleagues.
- Summer 2001 – Served as moderator in break-out group to discuss extracting administrative support for Bridges programs while at the Annual Bridges Program Directors' Meeting.
- 8/00 – Wrote questions for the GRE.
- March 2000 – Served as panel reviewer for the National Science Foundation's Centers for Teaching and Learning Program.
- January 2000 – Served as panelist at Texas Science Summit 2000.
- 1994 – 2000, participated in American Society for Cell Biology Young Scientists Program, in which I wrote letters to primary and secondary school students who had expressed an interest in science, and particularly biology.
- 1998, served as an *ad hoc* reviewer for the National Science Foundation POWRE program

ORGANIZATIONS OF WHICH I AM OR HAVE BEEN A MEMBER

Honorary:

Sigma Xi

Professional:

American Physiological Society

American Society for Cell Biology

Society for the Advancement of Chicanos and Native Americans in Science