

DANIEL M. HARDY, PH.D.

ADDRESS & PHONE

Department of Cell Biology & Biochemistry
Texas Tech University Health Sciences Center
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WORD WIDE WEB & E-MAIL

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Daniel.Hardy@ttuhscc.edu

PERSONAL DATA

US Citizen. Married, 2 children

EDUCATION

1986 Ph.D., Biochemistry. University of New Mexico School of Medicine
1979 B.S., Chemistry (ACS Certified). South Dakota School of Mines & Technology

POSITIONS HELD

- 2002- Associate Professor (tenured)
Departments of Cell Biology & Biochemistry and Orthopaedic Surgery
Texas Tech University Health Sciences Center, Lubbock
- 1999-2002 Assistant Professor
Departments of Cell Biology & Biochemistry and Orthopaedic Surgery
Texas Tech University Health Sciences Center, Lubbock
- 1995-1999 Assistant Professor
Department of Cell Biology & Biochemistry
Texas Tech University Health Sciences Center, Lubbock
- 1993-1995 Assistant Instructor
Department of Pharmacology
University of Texas Southwestern Medical Center, Dallas
- 1990-1993 Associate (D.L. Garbers, advisor)
Howard Hughes Medical Institute
University of Texas Southwestern Medical Center, Dallas

POSITIONS HELD (continued)

- 1989-1990 Associate (D.L. Garbers, advisor)
Howard Hughes Medical Institute
Vanderbilt University Medical Center, Nashville, TN
- 1987-1989 NRSA Postdoctoral Fellow (J.L. Hedrick, advisor)
Department of Biochemistry and Biophysics
University of California, Davis.
- 1986-1987 Postdoctoral Trainee, Reproductive Biology
Department of Biochemistry and Biophysics
University of California, Davis.
- 1982-1986 Teaching Assistant
Department of Biochemistry
University of New Mexico School of Medicine, Albuquerque.

ACADEMIC APPOINTMENTS

- 2015-present Graduate Faculty, Graduate School of Biomedical Sciences
Biomedical Sciences Program
Biochemistry, Cellular & Molecular Biology Concentration (*primary appointment**)
Texas Tech University Health Sciences Center
- 2003-present Graduate Faculty, Graduate School of Biomedical Sciences
Biotechnology Program (*joint appointment**)
Texas Tech University Health Sciences Center
- 1995-2015 Graduate Faculty, Graduate School of Biomedical Sciences
Biomedical Sciences Program
Biochemistry & Molecular Genetics Concentration (*primary appointment**)
Texas Tech University Health Sciences Center
- 1995-2015 Graduate Faculty, Graduate School of Biomedical Sciences
Biomedical Sciences Program
Cell & Molecular Biology Concentration (*joint appointment**)
Texas Tech University Health Sciences Center

**Full member with voting privileges*

PROFESSIONAL DEVELOPMENT

- 2015-18 Faculty Development Course on Medical Education: "Medical Education Journal and Interest Club (MAJIC)". SoM Teaching Academy and DoME.
- 2012 Basic Mediation Training, Aug. 13 – Nov. 8 (50+ hours of instruction). TTU Law School and Training Institute Division of the Texas Dispute Resolution System.
- 2010 Faculty Development Course on Medical Education, Sept. 2 – Dec. 2. TTUHSC.
- 2008-9 Faculty Leadership Development Course, Sept. 5 – May 5. TTUHSC

RESEARCH FUNDING

“Antibodies for Rapid, Efficient, and Specific Detection and Capture of Sperm Heads from Assault Evidence”

National Institute of Justice

Hardy DM, Principal Investigator, 20% effort

\$391,000 Total request

Not funded

“Rapid, Efficient Processing of Sexual Assault Evidence for DNA Testing”

Laura W. Bush Institute for Women's Health

Hardy DM, Principal Investigator, 20% effort

\$10,000 Total award

06/01/16-12/31/17

“Rapid, Efficient Processing of Sexual Assault Evidence for DNA Testing”

The CH Foundation

Hardy DM, Principal Investigator, 20% effort

\$65,000 Total request

Not funded

“Significance of Response to a Single Dominant Antigen in Autoimmune Disease Induction”

South Plains Foundation

Hardy DM, Principal Investigator, 10% effort

\$14,900 Total award

09/01/14-08/31/15

“Multiple Sperm Antigen Vaccine for Control of Male and Female Fertility”

R01 HD080631-01, National Institutes of Health/NICHHD/USDA

Hardy DM, Principal Investigator, 30% effort

\$911,355 Total request

Scored but not funded

RESEARCH FUNDING (continued)

“Rapid, Efficient Processing of Sexual Assault Evidence by Improved Detection and Isolation of Spermatozoa for STR Analysis”

2014-90566-TX-DN, National Institute of Justice

Hardy DM, Principal Investigator, 30% effort

\$721,543 Total request

Scored but not funded

“Gender Effects on Anterior Cruciate Ligament Remodeling”

R01 AR049767-05, National Institutes of Health/NIAMS

Hardy DM, Principal Investigator, 30% effort

\$1,170,000 Total award

04/01/04-3/31/10

“Molecular and Biomechanical Causes and Consequences of Aging-Related Degeneration of Intervertebral Discs”

TTUHSC/TTU Joint Seed Grant Program

Hardy DM, Principal Investigator, 10% effort

\$270,000 Total award

05/01/07-09/30/09

“Gender Effects on the Maintenance and Repair of the Anterior Cruciate Ligament”

National Collegiate Athletic Association

Committee on Competitive Safeguards and Medical Aspects of Sports

Hardy DM, Principal Investigator, 10% effort

\$25,000 Total award

09/01/06-08/31/07

“A Novel Method for Biological Control of Feral Hogs in Texas”

Texas Department of Agriculture

McGlone J, Project Director

Hardy DM, Co-Principal Investigator, 10% effort

\$100,000 Total award

01/01/06-12/31/07

“Gene Expression in the Human Anterior Cruciate Ligament”

Stryker Corporation

Hardy DM, Principal Investigator, 10% effort

\$20,000 Total award

04/01/05-03/31/06

“Fertility Phenotype of Zonadhesin Null Mice”

Lalor Foundation

Tardif S, Postdoctoral Fellow

Hardy DM, Sponsor

\$35,000 Total award

07/01/04-06/30/05

RESEARCH FUNDING (continued)

“Regulation of Reproductive Processes”
2 T32 HD07271-16, National Institutes of Health/NICHD
Stocco DM, Principal Investigator
Hardy DM, Participating Faculty
05/01/99-04/30/04

“Functions of Protein Domains in Gamete Interactions”
R29 HD35166-05, National Institutes of Health/NICHD
Hardy DM, Principal Investigator, 50% effort
\$525,000 Total award
01/01/98-12/31/03

“Hormone-Dependent Regulation of Proteolysis as a Cause of Female ACL Injury”
Orthopedic Research and Education Foundation
Slauterbeck JR, Principal Investigator; **Hardy DM**, Co-Principal Investigator, 20% effort
\$100,000 Total award
07/01/99-06/30/02

“Hormone-dependent Regulation of Protease Gene Expression in the ACL”
TTU Health Sciences Center Basic/Clinical Seed Grant Program
Hardy DM (10% effort), Slauterbeck JR, Co-Principal Investigators
\$20,000 Total award
06/01/99-05/31/00

“Hormone-dependent Regulation of Protease Gene Expression in the ACL”
TTU Health Sciences Center Basic/Clinical Seed Grant Program
Hardy DM (10% effort), Slauterbeck JR, Co-Principal Investigators
\$20,000 Total award
06/01/98-05/31/99

“A Systematic Strategy for Identifying Sperm-Specific Membrane Proteins”
TTU Health Sciences Center Seed Grant Program
Hardy DM, Principal Investigator, 10% effort
\$9000 Total award
03/01/98-02/28/99

“General Molecular Properties and Activities of von Willebrand D-Domains”
96G-324, American Heart Association, Texas Affiliate
Hardy DM, Principal Investigator, 20% effort
\$38,400 Total award
07/01/96-06/30/98

RESEARCH FUNDING (continued)

“Egg Glycoprotein Processing Essential to Fertilization”
1 F32 HD-07088 CLN-3, National Institutes of Health/NICHD
Individual National Research Service Award
Hardy DM, Fellow, 100% effort; Hedrick JL, Sponsor
\$32,000 Total award
09/17/1987-05/31/1989

“The Magic of Chemistry”
American Chemical Society
Hardy DM, Student Chapter Project Director
\$300 Total award
04/1979-03/1980

PUBLICATIONS

<https://scholar.google.com/citations?user=vLHqICIAAAA&user=vLHqICIAAAA>

Roberts EK, Tardif S, Wright EA, Platt II RN, Phillips CD, Bradley RD, **Hardy DM**. Rapid evolution of a gamete recognition gene promoted macroevolution of Eutheria. *Mol Biol Evol* (in revision)

Fisher GD, Strawn MD, Simpson J, Hashemi J, Mansouri H, White ES, Scheerer ME, Zumwalt M, Brindley G, **Hardy DM**. Validity of gene expression profiles obtained using partially degraded RNA from human anterior cruciate ligament. *Knee* (in revision)

Cormier N, McGlone J, Leszyk J, **Hardy DM** (2018) Immunocontraceptive repertoire defined by systematic identification of major sperm membrane and lipid raft alloantigens in a single species. *PLoS One* 13, e0190891. PMID 29342175

Tung KSK, Harakal J, Qiao H, Rival C, Li J, Paul AG, Wheeler K, Pramoongjago P, Grafer CM, Sun W, Sampson RD, Wong EW, Reddi PP, Deshmukh US, **Hardy DM**, Tang H, Cheng CY, Goldberg E (2017) Egress of sperm autoantigen from seminiferous tubules maintains systemic tolerance. *J Clin Invest* 127, 1046-1060. PMID 28218625

Tourville TW, Shultz SJ, Vacek PM, Knudsen EJ, Bernstein IM, Tourville KJ, **Hardy DM**, Slauterbeck JR, Johnson RJ, Beynon BD (2016) Evaluation of an algorithm to predict menstrual cycle phase at the time of injury. *J Athletic Training* 51, 47-56. PMID 26807868

Tanphaichitr N, Kongmanas K, Kruevaisayawan H, Saewu A, Sugeng C, Fernandes J, Souda P, Angel JB, Faull KF, Aitken RJ, Whitlegge J, **Hardy D**, Berger T, Baker M (2015) Remodeling of the plasma membrane in preparation for sperm-egg recognition: roles of acrosomal proteins. *Asian J Androl* 17, 1-9. PMID 25994642

Kongmanas K, Kruevaisayawan H, Saewu A, Sugeng C, Fernandes J, Souda P, Angel JB, Kitajima K, Faull KF, Aitken RJ, Whitelegge J, **Hardy D**, Berger T, Baker MA, Tanphaichitr N (2015) Proteomic characterization of sperm anterior head plasma membrane vesicles reveals the roles of acrosomal proteins in ZP3 binding. *J Cell Physiol* 230, 449-463. PMID 25078272

PUBLICATIONS (continued)

Rival C, Wheeler K, Jeffrey S, Qiao H, Lu, Tewalt E, Engelhard V, Tardif S, **Hardy D**, del Rio R, Teuscher C, Tung K (2013) Regulatory T cells in vasectomy. *J Reprod Immunol* 100, 66-75. PMID 24080233

Wheeler K, Tardif S, Rival C, Luu B, Bui E, Del Rio R, Sparwasser T, Teuscher C, **Hardy D**, Tung KSK (2011) Regulatory T cells control tolerogenic versus autoimmune response to sperm in vasectomized mice. *Proc Natl Acad Sci USA* 108, 7511-7516. PMID 21502500

Hashemi J, Mansouri H, Chandrashekar N, Slauterbeck JR, **Hardy DM**, Beynnon BD (2011) Age, sex, body anthropometry, and ACL size predict the structural properties of the human anterior cruciate ligament. *J Orthop Res* 29, 993-1001. PMID 21246609

Hashemi J, Breighner R, Chandrashekar N, **Hardy DM**, Chaudhari AM, Shultz SJ, Slauterbeck JR, Beynnon BD (2011) Hip-extension, knee-flexion paradox: A new mechanism for non-contact ACL injury. *J Biomechanics* 44, 577-585. PMID 21144520

Tardif S, Wilson MD, Wagner R, Hunt P, Gertsenstein M, Nagy A, Lobe C, Koop BF, **Hardy DM** (2010) Zonadhesin is essential for species specificity of sperm adhesion to the egg zona pellucida. *J Biol Chem* 285, 24863-24870. PMID 20529856

Tardif S, Akrofi A, Dass B, **Hardy DM**, MacDonald CC (2010) Infertility with impaired zona pellucida adhesion of spermatozoa from mice lacking tCstf-64. *Biol Reprod* 83, 464-472. PMID 20463354

Peteiro-Gonzalez D, Lee J, Rodriguez-Fontan J, Castro-Piedras I, Cameselle-Teijeiro J, Beiras A, Bravo SB, Alvarez CV, **Hardy DM**, Targovnik HM, Arvan P, Lado-Abeal J (2010) New insights into thyroglobulin pathophysiology revealed by the study of a family with congenital goiter. *J Clin Endocrinol Metab* 95, 3522-3526. PMID 20410234

Tardif S, Brady HA, Braezeale KR, Bi M, Thompson LD, Bruemmer JE, Bailey LB, **Hardy DM** (2010) Zonadhesin D3-polypeptides vary among species but are similar in *Equus* species capable of interbreeding. *Biol Reprod* 82, 413-421. PMID 19794156

Hashemi J, Chandrashekar N, Mansouri H, Slauterbeck JR, **Hardy DM** (2008) The human anterior cruciate ligament: sex differences in ultrastructure and correlation with biomechanical properties. *J Orthop Res* 26, 945-950. PMID 18302253

Slauterbeck JR, Hickox JR, **Hardy DM** (2007) Ligament biology and its relationship to injury forces. Chapter 18. In: *Understanding and Preventing Non-Contact ACL Injuries* (Hewett T, Shultz SJ, Griffin LY, eds) pp. 213-218. American Orthopaedic Society for Sports Medicine (AOSSM), Rosemont IL.

Slauterbeck JR, Hickox JR, Beynnon B, **Hardy DM** (2006) Anterior cruciate ligament biology and its relationship to injury forces. *Orthop Clin North Am* 37, 585-591. PMID 17141016

Bailey LB, Brady HB, Tardif S, Thompson LD, **Hardy DM** (2006) Zonadhesin expression and localisation in stallion testes. *Animal Reproduction Science* 94, 56-59.

Slauterbeck JR, Pankratz K, Xu KT, Bozeman SC, **Hardy DM** (2004) Canine ovariohysterectomy and orchietomy increase the prevalence of ACL injury. *Clin Orthop Relat Res* 429, 301-305. PMID 15577502

PUBLICATIONS (continued)

Olson GE, Winfrey VP, Bi M, **Hardy DM**, NagDas SK (2004) Zonadhesin assembly into the hamster sperm acrosomal matrix occurs by distinct targeting strategies during spermiogenesis and epididymal maturation. *Biol Reprod* 71, 1128-1134. PMID 15175237

Bi M, Winfrey VP, Olson GE, **Hardy DM** (2003) Processing, localization, and binding activity of zonadhesin suggest a function in sperm adhesion to the zona pellucida during exocytosis of the acrosome. *Biochem J* 375, 477-488. PMID 12882646

Cornwall GA, Cameron A, Lindberg I, **Hardy DM**, Hsia N (2003) The cystatin-related epididymal spermatogenic protein inhibits the serine protease prohormone convertase 2. *Endocrinology* 144, 901-908. PMID 12586766

Slauterbeck JR, Fuzie S, Smith MP, Clark RJ, Xu KT, **Hardy DM** (2002) The menstrual cycle, sex hormones, and anterior cruciate ligament injury. *J Athletic Training* 37, 275-280. PMID 12937585

Wassler MJ, Syntin P, Sutton-Walsh HG, Hsia N, **Hardy DM**, Cornwall GA (2002) Identification and characterization of cystatin-related epididymal spermatogenic protein in human spermatozoa: localization in the equatorial segment. *Biol Reprod* 67, 795-803. PMID 12193387

Crider-Pirkle S, Billingsley P, Faust C, **Hardy DM**, Lee V, Weitlauf HM (2002). Cubilin: A binding partner for galectin-3 in the murine utero-placental complex. *J Biol Chem* 277, 15904-15912. PMID 11856751

Bi M, Wassler MJ, **Hardy DM** (2002). Chapter 5: Sperm adhesion to the extracellular matrix of the oocyte. In: *Fertilization* (**Hardy DM**, ed) pp. 153-180. Academic Press, San Diego

Breazeale KR, Brady HB, Bi M, Uppuluri S, Thompson LD, Bruemmer JE, **Hardy DM** (2002) Biochemical properties and localization of zonadhesin in equine spermatozoa. *Theriogenology* 58, 359-362

Slauterbeck JR, **Hardy DM** (2001) Sex hormones and knee ligament injuries in females. *Am J Med Sci*, 322, 196-199. PMID 11678515

Hickox JR, Bi M, **Hardy DM** (2001). Heterogeneous processing and zona pellucida binding activity of pig zonadhesin. *J Biol Chem* 276, 41502-41509. PMID 11526117

Foos MJ, Hickox JR, Mansour PG, Slauterbeck JR, **Hardy DM** (2001). Expression of matrix metalloproteinase and tissue inhibitor of metalloproteinase genes in human anterior cruciate ligament. *J Orthop Res* 19, 642-649. PMID 11518274

Wilson MD, Riemer C, Martindale DW, Schnupf P, Boright AP, Cheung TL, **Hardy DM**, Schwartz S, Scherer SW, Tsui L-C, Miller W, Koop BF (2001). Comparative analysis of the gene dense *ACHE/TFR2* region on human chromosome 7q22 with the orthologous region on mouse chromosome 5. *Nucleic Acids Res* 29, 1352-1365. PMID 11239002

Evans JP, **Hardy DM**, Storey BT (2001). Sperm-egg interactions: sperm-egg binding in mammals. In: *Encyclopedia of Life Sciences*, Macmillan Reference Ltd., London

PUBLICATIONS (continued)

Haden NP, Hickox JR, Whisnant CS, **Hardy DM** (2000) Systematic characterization of sperm-specific membrane proteins in swine. *Biol Reprod* 63, 1839-1847. PMID 11090456

Lado-Abeal J, Hickox JR, Cheung TL, Veldhuis J.D., **Hardy DM**, Norman RL (2000). Neuroendocrine consequences of fasting in adult male macaques: Effects of recombinant rhesus macaque leptin infusion. *Neuroendocrinology* 71, 196-208. PMID 10729791

Hardy DM, Garbers DL (1995) A sperm membrane protein that binds in a species specific manner to the egg extracellular matrix is homologous to von Willebrand factor. *J Biol Chem* 270, 26025-26028. PMID 7592795

Hardy DM, Garbers DL (1994) Species-specific binding of sperm proteins to the extracellular matrix (zona pellucida) of the egg. *J Biol Chem* 269, 19000-19004. PMID 8034657

Hardy DM, Harumi T, Garbers DL (1994) Sea urchin sperm receptors for egg peptides. *Sem Dev Biol* 5, 217-224

Hardy DM, Garbers DL (1993) Molecular basis of signaling in spermatozoa. In: *Molecular Biology of the Male Reproductive System* (De Kretser DM, ed) Chapter 7, pp. 233-270, Academic Press, San Diego, CA

Hardy DM, Hedrick JL (1992) Oviductin. Purification and properties of the oviductal protease that processes the 43,000 Mr glycoprotein of the *Xenopus laevis* egg envelope. *Biochemistry* 31, 4466-4472. PMID 1581303

Anakwe OO, Sharma S, Hoff HB, **Hardy DM**, Gerton GL (1991) Maturation of guinea pig sperm in the epididymis involves the modification of proacrosin oligosaccharide side chains. *Mol Reprod Devel* 29, 294-301. PMID 1931047

Anakwe OO, Sharma S, **Hardy DM**, Gerton GL (1991) Guinea pig proacrosin is synthesized principally by round spermatids and contains O-linked as well as N-linked oligosaccharide side chains. *Mol Reprod Devel* 29, 172-179. PMID 1908685

Hardy DM, Oda MN, Friend DS, Huang TTF Jr (1991) A mechanism for differential release of acrosomal enzymes during the acrosome reaction. *Biochem J* 275, 759-766. PMID 1903927

Hedrick JL, **Hardy DM** (1991) Isolation of the extracellular matrix structures from *Xenopus laevis* oocytes, eggs, and embryos. In: *Methods in Cell Biology*, V. 36 (Kay BK, Peng HB, eds) pp. 225-241, Academic Press, San Diego, CA. PMID 1811136

Hardy DM, Schoots AFM, Hedrick JL (1989) Caprine acrosin: Purification, characterization, and effects on the porcine zona pellucida. *Biochem J* 257, 447-453. PMID 2930460

Hedrick JL, Urch UA, **Hardy DM** (1989) Structure-function properties of the sperm enzyme acrosin. In: *Biocatalysis in Agricultural Biotechnology* (Whitaker JR, Sonnet P, eds) Chapter 15, pp. 215-229, ACS Symposium Series, Washington DC

PUBLICATIONS (continued)

Hardy DM, Huang TTF Jr, Driscoll WJ, Tung KSK, Wild GC (1988) Purification and characterization of the primary acrosomal autoantigen of guinea pig epididymal spermatozoa. *Biol Reprod* 38, 423-437. PMID 32825555

Hardy DM, Wild GC, Tung KSK (1987) Purification and initial characterization of proacrosins from guinea pig testes and epididymal spermatozoa. *Biol Reprod* 37, 189-199. PMID 3115322

Huang TTF Jr, **Hardy D**, Yanagimachi H, Teuscher C, Tung KSK, Wild G, Yanagimachi R (1985) pH and protease control of acrosomal content stasis and release during the guinea pig sperm acrosome reaction. *Biol Reprod* 32, 451-462. PMID 3886029

MANUSCRIPTS IN PREPARATION

Roberts EK, Wright EA, **Hardy DM**, Bradley RD. Gamete recognition gene tree yields a robust Eutherian phylogeny across taxonomic levels.

Roberts EK, Cheung TL, Wright EA, **Hardy DM**, Bradley RD. *Zan* domain duplication and divergence reflect unique evolution of a putative speciation gene in myomorph rodents.

Cheung TL, Tardif S, Wassler MJ, Wilson MD, Cornwall GA, Koop BF, **Hardy DM**. Human zonadhesin binds the ZPB component of the human zona pellucida and is encoded by multiple transcripts derived from variation in VWC and TIL domain exon splicing.

Uppuluri N, **Hardy DM**. Pig zonadhesin binds independently to glycosaminoglycans and to homologous zona pellucida.

Cormier N, Linch C, **Hardy DM**. Sperm membrane alloantigen SMA20 is a rapidly evolving, sperm-head-specific protein with possible species-divergent function in fertilization.

Hickox JR, Xu T, Zumwalt M, Slauterbeck JR, **Hardy DM**. Sex differences in expression of mRNAs encoding MMP1, MMP3, and collagen 1 α 1 in the human ACL.

Hickox JR, Xu T, Zumwalt M, Slauterbeck JR, **Hardy DM**. Knee pathology alters expression of MMP and collagen mRNAs in the human ACL.

Hickox JR, Pithadia N, Slauterbeck JR, **Hardy DM**. Ligament rupture and arthritis affect global gene expression profiles in the ACL.

Cowden C, Lee VH, Slauterbeck JR, Hashemi J, **Hardy DM**. Estrogen administration decreases ACL strength in prepubertal rabbits.

Fisher G, Hashemi J, Gill JB, Graham S, Hutson J, **Hardy DM**. Correlation of age, degeneration, and biomechanical properties of human lumbar discs with mRNAs encoding numerous extracellular matrix components.

Fisher G, Borisova T, Hashemi J, Gill JB, Graham S, Hutson J, **Hardy DM**. Variation in expression profiles of extracellular matrix genes among cervical, thoracic, and lumbar intervertebral discs.

BOOKS

"*Fertilization*" (**Hardy DM**, ed.) 427 pp., Academic Press, San Diego, 2002

PATENTS

"*Species-specific egg binding proteins of sperm*"

U.S. Patent no. 5,851,817. Issued December 22, 1998

Daniel M. Hardy, Ph.D. & David L. Garbers, Ph.D., Inventors

NEWS PIECES

"*ACL Injury Risk in Female Athletes*" Healthwise, KCBD News Channel 11. Interview with Karin McCay, October 19, 2013.

"*Women have a higher risk of injuring an ACL. But why?*" By Dr. Daniel M. Hardy, Ph.D. San Angelo TX Standard-Times. June 23, 2013.

"*President's Prescription: ACL Injuries in Women.*" By Karin McCay. KCBD News Channel 11, Lubbock, TX. Sept. 17, 2012.

ABSTRACTS (since 2000)

Roberts EK, Cheung TL, Wright EA, Bradley RD, **Hardy DM** (2020). *Zan* domain duplication and divergence reflect unique evolution of a putative speciation gene in myomorph rodents. 19th Annual TTU Graduate Student Research Competition. March 11, Lubbock, TX.

Roberts EK, Cheung TL, Wright EA, Bradley RD, **Hardy DM** (2020). *Zan* domain duplication and divergence reflect unique evolution of a putative speciation gene in myomorph rodents. 32nd Annual TTUHSC Student Research Week. March 10-12, Lubbock, TX

Roberts EK*, **Hardy DM**, Platt II RN, Phillips CD, Bradley RD (2019) Zonadhesin ontogeny reveals a unique reproductive contribution to divergence of Eutheria. 18th Annual TTU Graduate Student Research Competition. March 26, Lubbock, TX. (**1st Place, Poster Presentation, Biological Sciences*)

Roberts EK, **Hardy DM**, Platt II RN, Phillips CD, Bradley RD (2019) Zonadhesin ontogeny reveals a unique reproductive contribution to divergence of Eutheria. 31st Annual TTUHSC Student Research Week. March 19-22, Lubbock, TX.

Jaeger NR, Tung K, **Hardy DM**, O'Malley DP, Cheng L, Aguilera NS (2019) Anti-zonadhesin reactivity in normal splenic sinus lining cells and littoral cell angiomas. 108th Annual Meeting of the United States & Canadian Academy of Pathology. March 16-21, National Harbor, MD.

Roberts EK, **Hardy DM**, Bradley RD (2019) Detecting sites and identifying lineages subject to episodic and diversifying selection in reproductive (zonadhesin) and hearing (alpha-tectorin) proteins. 37th Annual meeting of the Texas Society of Mammalogists. February 8-10, Junction, TX.

ABSTRACTS (since 2000; continued)

Roberts EK, **Hardy DM**, Bradley RD (2018) Alternative mRNA splicing of a gamete recognition gene, zonadhesin, may promote a new functional adaptation in mammalian reproduction. 98th Annual Meeting of the American Society of Mammalogists. June 25-29, Manhattan, KS.

Roberts EK, **Hardy DM**, Bradley RD (2018) Alternative mRNA splicing of a gamete recognition gene, zonadhesin, may promote a new functional adaptation in mammalian reproduction. 36th Annual meeting of the Texas Society of Mammalogists. February 16-18, Junction, TX.

Roberts EK, **Hardy DM**, Bradley RD (2017) The zonadhesin gene reveals reproductive advantage unique to divergence of Eutherian mammals. 97th Annual Meeting of the American Society of Mammalogists. June 20-24, Moscow, ID.

Tung KSK, Harakal J, Qiao H, Rival C, Paul L, **Hardy DM**, Cheng CY, Goldberg E (2017) Cancer testis autoantigens as germ cell autoantigens continuously egress from normal testes and maintain Treg-dependent tolerance. *J Immunol* 198, Suppl 1, 156.13. Immunology 2017, Annual Meeting of the American Association of Immunologists. May 12-16, Washington, DC.

Roberts EK, **Hardy DM**, Bradley RD (2017) The zonadhesin gene reveals reproductive advantage unique to divergence of Eutherian mammals. 7th Texas Tech Annual Biological Sciences Symposium. April 7-8, Lubbock TX.

Roberts EK, **Hardy DM**, Bradley RD (2017) The utility of zonadhesin in examining a potential isolation mechanism in three pairs of rodent species. 35th Annual meeting of the Texas Society of Mammalogists. February 10-12, Junction, TX.

Roberts EK, **Hardy DM**, Platt II RN, Phillips CD, Bradley RD (2016) Evolution of the zonadhesin gene depicts a unique history during the origin of Eutherian mammals. 96th Annual Meeting of the American Society of Mammalogists. June 24-28, Minneapolis, MN.

Roberts EK, **Hardy DM**, Bradley RD (2016) The utility of zonadhesin in examining a potential isolation mechanism in three pairs of rodent species. 34th Annual meeting of the Texas Society of Mammalogists. February 12-14, Junction, TX.

Roberts EK*, **Hardy DM**, Platt II RN, Phillips CD, Bradley RD (2015) The zonadhesin gene reveals reproductive advantage unique to divergence of Eutherian mammals. 6th Texas Tech Annual Biological Sciences Symposium. April 10-11, Lubbock TX. (**1st Place, Oral Presentation, Evolutionary Biology*)

Roberts EK*, **Hardy DM**, Platt II RN, Phillips CD, Bradley RD (2015) Evolution of the zonadhesin gene depicts a unique history during the origin of Eutherian mammals. 33rd Annual meeting of the Texas Society of Mammalogists. February 13-15, Junction, TX. (**TSM Award*)

Roberts EK, **Hardy DM**, Bradley RD (2014) Is zonadhesin (*Zan*) a useful molecular marker for determining ordinal relationships among mammalian orders? 94th Annual Meeting of the American Society of Mammalogists. June 6-10, Oklahoma City, OK.

Roberts EK, Muthusubramanian A, **Hardy DM**, Bradley RD (2014) Is zonadhesin (*Zan*) a useful molecular marker for determining phylogenetic relationships among mammalian orders? 32nd Annual meeting of the Texas Society of Mammalogists. February 14-16, Junction, TX.

ABSTRACTS (since 2000; continued)

Roberts EK, **Hardy DM**, Bradley RD (2014) Is zonadhesin (Zan) a useful molecular marker for determining phylogenetic relationships among mammalian orders? 5th Texas Tech Annual Biological Sciences Symposium. March 28-29, Lubbock, TX.

Tung KSK, Harakal J, Qiao H, Rival C, Li J, Pramoonjago P, Grafer C, Paul A, Sun W, Reddi PP, Deshmukh U, Xia W, Cheng CY **Hardy DM**, Tang H, Goldberg E (2013) Regulatory T cell-dependent tolerance to non-sequestered male meiotic germ cell antigens. XXII North American Testis Workshop: "The Foundations of Male Fertility." April 10-13, San Antonio, TX.

Roberts EK*, Muthusubramanian A, **Hardy DM**, Bradley RD (2013) The utility of zonadhesin (Zan) in examining a potential isolation mechanism in rodent/Lautilidad de zonadhesin (Zan) en el analisis del mecanismo de aislamiento de roedores. 60th Annual Meeting of the Southwestern Association of Naturalists. April 4-7, McNeese State University, Lake Charles, LA. (*Howard McCarley Student Research Award)

Roberts EK, **Hardy DM**, Bradley RD (2013) The utility of zonadhesin in examining a potential isolation mechanism in three pairs of rodent species. Meeting of the Texas Academy of Science. March 1-2, Shreiner University, Kerrville, TX.

Roberts EK, **Hardy DM**, Bradley RD (2013) The utility of zonadhesin in examining a potential isolation mechanism in three pairs of rodent species. 31st Annual Meeting of the Texas Society of Mammalogists. February 15-17, Junction, TX.

Castro-Piedras I, Quisenberry L, Hutson J, Norman R, McGlone J, **Hardy D**, Lado-Abeal J (2012) Lipopolysaccharide (LPS)-induced non-thyroidal illness syndrome (NTIS) in pigs causes profound hypothyroidism and tissue-specific changes in thyroid hormone metabolism and molecular targets. ENDO 2012: The Endocrine Society's 94th Annual Meeting & Expo. June 23-26, Houston, TX.

Roberts EK, **Hardy DM**, Bradley RD (2012). The utility of zonadhesin in examining a potential isolating mechanism in three pairs of rodent species. 3rd Texas Tech University Annual Biological Sciences Symposium. March 30-31, Lubbock, TX.

Tardif S, Akrofi AS, Dass B, **Hardy DM**, MacDonald CC (2011) Infertility with impaired zona pellucida adhesion of spermatozoa from mice lacking TauCstF-64. *Int J Fertil Steril* Vol. 5 Suppl. 1, I-13. 12th Royan Congress on Reproductive Biomedicine. August 31-September 2, Teheran, Iran.

Fisher GD, Hashemi J, Mansouri H, **Hardy DM** (2011) Validity of Extracellular Matrix Expression Profiles Generated Using Partially Degraded RNA from Human Anterior Cruciate Ligament. Proceedings of the 57th Annual Meeting of the Orthopaedic Research Society. January 13-16, 2011. Long Beach, CA

Fisher GD, Hashemi J, Gill JB, Graham S, Hutson JC, **Hardy DM** (2011) Correlation of Age, Degeneration, and Biomechanical Properties of Human Lumbar Discs with mRNAs Encoding Numerous Extracellular Matrix Components. Proceedings of the 57th Annual Meeting of the Orthopaedic Research Society. January 13-16, 2011. Long Beach, CA

ABSTRACTS (since 2000; continued)

Wheeler K, Luu B, Tardif S, Rival C, Qiao H, Bui E, **Hardy D**, Tung K (2010) Natural regulatory T cells (Treg) determine post vasectomy sequelae: autoimmune orchitis (EAO) versus testis-specific tolerance. *J Immunol* 184, Suppl 1, 83.3. Immunology 2010, Annual Meeting of the American Association of Immunologists.

Fisher GD, Gill JB, Graham S, Hutson JC, Hashemi J, **Hardy DM** (2010). Correlation of Gene Expression with Biomechanical Properties of Human Cervical Discs In Vitro. Proceedings of the 56th Annual Meeting of the Orthopaedic Research Society. March 6-9, 2010. New Orleans, LA

Cormier N, McGlone J, **Hardy DM** (2010) Filling the holes in the human genome: discovery of the sperm acrosomal protein SSMP20. 35th Annual Meeting of the American Society for Andrology. April 10-13, Houston, TX.

Cormier N, McGlone J, **Hardy DM** (2009) Systematic detection and identification of sperm-specific membrane and lipid raft proteins in swine using a targeted proteomic strategy. XX North American Testis Workshop: "Testicular Function: Levels of Regulation." April 1-4, Philadelphia, PA.

Gill JB, Borisova T, Schweizer E, **Hardy DM** (2008) Collagen and MMP mRNA levels vary by sex in degenerated intervertebral discs. 75th Annual Meeting of the American Academy of Orthopaedic Surgeons. March 5-9, 2008, San Francisco, CA.

Tardif S, Wilson MD, Koop BF, **Hardy DM** (2007) Zonadhesin deficient spermatozoa exhibit decreased species-specificity of adhesion to the zona pellucida. 32nd Annual Meeting of the American Society for Andrology. April 21-24, Tampa, FL.

Hashemi J, Chandrashekar N, Mansouri H, **Hardy DM**, Slauterbeck JR (2007) Ultrastructure, size, and material properties of the human anterior cruciate ligament: a sex-based assessment. *J Orthop Sports Physical Ther* 37, A31. ACL Injuries-The Gender Bias: Research Retreat III. April 6-8, 2006, Lexington, KY.

Bailey LB, Brady HB, Tardif S, Thompson LB, **Hardy DM** (2006). Zonadhesin expression and localization in stallion testes. Proceedings of the 9th International Symposium on Equine Reproduction, August 6-11, 2006. Kerkrade, The Netherlands

Hickox JR, Harvey BJ, Schutt RC, Slauterbeck JR, **Hardy DM** (2006). Knee pathology alters expression of multiple MMP, TIMP, and collagen genes in human ACL. Proceedings of the 52nd Annual Meeting of the Orthopaedic Research Society. March 19-22, 2006. Chicago, IL

Tardif S, Wilson MD, Koop BF, **Hardy DM** (2006) Loss of zonadhesin alters specificity of mouse sperm adhesion to the zona pellucida. 31st Annual Meeting of the American Society for Andrology. April 8-11, Chicago, IL.

Tardif S, **Hardy DM** (2005) Capacitation-dependent changes in the localization and composition of zonadhesin in mouse spermatozoa. 38th Annual Meeting of the Society for the Study of Reproduction. July 24-27, Quebec City, Quebec, Canada.

Hickox JR, Slauterbeck JR, **Hardy DM** (2005). Effects of osteoarthritis on gene expression profiles in human ACL. Proceedings of the 51st Annual Meeting of the Orthopaedic Research Society. February 20-23, 2005. Washington, DC

ABSTRACTS (since 2000; continued)

Slauterbeck JR, Pankratz K, Xu KT, Bozeman SC, **Hardy DM** (2004). Canine ovariohysterectomy and orchietomy increases prevalence of ACL injury. Proceedings of the 50th Annual Meeting of the Orthopaedic Research Society. March 7-10, 2004. San Francisco, CA

Slauterbeck JR, Hickox JR, Xu KT, **Hardy DM** (2004). Expression of remodeling genes in human anterior cruciate ligament varies by gender. Proceedings of the 50th Annual Meeting of the Orthopaedic Research Society. March 7-10, San Francisco, CA

Cowden C, Chandrashekar N, Hashemi J, Lee VH, **Hardy DM**, Slauterbeck JR (2004) Effect of estrogen on the mechanical properties of prepubertal rabbit ACL. American Society of Mechanical Engineers 2004 International Congress and Exposition. November 13-19, Anaheim, CA.

Tardif S, **Hardy DM** (2004) Marked variation in the amino acid sequences and polypeptide compositions of zonadhesin among four species of rodents. 37th Annual Meeting of the Society for the Study of Reproduction. August 1-4, Vancouver, BC, Canada

Cheung TL, Wassler MJ, Cornwall GA, **Hardy DM** (2003). Multiple intra-species variants of human zonadhesin. 48th Annual Meeting of the American Society for Andrology. March 29-April 1, Phoenix, AZ.

Tardif S, Cheung TL, Wilson MD, Koop BF, **Hardy DM** (2003). Genomic basis of inter- and intra-species variation in zonadhesin domain structure. 48th Annual Meeting of the American Society for Andrology. March 29-April 1, Phoenix, AZ.

Slauterbeck JR, **Hardy DM**, Shepherd SM, Smith MP, Hirsch RA, Hickox JR (2002) Gender differences in expression of MMP3 in human ACL. Proceedings of the 48th Annual Meeting of the Orthopaedic Research Society. February 10-13, 2002. Dallas, TX

Breazeale KR, Brady HB, Bi M, Uppuluri S, Thompson LD, Bruemmer JE, **Hardy DM** (2002) Biochemical properties and localization of zonadhesin in equine spermatozoa. Proceedings of the 8th International Symposium on Equine Reproduction, Fort Collins CO

Bi M, Winfrey VP, Olson GE, **Hardy DM** (2001). Temporal and functional characterization of zonadhesin processing and localization. 41st Annual Meeting of the American Society for Cell Biology. December 8-12, Washington, DC

Hickox JR, Bi M, **Hardy DM** (2001). Heterogeneous processing and zona pellucida binding activity of pig zonadhesin. Gordon Research Conference on Fertilization and Activation of Development. July 29-Aug. 2, Holderness, NH.

Bi M, Winfrey VP, Olson GE, **Hardy DM** (2001). Marked variation in biochemical properties of zonadhesin in spermatozoa from eight mammals. Gordon Research Conference on Fertilization and Activation of Development. July 29-Aug. 2, Holderness, NH.

Foos MJ, Hickox JR, Mansour PG, **Hardy DM**, Slauterbeck JR (2000). Expression of matrix metalloproteinase and tissue inhibitor of metalloproteinase genes in human anterior cruciate ligament. Proceedings of the 46th Annual Meeting of the Orthopaedic Research Society. March 10-14, 2000. Orlando, FL

ABSTRACTS (since 2000; continued)

Cheung TL, Shepherd SM, **Hardy DM** (2000). Intra-species variants of human zonadhesin. 3rd International Symposium on the Molecular and Cellular Biology of the Egg and Embryo Extracellular Matrix. Aug. 27-Sept. 1, Lake Tahoe, CA.

INVITED LECTURES

"The Future of Medicine in Three Medically Relevant Science Vignettes"

School of Medicine 'Future of Medicine' Elective. October 6, 2014

Texas Tech University Health Sciences Center, Lubbock TX

"Knee Ligament Injury in Women Athletes: from Biochemistry to Biomechanics to Basketball"

Gender-Specific Medicine & Women's Health Symposium. November 14, 2013

Texas Tech University Health Sciences Center, Lubbock TX

"Function of the sperm protein zonadhesin in species specific recognition of the egg"

Animal Sciences Graduate Seminar. January 28, 2013

Texas Tech University, Lubbock TX

"Molecular Basis of Sex Differences in Susceptibility to Knee Ligament Injury"

Gender-Specific Women's Health Symposium. October 3, 2012

Texas Tech University Health Sciences Center, Lubbock TX

"Institutional Responsibilities in Addressing Conflict of Interest"

Ethics Grand Rounds. April 23, 2012

Texas Tech University Health Sciences Center, Lubbock TX

"Function of the sperm protein zonadhesin in species specific recognition of the egg"

Graduate School of Biomedical Sciences Seminar. September 30, 2011

Texas Tech University Health Sciences Center, Lubbock TX

"Zonadhesin confers species-specificity to sperm-egg recognition in mammals"

Cell Physiology & Molecular Biophysics Departmental Seminar. December 10, 2009

Texas Tech University Health Sciences Center, Lubbock TX

"What is the influence of sex on soft tissue healing"

Ligament and Tendon Repair and Regeneration Think Tank. Academy of Orthopaedic Surgery and Sports Medicine. January 24-25, 2009. Miami Beach FL

"ACL injury and other knee pathologies: Insights from modern molecular and genomic methods"

Continuing Medical Education Video. August 2008.

Texas Tech University Health Sciences Center, Lubbock TX

"A trip to the arctic: Sports injury prevention, the Olympics, and Norway's bid for the 2018 Winter Games"

Center for International and Multicultural Affairs Seminar Series. August 20, 2008.

Texas Tech University Health Sciences Center, Lubbock TX

INVITED LECTURES (continued)

“Relationship of sex hormones, gene expression profiles, and ACL remodeling to ACL loading and failure”

Session B: ACL injury paradigm: ACL biology and its relationship to injury and prevention. World Congress on Sports Injury Prevention. June 26-28, 2008. Tromsø, Norway

“Progress, problems, and perspectives on sperm-zona pellucida interactions”

Session IV: Sperm-Oocyte Extracellular Matrix Interactions. Gordon Research Conferences on Fertilization and Activation of Development. July 15-20, 2007. Holderness NH

“Relationship of tissue remodeling to the sex bias in ACL injury: Do men and women ‘just do it differently?’”

Research Seminar, April 10, 2006. Nike Research Division, Nike Inc., Beaverton OR

“What can gene expression profiling tell us about knee pathology and susceptibility to injury?”

Grand Rounds, February 17, 2006. Department of Orthopaedic Surgery
Texas Tech University Health Sciences Center, Lubbock TX

“What can gene expression profiling tell us about knee pathology and susceptibility to injury?”

Grand Rounds, September 22, 2005. Department of Orthopaedics and Rehabilitation
University of Vermont School of Medicine, Burlington VT

“Specificity and Degeneracy in Sperm Adhesion to the Zona Pellucida”

Session V: Molecular Aspects of Sperm-Egg Interaction. Gordon Research Conferences on Fertilization and Activation of Development. July 17-22, 2005. Holderness NH

“Extraordinary Variability in a Mammalian Sperm Protein That May Mediate Species-Specific Adhesion to the Zona Pellucida of the Egg”

Research Seminar Series. April 16, 2004. Department of Animal Sciences and College of Veterinary Medicine, Texas A&M University, College Station TX

“Structural Properties and Activity of Zonadhesin: Implications for the Biochemistry of Species-Specific Gamete Recognition in Mammals”

Keynote Address. Réunion Hiverale en Biologie de la Reproduction du Québec
March 9-12, 2003. Forêt Montmorency, Québec, Canada

“Gamete Recognition in Animal Fertilization: How Many Times Has Nature Invented the Wheel?”

Keynote Address. Reproductive Biology Colloquium. September 23, 2003. University of California, Davis CA

“Sperm-Egg Recognition in Mammals: How Many Times Has Nature Reinvented the Wheel?”

Biochemistry & Molecular Biology Seminar Series. November 12, 2003
University of Arkansas for Medical Sciences, Little Rock AR

“Structure, Activity, and Species Diversity of Zonadhesin”

Biology Seminar Series, October 2000. University of California, Riverside CA

“Structure, Activity, and Species Diversity of Zonadhesin”

Third International Symposium on the Molecular & Cell Biology of Egg- & Embryo-ECM
August 27-September 1, 2000. Granlibakken Conference Center, Lake Tahoe CA

INVITED LECTURES (continued)

“Function of the Sperm Protein Zonadhesin in Fertilization”
Session I: Sperm-Zona Pellucida Interactions. Gordon Research Conferences on Fertilization and Activation of Development. July 25-30, 1999. Holderness NH

“Molecular Basis of Species-Specificity in Gamete Adhesion”
Second International Symposium on the Molecular & Cell Biology of Egg- & Embryo-Coats
October 12-17, 1997. Hokkaido University Conference Center, Sapporo, Japan

“Molecular Basis of Species-Specificity in Gamete Adhesion”
Minisymposium on Sperm/Egg Interaction. Combined 69th Congress of the Japanese Biochemistry Society and 19th Annual Meeting of the Japanese Society for Molecular Biology.
August 26-30, 1996. Sapporo, Japan

“Molecular Basis of Species-Specificity in Gamete Adhesion.”
Reproductive Biology Seminar Series, 1996. University of California, Davis CA
“Molecular Studies of Species-Specificity in Mammalian Gamete Interactions”
Session II: Gamete Recognition Molecules. Gordon Research Conferences on Fertilization and Activation of Development. July 31-August 4, 1995. Holderness NH

“Molecular Studies of Species-Specificity in Mammalian Gamete Interactions”
Physiology Seminar Series, 1995
University of Kentucky School of Medicine, Lexington KY

“Molecular Studies of Species-Specificity in Mammalian Gamete Interactions”
Cell Biology & Neuroscience Seminar, 1995
University of Texas Southwestern Medical Center, Dallas TX

“Molecular Studies of Species-Specificity in Mammalian Gamete Interactions”
Biochemistry Seminar Series, 1995
University of Tennessee School of Medicine, Memphis TN

“A New Approach to the Identification of Sperm Receptors for the Zona Pellucida”
Session V. Activation Signaling in Gametes I. Gordon Research Conferences on Fertilization and Activation of Development. August 5-9, 1991. Holderness NH

“Compartmentalization of Enzymes in the Guinea Pig Sperm Acrosome, and Purification of an Oviductal Protease that Processes the gp43 Component of the Xenopus Egg Envelope.”
Reproductive Biology Seminar Series, 1989. Center for Reproductive Biology Research
Vanderbilt University School of Medicine, Nashville, TN

“Acrosomal Autoantigens and the Acrosin System in Guinea Pig Fertilization”
Reproductive Biology Seminar Series, 1986
University of California, Davis, CA

PROFESSIONAL & ADMINISTRATIVE ACTIVITIES, HONORS, & AWARDS

2020

Co-Leader, MAJIC Medical Education/Assessment Journal and Interest Club
Vice Chair (elected) of the Faculty Council Executive Committee, TTUHSC School of Medicine

2019

Co-Leader, MAJIC Medical Education/Assessment Journal and Interest Club
Vice Chair (elected) of the Faculty Council Executive Committee, TTUHSC School of Medicine

2018

Co-Leader, MAJIC Medical Education/Assessment Journal and Interest Club
Student Government Association Outstanding Faculty, Biomedical Sciences

2017

President, School of Medicine Teaching Academy
Co-Leader, MAJIC Medical Education/Assessment Journal and Interest Club
Unsung Hero Award, School of Medicine

2016

President, School of Medicine Teaching Academy
Co-Leader, MAJIC Medical Education/Assessment Journal and Interest Club

2015

President, School of Medicine Teaching Academy
Student Government Association Outstanding Faculty, Biomedical Sciences
Co-Leader, MAJIC Medical Education/Assessment Journal and Interest Club

2014

President, TTUHSC Faculty Senate
President, School of Medicine Teaching Academy

2013

President, TTUHSC Faculty Senate
President-Elect, School of Medicine Teaching Academy
Unsung Hero Award, School of Medicine
Graduate Program External Reviewer, University of South Florida (Biotechnology Program)
Plenary Session Speaker, Gender Specific Medicine & Women's Health Symposium, TTUHSC
Chair (elected) of the Faculty Council Executive Committee, TTUHSC School of Medicine
Chair (elected) of the Graduate Faculty, TTUHSC Graduate School of Biomedical Sciences

2012

Chair (elected) of the Faculty Council Executive Committee, TTUHSC School of Medicine
Chair (elected) of the Graduate Faculty, TTUHSC Graduate School of Biomedical Sciences
President-Elect, TTUHSC Faculty Senate
Member, School of Medicine Teaching Academy

2011

Wheeler, Tardif et al. 2011, *Proc Natl Acad Sci* rated top 2% publication by Faculty of 1000.
Core Curriculum Student Advocate and Teacher of the Year, Graduate School of Biomedical Sciences
Chair (elected) of the Graduate Faculty, TTUHSC Graduate School of Biomedical Sciences
Vice Chair (elected) of the Faculty Council Executive Committee, TTUHSC School of Medicine
Founding Co-Director, TTUHSC/TTU Master's Degree in Biotechnology
Member, School of Medicine Teaching Academy

PROFESSIONAL & ADMINISTRATIVE ACTIVITIES, HONORS, & AWARDS (continued)

2010

Founding Co-Director, TTUHSC/TTU Master's Degree in Biotechnology
Member, School of Medicine Teaching Academy

2009

Founding Co-Director, TTUHSC/TTU Master's Degree in Biotechnology
Editorial Board, The Journal of Biological Chemistry
Graduate, TTUHSC Faculty Leadership Development Course
Member, School of Medicine Teaching Academy

2008

Core Curriculum Student Advocate and Teacher of the Year, Graduate School of Biomedical Sciences
Founding Co-Director, TTUHSC/TTU Master's Degree in Biotechnology
Editorial Board, The Journal of Biological Chemistry
Member, School of Medicine Teaching Academy

2007

Session Chair, Gordon Research Conference on Fertilization & Activation of Development
Founding Co-Director, TTUHSC/TTU Master's Degree in Biotechnology
Editorial Board, The Journal of Biological Chemistry
Member, School of Medicine Teaching Academy

2006

TTUHSC President's Excellence in Teaching Award
Chair (elected) of the Graduate Faculty, TTUHSC Graduate School of Biomedical Sciences
Founding Co-Director, TTUHSC/TTU Master's Degree in Biotechnology
Editorial Board, The Journal of Biological Chemistry

2005

Chair (elected) of the Graduate Faculty, TTUHSC Graduate School of Biomedical Sciences
Founding Co-Director, TTUHSC/TTU Master's Degree in Biotechnology
Editorial Board, The Journal of Biological Chemistry

2004

Founding Co-Director, TTUHSC/TTU Master's Degree in Biotechnology
Editorial Board, The Journal of Biological Chemistry
Participating Faculty, NIH Reproductive Biology Training Grant

2003

Keynote Speaker, Réunion Hiverale en Biologie de la Reproduction du Québec
Keynote Speaker/Distinguished Alumnus, Reproductive Biology Colloquium, University of California, Davis
Kenneth L. Knight Award, National Athletic Trainer's Association, for Outstanding Research
Manuscript of 2002 published in *The Journal of Athletic Training*.
Founding Co-Director, TTUHSC/TTU Master's Degree in Biotechnology
Participating Faculty, NIH Reproductive Biology Training Grant

2002

Editor, "*Fertilization*", Academic Press, San Diego
Founding Co-Director, TTUHSC/TTU Master's Degree in Biotechnology
Founding Director, TTUHSC Summer Accelerated Biomedical Research Program
Participating Faculty, NIH Reproductive Biology Training Grant

PROFESSIONAL & ADMINISTRATIVE ACTIVITIES, HONORS, & AWARDS (continued)

2001

Editor, “*Fertilization*”, Academic Press, San Diego
Founding Co-Director, TTUHSC/TTU Master’s Degree in Biotechnology
Founding Director, TTUHSC Summer Accelerated Biomedical Research Program
Participating Faculty, NIH Reproductive Biology Training Grant

2000

Editor, “*Fertilization*”, Academic Press, San Diego
Founding Co-Director, TTUHSC/TTU Master’s Degree in Biotechnology
Founding Director, TTUHSC Summer Accelerated Biomedical Research Program
Participating Faculty, NIH Reproductive Biology Training Grant
Co-Chair, Session entitled “Structure of the Zona Pellucida.” Third International Symposium on the
Molecular & Cell Biology of Egg- & Embryo-Extracellular Matrix, Aug. 27-Sept. 1. Lake
Tahoe, CA

1999

Editor, “*Fertilization*”, Academic Press, San Diego
Founding Co-Director, TTUHSC/TTU Master’s Degree in Biotechnology
Founding Director, TTUHSC Summer Accelerated Biomedical Research Program
Participating Faculty, NIH Reproductive Biology Training Grant Review
Panel Member, U54 NIH Site Visit

1998

Editor, “*Fertilization*”, Academic Press, San Diego
Founding Director, TTUHSC Summer Accelerated Biomedical Research Program
Participating Faculty, NIH Reproductive Biology Training Grant
Grant Reviewer (*ad hoc*), USDA National Research Initiative Competitive Grants Program
Review Panel Member, U54 NIH Site Visit

1997

Editor, “*Fertilization*”, Academic Press, San Diego
Founding Director, TTUHSC Summer Accelerated Biomedical Research Program
Participating Faculty, NIH Reproductive Biology Training Grant
Grant Reviewer (*ad hoc*), USDA National Research Initiative Competitive Grants Program
Organizer and Host, TTUHSC Advisors’ Day
Co-organizer, TTU/TTUHSC Joint Seminar Series on Biotechnology (with David Knaff)

1996

Cover photomicrograph, Howard Hughes Medical Institute’s “*Research in Progress*”
Research Grant 96G-324 named in honor of AHA Distinguished Service Award recipient Carol
Phillips of Amarillo, TX, by the American Heart Association Texas Affiliate
Editor, “*Fertilization*”, Academic Press, San Diego
Participating Faculty, NIH Reproductive Biology Training Grant
Invited Investigator, International Collaborative Research Project: “Studies on the Sperm/Oocyte
Interaction in Fertilization.” Ministry for Education, Science, Sports and Culture, Japan
Grant Reviewer (*ad hoc*), USDA National Research Initiative Competitive Grants Program

1995

Grant Reviewer (*ad hoc*), USDA National Research Initiative Competitive Grants Program
Grant Reviewer (*ad hoc*), National Science Foundation

PROFESSIONAL & ADMINISTRATIVE ACTIVITIES, HONORS, & AWARDS (continued)

1994

Member, Enhancing Reproductive Efficiency Grant Review Panel, USDA National Research Initiative Competitive Grants Program

1989

NIH National Research Service Award Postdoctoral Fellowship, University of California, Davis

1988

NIH National Research Service Award Postdoctoral Fellowship, University of California, Davis

1987

Chair, Cell Biology Session. 12th Annual West Coast Undergraduate Research Conference, Santa Clara University

NIH National Research Service Award Postdoctoral Fellowship, University of California, Davis

1985

Council Chair, University of New Mexico Graduate Student Association

Council Representative, Medical Sciences Program, University of New Mexico Graduate Student Association

1984

Council Chair, University of New Mexico Graduate Student Association,

Council Representative, Medical Sciences Program, University of New Mexico Graduate Student Association

1983

Council Representative, Medical Sciences Program, University of New Mexico Graduate Student Association

1980

Outstanding Science Undergraduate (highest GPA), South Dakota School of Mines & Technology

1979

Outstanding Science Undergraduate (highest GPA), South Dakota School of Mines & Technology
President, Student Chapter of the American Chemical Society, South Dakota School of Mines & Technology

American Chemical Society Award for Excellence in Analytical Chemistry, South Dakota School of Mines & Technology

1978

Outstanding Science Undergraduate (highest GPA), South Dakota School of Mines & Technology
President, Student Chapter of the American Chemical Society, South Dakota School of Mines & Technology

Outstanding Cadet, US Army ROTC, South Dakota School of Mines & Technology

1977

US Army ROTC Scholarship

1976

US Army ROTC Scholarship

Valedictorian (1/410), Rapid City Stevens High School

PUBLIC DATABASE ENTRIES

HM070406 *Equus asinus* zonadhesin (*Zan*) mRNA, partial cds
HM064497 *Equus caballus* zonadhesin (*Zan*) mRNA, partial cds
AF332980 *Homo sapiens* zonadhesin variant 6 (*ZAN*) mRNA, complete cds
AF332979 *Homo sapiens* zonadhesin variant 5 (*ZAN*) mRNA, complete cds
AF332978 *Homo sapiens* zonadhesin variant 4 (*ZAN*) mRNA, complete cds
AF332977 *Homo sapiens* zonadhesin variant 3 (*ZAN*) mRNA, complete cds
AF332976 *Homo sapiens* zonadhesin variant 2 (*ZAN*) mRNA, complete cds
AF332975 *Homo sapiens* zonadhesin variant 1 (*ZAN*) mRNA, complete cds
AY046056 *Mus musculus* zonadhesin (*Zan*) gene, complete cds
AY046055 *Homo sapiens* zonadhesin (*ZAN*) gene, complete cds, alternatively spliced
AF312033 *Mus musculus* Chromosome 5 acetylcholinesterase (*Ache*)-TFR2 (*Tfr2*) genes, 12 complete cds
AF312032 *Homo sapiens* 7q22 acetylcholinesterase (*ACHE*)-zonadhesin (*ZAN*) genes, 6 complete cds
NM_031408 *Mus musculus* PERQ amino acid rich, with GYF domain 1 (*Perq1*), mRNA
NM_031406 *Mus musculus* cation-chloride cotransporter-interacting protein 1 (*Cip1*-pending), mRNA
NM_031405 *Mus musculus* arsenate resistance protein 2 (*Ars2*-pending), mRNA
NM_031404 *Mus musculus* actin-like 6 (*Actl6*), mRNA
NM_010312 *Mus musculus* guanine nucleotide binding protein, beta 2 (*Gnb2*), mRNA
NM_009599 *Mus musculus* acetylcholinesterase (*Ache*), mRNA
AR067862 Sequence 4 from patent U.S. 5,851,817
AR067861 Sequence 3 from patent U.S. 5,851,817
AR067860 Sequence 1 from patent U.S. 5,851,817
U40024 *Sus scrofa* zonadhesin (*Zan*) mRNA, complete cds
A40242 *Xenopus laevis* oviductin (3.4.21.--) N-terminal sequence
S02175 *Capra hircus* acrosin (3.4.21.10) light chain N-terminal sequence
S02176 *Capra hircus* acrosin (3.4.21.10) heavy chain N-terminal sequence
A60802 *Cavia porcellus* 25K autoantigen (AA1/TPX-1) N-terminal sequence

TEACHING

Texas Tech University Health Sciences Center

2019/2020

GSBS 5471 Biomedical Sciences Core I: Molecules-General Biochemistry (graduate curriculum)

Course Director

MSCI 5102 Biology of Cells & Tissues (medical curriculum)

Lectures on fundamental principles of biochemistry, amino acids, and protein structure and function

P3-I Patients, Physicians, & Populations, MSII (medical curriculum)

Small Group Leader

GBMG 6333 Advanced Protein Biochemistry (graduate curriculum)

Course Director

GCMB6320 Advanced Cell Biology

Lectures on animal fertilization and activation of development

GSBS5101 Responsible Conduct of Research

Lectures on Conflict of Interest

2018/2019

GSBS 5471 Biomedical Sciences Core I: Molecules-General Biochemistry (graduate curriculum)

Course Director

MSCI 5102 Biology of Cells & Tissues (medical curriculum)

Lectures on fundamental principles of biochemistry, amino acids, and protein structure and function

P3-II Patients, Physicians, & Populations, MSII (medical curriculum)

Small Group Leader

GBMG 6333 Advanced Protein Biochemistry (graduate curriculum)

Course Director

GCMB6320 Advanced Cell Biology

Lectures on animal fertilization and activation of development

GSBS5101 Responsible Conduct of Research

Lectures on Conflict of Interest

2017/2018

GSBS 5471 Biomedical Sciences Core I: Molecules-General Biochemistry (graduate curriculum)

Course Director

MSCI 5102 Biology of Cells & Tissues (medical curriculum)

Lectures on fundamental principles of biochemistry, amino acids, and protein structure and function

GSBS 5373 Biomedical Sciences Core III: Genes (graduate curriculum)

Lectures on polymerase chain reaction and molecular evolution

P3-I Patients, Physicians, & Populations, MSI (medical curriculum)

Small Group Leader

TEACHING (continued)

Texas Tech University Health Sciences Center

2017/2018 (continued)

GBMG 6333 Advanced Protein Biochemistry (graduate curriculum)

Course Director

GCMB6320 Advanced Cell Biology (graduate curriculum)

Lectures on animal fertilization and activation of development

GSBS5101 Responsible Conduct of Research

Lectures on Conflict of Interest

2016/2017

GSBS 5471 Biomedical Sciences Core I: Molecules-General Biochemistry (graduate curriculum)

Course Director

MSCI 5102 Biology of Cells & Tissues (medical curriculum)

Lectures on fundamental principles of biochemistry, amino acids, and protein structure and function

GSBS 5373 Biomedical Sciences Core III: Genes (graduate curriculum)

Lectures on polymerase chain reaction and molecular evolution

P3-II Patients, Physicians, & Populations, MSII (medical curriculum)

Small Group Leader

GBMG 6333 Advanced Protein Biochemistry (graduate curriculum)

Course Director

GCMB6320 Advanced Cell Biology (graduate curriculum)

Lectures on animal fertilization and activation of development

2015/2016

GSBS 5471 Biomedical Sciences Core I: Molecules-General Biochemistry (graduate curriculum)

Course Director

GSBS 5373 Biomedical Sciences Core III: Genes (graduate curriculum)

Lectures on polymerase chain reaction and molecular evolution

P3-I Patients, Physicians, & Populations, MSI (medical curriculum)

Small Group Leader

GBMG 6333 Advanced Protein Biochemistry (graduate curriculum)

Course Director

GCMB6320 Advanced Cell Biology (graduate curriculum)

Lectures on animal fertilization and activation of development

2014/2015

GSBS 5471 Biomedical Sciences Core I: Molecules-General Biochemistry (graduate curriculum)

Course Director

GSBS 5373 Biomedical Sciences Core III: Genes (graduate curriculum)

Lectures on polymerase chain reaction and molecular evolution

TEACHING (continued)

Texas Tech University Health Sciences Center

2014/2015 (continued)

P3-2 Patients, Physicians, & Populations, MSII (medical curriculum)
Small Group Leader

GBMG 6333 Advanced Protein Biochemistry (graduate curriculum)
Course Director

GCMB6320 Advanced Cell Biology (graduate curriculum)
Lectures on animal fertilization and activation of development

2013/2014

GSBS 5471 Biomedical Sciences Core I: Molecules-General Biochemistry (graduate curriculum)
Course Director

GSBS 5373 Biomedical Sciences Core III: Genes (graduate curriculum)
Lectures on polymerase chain reaction and molecular evolution

P3-1 Patients, Physicians, & Populations, MSI (medical curriculum)
Small Group Leader

ECEII Early Clinical Experience II (medical curriculum)
Small Group Leader

GBMG 6333 Advanced Protein Biochemistry (graduate curriculum)
Course Director

GCMB6320 Advanced Cell Biology (graduate curriculum)
Lectures on animal fertilization and activation of development

2012/2013

GSBS 5471 Biomedical Sciences Core I: Molecules-General Biochemistry (graduate curriculum)
Course Director

GSBS 5373 Biomedical Sciences Core III: Genes (graduate curriculum)
Lectures on polymerase chain reaction and molecular evolution

ECEII Early Clinical Experience II (medical curriculum)
Small Group Leader

GBMG 6333 Advanced Protein Biochemistry (graduate curriculum)
Course Director

GCMB6320 Advanced Cell Biology (graduate curriculum)
Lectures on animal fertilization and activation of development

TEACHING (continued)

Texas Tech University Health Sciences Center

2011/2012

GSBS 5471 Biomedical Sciences Core I: Molecules-General Biochemistry (graduate curriculum)

Course Director

GBMG 6333 Advanced Protein Biochemistry (graduate curriculum)

Course Director

GSBS 5373 Biomedical Sciences Core III: Genes (graduate curriculum)

Lectures on genetic information, molecular evolution, and polymerase chain reaction

GSBS 5174 Biomedical Sciences Core IV: Seminar (graduate curriculum)

Lecture on the function of the sperm protein zonadhesin in species specific recognition of the egg

ECEI Early Clinical Experience I (medical curriculum)

Small Group Leader

GCMB6320 Advanced Cell Biology (graduate curriculum)

Lectures on animal fertilization and activation of development

GBTC 6202 Biomedical Informatics (graduate curriculum)

Lectures on DNA sequence and protein structure analysis using Lasergene

2010/2011

Biomedical Track, Biotechnology Master's Degree (graduate curriculum)

Graduate Advisor

GBMG 5421 General Biochemistry (graduate curriculum)

Course Director

GBTC/BTEC 6101 Biotechnology Seminar (graduate curriculum)

Course Director

GBTC 7000 Biotechnology Research (graduate curriculum)

Course Director

GBTC/BTEC 6301 Introduction to Biotechnology (graduate curriculum)

Lectures on biotechnology, genetic information, molecular evolution, and polymerase chain reaction

GANM6620 Advanced Cell Biology I

Lectures on animal fertilization and activation of development

ECEII Early Clinical Experience II (medical curriculum)

Small Group Leader

GBMG 6333 Advanced Protein Biochemistry (graduate curriculum)

Course Director

GBTC 6202 Biomedical Informatics (graduate curriculum)

Lectures on DNA sequence and protein structure analysis using Lasergene

TEACHING (continued)

Texas Tech University Health Sciences Center

2009/2010

Biomedical Track, Biotechnology Master's Degree (graduate curriculum)

Graduate Advisor

GBMG 5421 General Biochemistry (graduate curriculum)

Course Director

GBMG 6333 Advanced Protein Biochemistry (graduate curriculum)

Course Director

GBTC/BTEC 6101 Biotechnology Seminar (graduate curriculum)

Course Director

GBTC 7000 Biotechnology Research (graduate curriculum)

Course Director

GBTC/BTEC 6301 Introduction to Biotechnology (graduate curriculum)

Lectures on biotechnology, genetic information, molecular evolution, and polymerase chain reaction

GANM6620 Advanced Cell Biology I (graduate curriculum)

Lectures on animal fertilization and activation of development

ECEI Early Clinical Experience I (medical curriculum)

Small Group Leader

GBTC 6202 Biomedical Informatics (graduate curriculum)

Lectures on DNA sequence and protein structure analysis using Lasergene

2008/2009

Biomedical Track, Biotechnology Master's Degree (graduate curriculum)

Graduate Advisor

GBCH 5421 General Biochemistry (graduate curriculum)

Course Director

GANM/GBCH 7101 Biochemistry & Cell Biology Seminar (graduate curriculum)

Course Director

GBTC/BTEC 6101 Biotechnology Seminar (graduate curriculum)

Course Director

GBTC 7000 Biotechnology Research (graduate curriculum)

Course Director

GBTC/BTEC 6301 Introduction to Biotechnology (graduate curriculum)

Lectures on biotechnology, genetic information, molecular evolution, and polymerase chain reaction

GANM6620 Advanced Cell Biology I

Lectures on animal fertilization and activation of development

GBTC 6102 Biomedical Informatics (graduate curriculum)

Lectures on DNA sequence and protein structure analysis using Lasergene

TEACHING (continued)

Texas Tech University Health Sciences Center

2007/2008

Biomedical Track, Biotechnology Master's Degree (graduate curriculum)
Graduate Advisor

GBTC/BTEC 6301 Introduction to Biotechnology (graduate curriculum)
Course Director

GBTC/BTEC 6101 Biotechnology Seminar (graduate curriculum)
Course Director

GBTC 7000 Biotechnology Research (graduate curriculum)
Course Director

GBTC 6102 Biomedical Informatics (graduate curriculum)
Lectures on DNA sequence and protein structure analysis using Lasergene.

2006/2007

Biomedical Track, Biotechnology Master's Degree (graduate curriculum)
Graduate Advisor

GBTC/BTEC 6101 Biotechnology Seminar (graduate curriculum)
Course Director

GBTC 7000 Biotechnology Research (graduate curriculum)
Course Director

GBTC/BTEC 6301 Introduction to Biotechnology (graduate curriculum)
Course Director

GANM 6620 Advanced Cell Biology I (graduate curriculum)
Lectures on animal fertilization and activation of development

2005/2006

Biomedical Track, Biotechnology Master's Degree (graduate curriculum)
Graduate Advisor

GBTC/BTEC 6301 Introduction to Biotechnology (graduate curriculum)
Course Director

GBTC/BTEC 6101 Biotechnology Seminar (graduate curriculum)
Course Director

GBTC 7000 Biotechnology Research (graduate curriculum)
Course Director

TEACHING (continued)

Texas Tech University Health Sciences Center

2004/2005

Biomedical Track, Biotechnology Master's Degree (graduate curriculum)
Graduate Advisor

GBTC/BTEC 6301 Introduction to Biotechnology (graduate curriculum)
Course Director

GBTC/BTEC 6101 Biotechnology Seminar (graduate curriculum)
Course Director

GBTC 7000 Biotechnology Research (graduate curriculum)
Course Director

GBTC 6001 Biotechnology Internship (graduate curriculum)
Course Director

GBCH 6533 Molecular Biology of Eukaryotes: Proteins (graduate curriculum)
Lectures on Purification & characterization

GANM 5306 Mechanisms of Cellular Differentiation (graduate curriculum)
Lecture on Fertilization

GBCH 6441 Cell Signaling (graduate curriculum)
Lectures on G-proteins, cyclic nucleotides, and cyclase enzymes

2003/2004

Biomedical Track, Biotechnology Master's Degree (graduate curriculum)
Graduate Advisor

GBTC/BTEC 6301 Introduction to Biotechnology (graduate curriculum)
Course Director

GBTC/BTEC 6101 Biotechnology Seminar (graduate curriculum)
Course Director

GBTC 7000 Biotechnology Research (graduate curriculum)
Course Director

GBTC 6001 Biotechnology Internship (graduate curriculum)
Course Director

GBCH 6222 Biochemistry Problem Solving (graduate curriculum)
Lectures on Enzyme kinetics, DNA sequencing, and PCR

GBCH 6441 Cell Signaling (graduate curriculum)
Lectures on G-proteins, cyclic nucleotides, and cyclase enzymes

BINF 5301 Biological Informatics (graduate curriculum)
Lectures on Sequence analysis using Lasergene

TEACHING (continued)

Texas Tech University Health Sciences Center

2002/2003

Biomedical Track, Biotechnology Master's Degree (graduate curriculum)
Graduate Advisor

GBTC/BTEC 6301 Introduction to Biotechnology (graduate curriculum)
Course Director

GBTC/BTEC 6101 Biotechnology Seminar (graduate curriculum)
Course Director

GBTC 7000 Biotechnology Research (graduate curriculum)
Course Director

GBTC 6001 Biotechnology Internship (graduate curriculum)
Course Director

GBCH 6533 Molecular Biology of Eukaryotes: Proteins (graduate curriculum)
Lectures on Purification & characterization

GBCH 6222 Biochemistry Problem Solving (graduate curriculum)
Lectures on Enzyme kinetics, DNA sequencing, and PCR

GANM 5306 Mechanisms of Cellular Differentiation (graduate curriculum)
Lecture on Fertilization

GBCH 6441 Cell Signaling (graduate curriculum)
Lectures on G-proteins, cyclic nucleotides, and cyclase enzymes

BINF 5301 Biological Informatics (graduate curriculum)
Lectures on Sequence analysis using Lasergene

2001/2002

Biomedical Track, Biotechnology Master's Degree (graduate curriculum)
Graduate Advisor

GBTC 6301/BTEC Introduction to Biotechnology (graduate curriculum)
Course Director

GANM 5409 Biology of Reproduction (graduate curriculum)
Course Director

GBTC 6101 Biotechnology Seminar (graduate curriculum)
Course Co-Director

GBTC 7000 Biotechnology Research (graduate curriculum)
Course Director

GBTC 6001 Biotechnology Internship (graduate curriculum)
Course Director

GBCH 6222 Biochemistry Problem Solving (graduate curriculum)
Lectures on Enzyme kinetics, metabolism, and PCR

TEACHING (continued)

Texas Tech University Health Sciences Center

2001/2002 (continued)

GANM 6704 Cell Function & Regulation (graduate curriculum)

Lectures on Signal propagation

BINF 5301 Biological Informatics (graduate curriculum)

Lectures on Sequence analysis using Lasergene

Orthopedics Core Conference & Journal Club (medical resident curriculum)

Lectures on Cell and molecular biology

2000/2001

Biomedical Track, Biotechnology Master's Degree (graduate curriculum)

Graduate Advisor

GANM 5306 Mechanisms of Cellular Differentiation (graduate curriculum)

Lectures on Fertilization & sex determination

GBCH 6222 Biochemistry Problem Solving (graduate curriculum)

Lectures on PCR, mutagenesis, and DNA sequencing

GBCH 6533 Molecular Biology of Eukaryotes: Proteins (graduate curriculum)'

Lectures on Purification & characterization

GANM 6704 Cell Function & Regulation (graduate curriculum)

Lectures on Signal propagation

Orthopedics Core Conference & Journal Club (medical resident curriculum)

Lectures on Cell and molecular biology

1999/2000

GANM 5309 Biology of Reproduction (graduate curriculum)

Course Director

GANM 6704 Cell Function & Regulation (graduate curriculum)

Lectures on Signal propagation

GBCH 6222 Biochemistry Problem Solving (graduate curriculum)

Lectures on Genomics and evolution

Orthopedics Core Conference & Journal Club (medical resident curriculum)

Lectures on Cell and molecular biology

1998/99

GANM 5306 Mechanisms of Cellular Differentiation (graduate curriculum)

Lectures on Fertilization & sex determination

GANM 6704 Cell Function & Regulation (graduate curriculum)

Lectures on Methodology & signal propagation

TEACHING (continued)

Texas Tech University Health Sciences Center

1997/98

GANM 5309 Biology of Reproduction (graduate curriculum)

Course Director

MAN 50709 Human Development (medical curriculum)

Lectures on DNA testing & cellular interactions

GBCH 6533 Molecular Biology of Eukaryotes: Proteins (graduate curriculum)

Lectures on Protein purification & characterization

GANM 6704 Cell Function & Regulation (graduate curriculum)

Lectures on Methodology & signal propagation

1996/97

GANM 5306 Mechanisms of Cellular Differentiation (graduate curriculum)

Lectures on Gamete differentiation & fertilization

MAN 50709 Human Development (medical curriculum)

Lectures on DNA testing & cellular interactions

GANM 6704 Cell Function & Regulation (graduate curriculum)

Lectures on Signal propagation

1995/96

GANM 5309 Biology of Reproduction (graduate curriculum)

Lectures on Coitus & fertilization

GANM 6704 Cell Function & Regulation (graduate curriculum)

Lectures on Signal propagation

1991/92 & 1992/93

Cell-Cell Interactions (graduate)

Lectures on Fertilization & activation of development

University of California, Davis

1988/89

Biochemistry 202A,B (upperclass undergraduate curriculum)

Lectures on Liquid chromatography, HPLC, & FPLC

University of New Mexico School of Medicine

1983/84, 1984/85, 1985/86

Biochemistry 423 (graduate & pharmacy curricula)

Teaching Assistant

POSTDOCTORAL FELLOWS

Steve Tardif, Ph.D. Research Associate, FCAR Fellow, Lalor Fellow	2001-2010
Tatyana Borisova, Ph.D. Research Associate	2005-2008
Michael J. Wassler, Ph.D. Research Associate, TTUHSC Center of Excellence in Reproduction	2000-2002
Surasit Issarachai, M.D. Internal Medicine Resident	1996

PH.D. STUDENTS

Emma K. Roberts TTU Biology Program (co-advisor with Dr. Robert Bradley) Dissertation title: <i>pending</i>	2014-present
Nathaly Cormier TTUHSC Cell & Molecular Biology Program Dissertation title: <i>“Systematic Characterization of Sperm-Specific Membrane Proteins by Targeted Proteomics”</i>	2004-2010
Nagesh Uppuluri TTUHSC Biochemistry & Molecular Genetics Program Dissertation title: <i>“Biochemical Characterization of Pig Zonadhesin’s Zona Pellucida Binding Activity”</i>	2002-2007
Ming Bi TTUHSC Medical Biochemistry Program Dissertation title: <i>“Biochemical and Functional Characterization of Zonadhesin”</i>	1996-2002

M.S. STUDENTS

Nhi Nguyen TTUHSC Biotechnology M.S. Program, Biomedical Track, non-thesis	2019-present
Spencer Godard TTU Biotechnology M.S. Program, General Science Track, non-thesis	2016-2017
Jessica Sladek TTUHSC Biotechnology M.S. Program, Biomedical Track, non-thesis	2015-2016
Archana Muthusubramanian TTU Biotechnology M.S. Program, General Science Track, non-thesis	2012-2013
Emma K. Roberts TTU Biology Program (co-advisor with Dr. Robert Bradley)	2011-2014
Neil A. Pithadia TTUHSC Biotechnology M.S. program, Biomedical Track, non-thesis	2009-2010

M.S. STUDENTS (continued)

Geoffrey D. Fisher TTU Mechanical Engineering Program (co-advisor with Dr. Javad Hashemi) Thesis title: <i>“Biomechanical Properties and Gene Expression Profiles of Human Cervical Intervertebral Discs In Vitro”</i>	2007-2009
Elizabeth (Schweizer) White TTUHSC Biotechnology M.S. Program, Biomedical Track, non-thesis	2005-2009
Sara Howard TTU Animal Sciences M.S. program (co-advisor with Dr. Heidi Brady), non-thesis	2007-2008
Faye Elizabeth (Beth) Eager TTU Animal Sciences M.S. program (co-advisor with Dr. Heidi Brady) Thesis title: <i>“Comparison of Biochemical Properties of Zonadhesin in Spermatozoa from Fertile and Subfertile Stallions”</i>	2002-2005
L. Blair Bailey TTU Animal Sciences M.S. program (co-advisor with Dr. Heidi Brady), non-thesis	2005-2007
Amma S. Akrofi TTUHSC Biotechnology M.S. program, Biomedical Track, non-thesis	2005-2006
Brandon C. Burriss TTUHSC Biotechnology M.S. program, Biomedical Track, non-thesis	2002-2003
Kelly Rebecca Breazeale TTU Animal Sciences M.S. program (co-advisor with Dr. Heidi Brady) Thesis title: <i>“Biochemical Properties and Localization of Zonadhesin in Equine Spermatozoa”</i>	2001-2002
John R. Hickox TTUHSC Biotechnology M.S. program, Biomedical Track, non-thesis	2001-2002
Nancy (Prudhomme) Haden TTU Animal Sciences M.S. program (co-advisor with Dr. Scott Whisnant) <i>Student completed research (Haden et al., 2001, Biol Reprod) but did not write thesis.</i>	1996-1997

UNDERGRADUATE AND OTHER STUDENTS

Tasmin Omy, Volunteer	2018-present
Jennifer Phan, TTUHSC Medical Student	2015-2016
Jake Davis, TTU Undergraduate Research Volunteer	2015-2016
Millie Dooley, TTUHSC Medical Student	2013
Matthew Strawn, TTUHSC Medical Student	2012-2013
Mary Sheerer, TTUHSC Medical Student	2012-2013
Geoffrey D. Fisher, TTUHSC Medical Student	2009-2013
Juan Martin, Visiting Predoctoral Fellow Formacion Personal Investigador, Universidad Complutense, Madrid, Spain	2004
Colin Jennings, TTUHSC SABR Intern	2005
Samuel Wright, TTUHSC SABR Intern	2004

UNDERGRADUATE AND OTHER STUDENTS (continued)

John Bradley, TTUHSC SABR Intern	2002
Joshua Carnes, TTUHSC SABR Intern, and TTU/HHMI Undergraduate Research Fellow	2000-2003
Sharron Shepherd, TTU/HHMI Undergraduate Research Fellow	1999-2001
Thomas Butler, TTUHSC SABR Intern	2001
Angela Lynn, TTU/HHMI Undergraduate Research Fellow	1999-2000
Sara Hayes, TTU/HHMI Undergraduate Research Fellow	2000
Trevor Kerr, TTU Clark Scholar	2000
Ramyar Gilani, TTUHSC Medical Student	1999
Tyler Handcock, TTUHSC SABR Intern	1999
Shannon Keel, TTU/HHMI Undergraduate Research Fellow	1998-1999
Marcus Foos, TTUHSC Medical Student	1998-1999
Paul Mansour, TTU Engineering/Pre-Medical Undergraduate	1997-1999
Dana Clair Edwards, TTU/HHMI Undergraduate Research Fellow	1996-1998
Marissa Rodriguez, TTUHSC/NIH High School Minority Fellow	1996

DOCTORAL DISSERTATION COMMITTEES

Caitlyn Myers TTUHSC Biochemistry, Cell & Molecular Biology Concentration Major Advisor: Dr. Gail Cornwall Dissertation title: <i>Pending</i>	2018-present
Kevin Bass TTUHSC Biochemistry, Cell & Molecular Biology Concentration Major Advisor: Dr. Vadivel Ganapathy Dissertation title: <i>Pending</i>	2018-present
Timothy Brown TTUHSC Biochemistry, Cell & Molecular Biology Concentration Major Advisor: Dr. Vadivel Ganapathy Dissertation title: <i>“Novel Mechanisms for Tumor-Cell Metabolite Lactic Acid in Promotion of Tumor Growth: Facilitation of Immune Evasion and Nutrition”</i>	2017-2020
Bojana Ristic TTUHSC Biochemistry, Cell & Molecular Biology Concentration Major Advisor: Dr. Vadivel Ganapathy Dissertation title: <i>Pending</i>	2016-present
Kellsie Beasley TTUHSC Biochemistry, Cell & Molecular Biology Concentration Major Advisor: Dr. Gail Cornwall Dissertation title: <i>None. Student changed mentors.</i>	2015-2017

DOCTORAL DISSERTATION COMMITTEES (continued)

- Bala Meenakshi Xavier 2013-2017
TTUHSC Biochemistry & Molecular Genetics Concentration
Major Advisor: Dr. Ina Urbatsch
Dissertation title: *"Mutations in the First Nucleotide Binding Domain Improve Human CFTR Stability and Its Trafficking in Yeast"*
- Shannon Dunn 2013-2016
TTUHSC Pharmacology & Neuroscience Concentration
Major Advisor: Dr. Kumuda Das
Dissertation title: *"Reduced Levels of Functional Thioredoxin in Mice and the Development of Diabetes"*
- Ashly Hindle 2012-2019
TTUHSC Cell & Molecular Biology Concentration
Major Advisor: Dr. C. Patrick Reynolds
Dissertation title: *"MGMT as a Chemoresistance Marker and as a Therapeutic Target for Chemosensitization to the Combination of Temozolomide and Irinotecan in Preclinical Models of Neuroblastoma"*
- Matthew Kay 2011-2015
TTUHSC Microbiology & Immunology Concentration
Major Advisor: Dr. Joe A. Fralick
Dissertation title: *"Search for Mutant Suppressors in TolC-Related Assembly Proteins"*
- Leah Quisenberry 2010-2014
TTUHSC Cell & Molecular Biology Concentration
Major Advisor: Dr. Joaquin Lado-Abeal
Dissertation title: *None. Student quit program and graduated with M.S.*
- Ariful Bhuiyan 2011-2013
TTU Mechanical Engineering Program
Major Advisor: Dr. Stephen Ekwaro-Osire and Dr. Javad Hashemi
Dissertation title: *"Anterior Cruciate Ligament Response Due to Forces Resulting from Quadriceps Muscle and Ground Reaction"*
- Bhagavathi Ramasubramanian 2010-2012
TTUHSC Microbiology & Immunology Concentration
Major Advisor: Dr. Joe A. Fralick
Dissertation title: *"The Role of Equatorial Domain of the Outer Membrane Efflux Protein (OEP) on its Specificity and Stability"*
- Sangeetha Gattam 2010-2012
TTUHSC Biochemistry & Molecular Genetics Concentration
Major Advisor: Dr. C. Patrick Reynolds
Dissertation title: *None. Student quit program and graduated with M.S.*
- Michael Holliday 2008-2012
TTUHSC Cell & Molecular Biology Concentration
Major Advisor: Dr. Barry Maurer
Dissertation title: *"C22:0- and C24:0-Dihydroceramides Confer Cytotoxicity in T-Cell Acute Lymphoblastic Leukemia Cell Lines"*

DOCTORAL DISSERTATION COMMITTEES (continued)

Doug Swartz TTUHSC Biochemistry & Molecular Genetics Concentration Major Advisor: Dr. Ina L. Urbatsch Dissertation title: <i>“Genetic Manipulation of P-Glycoprotein Provides New Tools for Biophysical Studies of the ABC Multidrug Transport Mechanism”</i>	2006-2012
Jianping Bai TTUHSC Microbiology & Immunology Program Major Advisor: Dr. Joe A. Fralick Dissertation title: <i>“Studies on the Functional Assembly of a Non-Functional VceAB-OprM Multiple Drug Resistant Efflux Pump in Escherichia coli”</i>	2006-2009
Brandy Jo Harvey Johnson TTUHSC Cell & Molecular Biology Program Major Advisor: Dr. Ina L. Urbatsch Dissertation title: <i>“Bile Acids Stimulate ATP Hydrolysis in the ABCG5/G8 Cholesterol Transporter”</i>	2005-2009
Kim Chau TTUHSC Cell & Molecular Biology Program Major Advisor: Dr. Gail A. Cornwall Dissertation title: <i>None. Student completed quit program and graduated with M.S.</i>	2004-2009
Priya Uppuluri TTUHSC Microbiology & Immunology Program Major Advisor: Dr. W. LaJean Chaffin Dissertation title: <i>“Gene Expression Studies in Candida albicans”</i>	2002-2006
Naveen Kugwe Chandrasekhar TTU Mechanical Engineering Program Major Advisor: Dr. Javad Hashemi Dissertation title: <i>“Sex-Based Difference in the Morphology, Tensile Properties and Ultrastructure of the Human Anterior Cruciate Ligament and Patellar Tendon”</i>	2004-2005
Oya Yazgan TTUHSC Medical Biochemistry Program Major Advisor: Dr. Curt M. Pfarr Dissertation title: <i>“Functional Characterization of Two JunD Isoforms”</i>	1998-2002
Nelson Hsia TTUHSC Medical Biochemistry Program Major Advisor: Dr. Gail A. Cornwall Dissertation title: <i>“Transcriptional Regulation of the CRES Gene and the Identification of Novel CRES-Like Genes”</i>	1998-2002
Sunday Suzanne Crider-Pirkle TTUHSC Cell Biology & Anatomy Program Major Advisors: Dr. Harry M. Weitlauf and Dr. Charles H. Faust Dissertation title: <i>“Identification of Cubilin (p400) as a Galectin-3 Binding Protein from the Murine Uteroplacental Complex”</i>	1998-2000

DOCTORAL DISSERTATION COMMITTEES (continued)

- Brinda Dass 1997-2001
TTUHSC Cell Biology & Anatomy Program
Major Advisor: Dr. Clinton C. MacDonald
Dissertation title: *"Polyadenylation in Mammalian Male Germ Cells"*
- Lance Patrick Walsh 1997-2001
TTUHSC Medical Biochemistry Program
Major Advisor: Dr. Douglas M. Stocco
Dissertation title: *"The Effects of Environmental Pollutants on Steroidogenic Acute Regulatory Protein Expression"*
- Heather Gayle Sutton-Walsh 1996-2001
TTUHSC Medical Biochemistry Program
Major Advisor: Dr. Gail A. Cornwall
Dissertation title: *"Identification and Characterization of Cystatin-Related Epididymal and Spermatogenic (CRES) Expression in Anterior Pituitary Gonadotropes"*
- Yang (Dennis) Du 1996-2000
TTUHSC Medical Biochemistry Program
Major Advisor: Dr. Simon C. Williams
Dissertation title: *"Molecular Control Mechanisms of Myeloid Differentiation and Proliferation"*
- Darrel Wayne Eubank 1997-2000
TTUHSC Medical Biochemistry Program
Major Advisors: Dr. Elmus G. Beale and Dr. Simon C. Williams
Dissertation title: *"Transcriptional Regulation of the Phosphoenolpyruvate Carboxykinase Gene in Adipocytes"*
- Steven Robert King 1997-1998
TTUHSC Medical Biochemistry Program
Major Advisor: Dr. Douglas M. Stocco
Dissertation title: *"Biochemical Characterizations of the Steroidogenic Acute Regulatory (StAR) Protein"*

MASTER'S THESIS/ADVISORY COMMITTEES

- Oscar Sias-Garcia 2016-2017
TTUHSC Biotechnology Program
Drs. Carla Lacerda and Ted Reid, Major Advisors
Project title: *"The Role of Selenium Compounds in Stem Cells and Valvular Interstitial Cells"*
- Isaac Scott 2016-2017
TTUHSC Biotechnology Program
Dr. R. Bryan Sutton, Major Advisor
Project title: *pending*

MASTER'S THESIS/ADVISORY COMMITTEES (continued)

Ross Wilson TTU Mechanical Engineering Program Dr. Javad Hashemi, Major Advisor Thesis title: <i>“Anterior Cruciate Ligament Injury and Impingement Against Intercondylar Notch: an In-Vitro Study Using Robots”</i>	2006-2007
Melinda K. Lackey TTUHSC Microbiology & Immunology Program Dr. Joe A. Fralick, Major Advisor Thesis title: <i>“Characterization of an ORF in a Novel Orientation in Escherichia coli”</i>	2000-2003
William Lee Boston TTUHSC Medical Biochemistry Program Dr. Elmus G. Beale, Major Advisor Thesis title: <i>“Characterization of Clone D2—An Orphan Protein that Interacts with Peroxisome Proliferator-Activated Receptor Gamma”</i>	2000-2002

INSTITUTIONAL COMMITTEES & SERVICE

2020

TTUHSC Embryonic Stem Cell Research Oversight Committee
School of Medicine Grievance Committee (Chair)
School of Medicine Student Promotions and Professional Conduct Committee (Vice Chair)
School of Medicine Faculty Council Executive Committee (Vice Chair)
School of Medicine Curriculum and Educational Policy Committee
School of Medicine Faculty Council Executive Subcommittee on Mentoring (Chair)
School of Medicine Teaching Academy Committee on Peer Evaluation (Chair)
GSBS Core Curriculum Coordination Committee
GSBS MD/PhD Admissions Committee

2019

TTUHSC Embryonic Stem Cell Research Oversight Committee
School of Medicine Grievance Committee (Chair)
School of Medicine Student Promotions and Professional Conduct Committee (Vice Chair)
School of Medicine Faculty Council Executive Committee (Vice Chair)
School of Medicine Curriculum and Educational Policy Committee
GSBS Core Curriculum Coordination Committee (Chair)
GSBS MD/PhD Admissions Committee

2018

TTUHSC Conflict of Interest in Research Committee (Chair)
TTUHSC Radiation Safety Committee (Chair)
TTUHSC Recombinant DNA Biosafety Committee (Chair)
TTUHSC Embryonic Stem Cell Research Oversight Committee
School of Medicine Grievance Committee (Chair)
School of Medicine Post-Tenure Review Committee (*ad hoc*)
School of Medicine Educational Policy Committee
GSBS Core Curriculum Coordination Committee (Chair)
GSBS MD/PhD Admissions Committee

INSTITUTIONAL COMMITTEES & SERVICE (continued)

2017

TTUHSC Conflict of Interest in Research Committee (Chair)
TTUHSC Radiation Safety Committee (Chair)
TTUHSC Recombinant DNA Biosafety Committee (Chair)
TTUHSC Embryonic Stem Cell Research Oversight Committee
School of Medicine Grievance Committee (Chair)
School of Medicine Post-Tenure Review Committee (*ad hoc*)
School of Medicine Educational Policy Committee
GSBS Internal Review Committee, Pharmaceutical Sciences Program 5 Year Review (Chair)
GSBS Core Curriculum Coordination Committee
GSBS MD/PhD Admissions Committee

2016

TTUHSC Conflict of Interest in Research Committee (Chair)
TTUHSC Radiation Safety Committee (Chair)
TTUHSC Recombinant DNA Biosafety Committee (Chair)
TTUHSC Safe Campus Committee
TTUHSC Library Executive Director Search Committee
TTUHSC Embryonic Stem Cell Operating Policy Committee
TTUHSC Embryonic Stem Cell Research Oversight Committee
School of Medicine Grievance Committee (Vice Chair)
School of Medicine Post-Tenure Review Committee (*ad hoc*)
School of Medicine Educational Policy Committee
GSBS Internal Review Committee, Pharmaceutical Sciences Program 5 Year Review (Chair)
GSBS Core Curriculum Coordination Committee
GSBS MD/PhD Admissions Committee

2015

TTUHSC Conflict of Interest in Research Committee (Chair)
TTUHSC Radiation Safety Committee (Chair)
TTUHSC Faculty Senate (elected)
TTUHSC Safe Campus Committee
TTUHSC Library Executive Director Search Committee
School of Medicine Admissions Interviewer (40 interviews)
School of Medicine Grievance Committee
School of Medicine Post-Tenure Review Committee (*ad hoc*)
School of Medicine Educational Policy Committee
GSBS Core Curriculum Coordination Committee
GSBS Internal Review Committee, Biotechnology Program 5 Year Review
GSBS MD/PhD Admissions Committee

INSTITUTIONAL COMMITTEES & SERVICE (continued)

2014

TTUHSC Conflict of Interest in Research Committee (Chair)
TTUHSC Radiation Safety Committee (Chair)
TTUHSC Faculty Senate (elected)
School of Medicine Faculty Council Executive Committee (elected)
School of Medicine Grievance Committee
GSBS Core Curriculum Coordination Committee
GSBS Internal Review Committee, Biotechnology Program 5 Year Review
GSBS Biotechnology Program Committee

2013

TTUHSC Conflict of Interest in Research Committee (Chair)
TTUHSC Radiation Safety Committee
TTUHSC Faculty Senate (elected)
TTUHSC Preliminary Data/Seed Grant Review Committee
School of Medicine Faculty Council Executive Committee (elected)
School of Medicine Grievance Committee
School of Medicine Teaching Academy Peer Evaluation Committee
School of Medicine Cell Biology & Biochemistry Chair Search Committee
GSBS Biotechnology Program Steering Committee
GSBS Core Curriculum Coordination Committee
GSBS Graduate Council Representative, Biotechnology Program

2012

TTUHSC Conflict of Interest in Research Committee (Chair)
TTUHSC Radiation Safety Committee
TTUHSC Faculty Senate (elected)
TTUHSC Preliminary Data/Seed Grant Review Committee
School of Medicine Faculty Council Executive Committee (elected)
School of Medicine Grievance Committee
School of Medicine Teaching Academy Peer Evaluation Committee
GSBS Core Curriculum Coordination Committee
GSBS Biotechnology Program Steering Committee
GSBS Technology & Commercialization Degree Organizing Committee
GSBS Graduate Council Representative, Biotechnology Program

2011

TTUHSC Conflict of Interest in Research Committee (Chair)
TTUHSC Faculty Senate (elected)
TTUHSC Preliminary Data/Seed Grant Review Committee
School of Medicine Faculty Council Executive Committee (elected)
School of Medicine Grievance Committee
GSBS Core Curriculum Coordination Committee
GSBS Biotechnology Program Steering Committee
GSBS Graduate Council Representative, Biotechnology Program

INSTITUTIONAL COMMITTEES & SERVICE (continued)

2010

TTUHSC Conflict of Interest in Research Committee (Chair)
TTUHSC Preliminary Data/Seed Grant Review Committee
School of Medicine Orthopaedics Chair Search Committee
School of Medicine Faculty Council Executive Committee (elected)
School of Medicine Grievance Committee
GSBS Graduate Council Representative, Biotechnology Program

2009

TTUHSC Conflict of Interest in Research Committee (Chair)
TTUHSC Preliminary Data/Seed Grant Review Committee
School of Medicine Orthopaedics Chair Search Committee
School of Medicine Faculty Council Executive Committee (elected)
School of Medicine Grievance Committee
GSBS Ph.D. Program Merger Implementation Committee
GSBS Ph.D. Program Restructuring Task Force (Chair)
GSBS Graduate Council Representative, Biotechnology Program

2008

TTUHSC Conflict of Interest in Research Committee (Chair)
TTUHSC Bridge Grant Review Committee
School of Medicine Faculty Council Executive Committee (elected)
School of Medicine Grievance Committee
GSBS Ph.D. Program Restructuring Task Force (Chair)
GSBS Graduate Council Representative, Biotechnology Program

2007

TTUHSC Conflict of Interest in Research Committee (Chair)
TTUHSC Bridge Grant Review Committee
School of Medicine Advisory Committee on Gene Expression Research & Bioinformatics
GSBS First Year Curriculum Oversight Committee
GSBS Graduate Council Representative, Biotechnology Program

2006

TTUHSC Conflict of Interest in Research Committee (Chair)
School of Medicine Clinical Curriculum Redesign Committee
School of Medicine Advisory Committee on Gene Expression Research & Bioinformatics
GSBS First Year Curriculum Oversight Committee
GSBS First Year Curriculum Redesign Committee
GSBS Graduate Council Representative, Biotechnology Program

2005

TTUHSC Conflict of Interest in Research Committee (Chair)
School of Medicine Clinical Curriculum Redesign Committee
School of Medicine Advisory Committee on Gene Expression Research & Bioinformatics
GSBS Graduate Council Representative, Biotechnology Program

INSTITUTIONAL COMMITTEES & SERVICE (continued)

2004

TTUHSC Conflict of Interest Committee
School of Medicine Advisory Committee on Gene Expression Research & Bioinformatics
GSBS Student Recruitment Committee
GSBS Graduate Council Representative, Biotechnology Program

2003

TTUHSC Conflict of Interest Committee
School of Medicine Advisory Committee on Gene Expression Research & Bioinformatics
GSBS Student Recruitment Committee
GSBS Graduate Council Representative, Biotechnology Program

2002

TTU/TTUHSC Subcommittee on Homeland Security Degree Programs
TTUHSC Conflict of Interest Committee
School of Medicine Advisory Committee on Gene Expression Research & Bioinformatics
School of Medicine Pharmacology Chair Search Committee
GSBS Student Recruitment Committee

2001

TTU/TTUHSC Subcommittee on Homeland Security Degree Programs
School of Medicine Pharmacology Chair Search Committee
GSBS Student Recruitment Committee
GSBS Student Research Day Poster Judge

2000

School of Medicine Pharmacology Chair Search Committee
GSBS Student Recruitment Committee
GSBS Student Research Day Poster Judge

1999

GSBS Multi-Department Degree Program Committee
GSBS Student Recruitment Committee
GSBS Student Research Day Poster Judge

1998

GSBS Multi-Department Degree Program Committee
GSBS Student Recruitment Committee

1997

School of Medicine Advisory Committee on Molecular Biology Computing
GSBS Student Research Day Poster Judge
GSBS Student Recruitment Committee

1996

TTU/HHMI Science Day Faculty Speaker
School of Medicine Advisory Committee on Molecular Biology Computing
GSBS Student Recruitment Committee

DEPARTMENTAL SERVICE

2019

Faculty Search Committee

2018

Faculty Search Committee (Chair)

2017

Faculty Search Committee

2016

Faculty Search Committee

2015

Faculty Search Committee

2014

Equipment Committee

Space Committee

Biochemistry & Molecular Genetics Graduate Program Committee

2013

Equipment Committee

Space Committee

Biochemistry & Molecular Genetics Graduate Program Committee

2012

Equipment Committee

Space Committee

Biochemistry & Molecular Genetics Graduate Program Committee

2011

Executive Committee

Equipment Committee

Space Committee

Biochemistry & Molecular Genetics Graduate Program Committee

2010

Executive Committee

Equipment Committee

Graduate Studies Committee

Faculty Seminar Coordinator

Biochemistry & Molecular Genetics Graduate Program Committee

2009

Executive Committee

Equipment Committee

Graduate Studies Committee

Faculty Seminar Coordinator

Biochemistry & Molecular Genetics Graduate Program Committee

DEPARTMENTAL SERVICE (continued)

2008

Executive Committee
Equipment Committee
Graduate Studies Committee
Biochemistry & Molecular Genetics Graduate Program Committee

2007

Executive Committee
Equipment Committee
Graduate Studies Committee
Biochemistry & Molecular Genetics Graduate Program Committee

2006

Executive Committee
Equipment Committee
Graduate Studies Committee
Biochemistry & Molecular Genetics Graduate Program Committee

2005

Executive Committee
Equipment Committee
Graduate Studies Committee
Medical Biochemistry Graduate Program Committee

2004

Executive Committee (Chair, elected)
Faculty Search Committee
Graduate Studies Committee
Medical Biochemistry Graduate Program Committee

2003

Executive Committee (Chair, elected)
Graduate Studies Committee
Medical Biochemistry Graduate Program Committee

2002

Executive Committee
Faculty Search Committee
Graduate Studies Committee
Medical Biochemistry Graduate Program Committee

2001

Executive Committee
Graduate Studies Committee
Medical Biochemistry Graduate Program Committee

DEPARTMENTAL SERVICE (continued)

2000

Equipment Committee (Chair)
Seminar Series Coordinator
Reproductive Biology Training Grant Seminar Series Coordinator
Executive Committee
Graduate Studies Committee
Medical Biochemistry Graduate Program Committee
Graduate Student Recruitment Committee

1999

Equipment Committee (Chair)
Seminar Series Coordinator
Reproductive Biology Training Grant Seminar Series Coordinator
Executive Committee
Graduate Studies Committee
Medical Biochemistry Graduate Program Committee
Faculty Search Committee
Graduate Student Recruitment Committee

1998

Graduate Student Recruitment Committee (Chair)
Seminar Series Coordinator
Reproductive Biology Training Grant Seminar Series Coordinator
Graduate Studies Committee
Faculty Search Committee
Medical Biochemistry Graduate Program Committee
Equipment Committee

1997

Graduate Student Recruitment Committee (Chair)
Graduate Studies Committee
Seminar Series Coordinator
Faculty Search Committee
Medical Biochemistry Graduate Program Committee
Equipment Committee
Reproductive Biology Training Grant Seminar Series Coordinator

1996

Cell Biology & Biochemistry Graduate Student Recruitment Committee (Chair)
Reproductive Biology Training Grant Seminar Series Coordinator
Medical Biochemistry Graduate Program Committee
Cell Biology & Biochemistry Equipment Committee

1995

Cell Biology & Biochemistry Graduate Student Recruitment Committee (Chair)

MANUSCRIPT AND GRANT REVIEW

Journals

Journal of Biological Chemistry (Editorial Board Member 2004-2009)
Proceedings of the National Academy of Sciences
Biochemistry Biochimica et Biophysica Acta
Journal of Cell Science
Journal of Cell Physiology
Journal of Orthopaedic Research
Biology of Reproduction
Fertility & Sterility
American Journal of Physiology
Molecular Reproduction & Development
Clinical Orthopedics & Related Research
Scandinavian Journal of Medicine and Science in Sports
Reproduction

Books

John Wiley & Sons
Chapman & Hall

Grants

UK Medical Research Council (*Ad hoc*)
National Institutes of Health (*Ad hoc*)
National Science Foundation (*Ad hoc*)
American Institute of Biological Sciences (*Ad hoc*)
US Department of Agriculture (*Ad hoc*; Review Panel Member, 1994)
US Army Medical Research and Materiel Command (*Ad hoc*)
Israeli Science Foundation (*Ad hoc*)
University of Missouri Research Board (*Ad hoc*)

PROFESSIONAL AFFILIATIONS

American Society for Biochemistry and Molecular Biology
Society for the Study of Reproduction
Orthopaedic Research Society
American Chemical Society
American Society for Andrology