

DOUGLAS ALLEN ANDRES, Ph.D.
CURRICULUM VITAE

Business Address:

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Department of Molecular and Cellular Biochemistry
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PROFESSIONAL EXPERIENCE:

- 2005-present UNIVERSITY OF KENTUCKY COLLEGE OF MEDICINE
Department of Molecular and Cellular Biochemistry
Position: Assistant Professor 1993-1999
Associate Professor 1999-2005
Professor and *Vice-Chair* of Biochemistry 2005-2012
Chairman of Biochemistry 2012-present
- 1990-1993 UNIVERSITY OF TEXAS SOUTHWESTERN MEDICAL CENTER, DALLAS
Department of Molecular Genetics
Advisors: Drs. Michael S. Brown and Joseph L. Goldstein
Position: Postdoctoral Fellow Supported by The Jane Coffin Childs Memorial Fund for Medical Research
Research Area: Protein Isoprenylation: Biochemical characterization of CAAX and Rab prenyltransferase enzymes.
- 1985-1990 PURDUE UNIVERSITY
Department of Biochemistry (Ph.D. in Biochemistry)
Advisor: Dr. Jack E. Dixon
Position: Graduate Student
Thesis: "Characterization of the Carboxyl-terminal Sequences Responsible for Protein Retention in the Endoplasmic Reticulum"

Education:

- 1985-1990 Purdue University
West Lafayette, Indiana.
Ph.D., Biochemistry (1990)
- 1981-1985 University of Wisconsin
Madison, Wisconsin,
B.S., Chemistry (1985)

Professional Societies and Awards:

- Summer Research Fellowship, American Diabetes Association, Indiana Affiliate, 1984
Arnold Kent Balls Award - Outstanding Biochemistry Graduate Student, Purdue University, 1985
Fellow of the Jane Coffin Childs Memorial Fund for Medical Research, University of Texas SW Med. Ctr, 1991-1993
Member of American Association for the Advancement of Science
Member of Sigma Xi
Member of American Society for Biochemistry and Molecular Biology
Member of The Society of Neuroscience
Member of American Heart Association Scientific Council (Cardiovascular Sciences)

Member of American Society of Microbiology
Member of Biophysical Society
Member of The American Association for Cell Biology
Co-Chair ACS: Tumor Biology and Endocrinology Study Section 2004
Editorial Board, The Journal of Biological Chemistry 2004-2006
Vice-Chair Southeast/Ohio Valley AHA Affiliate Peer Review Committee 2005, 2006
Vice-Chair ACS: Tumor Biology and Endocrinology Study Section, 2006, 2007
Chair ACS: Tumor Biology and Endocrinology Study Section 2007
Chair Southeast/Ohio Valley AHA Affiliate Peer Review Committee 2007
Chair Cellular Signaling/Transport AHA Region 1 Peer Review Committee 2008
Editorial Board of The Journal of Biochemical Letters 2008-2010
Chair Basic Cell & Molecular Biology 4 AHA Region 1 Peer Review Committee 2009
Chair Cell Transport Basic Science 3 AHA Region 1 Peer Review Committee 2010
Associate Editor of The Journal of Biochemistry Letters 2010-Present
Editorial Board of the World Journal of Biological Chemistry 2010-Present
Editorial Board, of Cell and Developmental Biology 2010-Present
Chair, Cell Transport Basic Science 3 AHA Region 1 Peer Review Committee 2011
University of Kentucky Research Professor, 2012-2013

RESEARCH INTERESTS:

Ras-related GTP-binding Proteins, Cellular Survival and Transformation Signaling, Neuronal Growth and Differentiation, Neurogenesis, Calcium Channel Regulation, Protein Isoprenylation.

RESEARCH SUPPORT:

National Institutes of Health, R01NS045103-08 12/01/2002-05/31/2013

Principal Investigator (35% effort), "Regulation of Neuronal Survival by the Rit GTPase"

National Institutes of Health, R01HL072936-07 04/15/2003-04/30/2014

Principal Investigator (15% effort), "Regulation of Calcium Channel Function by the Rem GTPase"
MPI R01 with Dr. Jonathan Satin (UK, Physiology)

National Institutes of Health, R01GM066152-05 05/01/2002-03/31/2012

"Synthetic Probes of Protein Prenylation" H. Peter Spielmann, P.I.
10% effort as Co-Investigator

National Institutes of Health, R01HL074091 06/01/2009-05/31/2014

"Mechanisms of long-term Cardiac Ion Channel Regulation" Jonathan Satin P.I.
10% effort as Co-Investigator

National Institutes of Health P20 RR-03-014 09/01/2004-06/30/2014

Center of Biomedical Excellence (COBRE) in the Molecular Basis of Human Disease
Louis B. Hersh, P.I.
Mentor to one of the young investigators (10% effort).

National Institutes of Health P20 RR-03-014

COBRE planning award, MPI: Drs. Andres, Stamm, and Galperin 08/01/2011-7/30/2012.
"Molecular Mechanism of Valproic Acid Action".
Planning grant to generate the preliminary data required for an NIH R01 submission.

Patents:

U.S. Patent #6,284,910
FARNESYL PYROPHOSPHATE ANALOGS
Inventors: Drs. D.A. Andres and H.P. Spielmann

Publications:

1. Andres, D.A., Dickerson, I.M., and Dixon, J.E. (1990) Variants of the Carboxyl-terminal KDEL Sequence Direct Intracellular Retention. **Journal of Biological Chemistry**, 265, 5952-5955.
 2. Andres, D.A., Rhodes, J.D., Meisel, R.L., and Dixon, J.E. (1991) Characterization of the Carboxyl-terminal Sequences Responsible for Protein Retention in the Endoplasmic Reticulum. **Journal of Biological Chemistry**, 266, 14277-14282.
 3. Chen, W. -J., Andres, D.A., Goldstein, J.L., Russell, D.W., and Brown, M.S. (1991) cDNA Cloning and Expression of the Peptide-Binding β -Subunit of Rat p21^{ras} Farnesyltransferase, the Counterpart of Yeast DPR1/RAM1. **Cell** 66, 327-334.
 4. Chen, W.-J., Andres, D.A., Goldstein, J.L., and Brown, M.S. (1991) Cloning and Expression of a cDNA Encoding the α subunit of Rat p21^{ras} Protein Farnesyltransferase. **Proceedings of the National Academy of Sciences USA**, 88, 11368-11372.
 5. Andres, D.A., Goldstein, J.L., Ho, Y.K., and Brown, M.S. (1993) Mutational Analysis of the α -Subunit of Protein Farnesyltransferase. **Journal of Biological Chemistry** 268, 1383-1390.
 6. Andres, D.A., Milatovich, A., Wenzlau, J., Ozcelik, T., Brown, M.S., Goldstein, J.L., and Francke, U. (1993) cDNA Cloning of the Two Subunits of Human CAAX Farnesyltransferase and Chromosomal Mapping of FNTA and FNTB Loci and Related Sequences. **Genomics** 18, 105-112.
 7. Andres, D.A., Seabra, M.C., Brown, M.S., Armstrong, S.A., Smeland, T., Cremers, F., and Goldstein, J.L. (1993) cDNA Cloning of Component A of Rab Geranylgeranyl Transferase and Demonstration of its Role as a Rab Escort Protein. **Cell** 73, 1-20.
- Since coming to the University of Kentucky**
8. Crick, D.C., Waechter, C.J., and Andres, D.A. (1994) Utilization of Geranylgeraniol for Protein Isoprenylation in C6 Glial Cells. **Biochemical Biophysical Research Communications**, 205, 955-961.
 9. Crick, D.C., Suders, J., Kluthe, C.M., Andres, D.A., and Waechter, C.J. (1995) Selective Inhibition of Cholesterol Biosynthesis in Brain Cells by Squalestatin. **Journal of Neurochemistry**, 65, 1365-1373.
 10. Crick, D.C., Andres, D.A., and Waechter, C.J. (1995) Farnesol is Utilized for Protein Isoprenylation and the Biosynthesis of Cholesterol in Mammalian Cells. **Biochemical Biophysical Research Communications**. 211, 590-599.
 11. Crick, D.C., Waechter, C.J., and Andres, D.A. (1996) Geranylgeraniol Restores Cell Proliferation to Lovastatin Treated C6 Glial Cells. **SAAS Bulletin**. 9, 37-42.
 12. Crick, D.C., Andres, D.A., and Waechter, C.J. (1997) Geranylgeraniol Promotes Entry of UT-2 Cells into the Cell Cycle in the Absence of Mevalonate. **Experimental Cell Research**, 231, 302-307.
 13. Finlin, B. and Andres, D.A. (1997) Rem: A New Member of the Rad and Gem/Kir Ras-Related GTP- binding Protein Family Repressed by Lipopolysaccharide Stimulation. **Journal of Biological Chemistry** 272, 21982-21988.
 14. Andres, D.A., Shoa, H., Crick, D.C., and Finlin, B. (1997) Expression Cloning of a Novel Farnesylated Protein, RDJ2, Encoding a DnaJ Protein Homologue. **Biochemical Biophysical Research Communications**, 346, 113-124.

15. Kadono-Okuda, K. and Andres, D.A. (1997) An Expression Cloning Method to Identify Monomeric GTP-Binding Proteins by GTP Overlay. **Analytical Biochemistry**, 254, 187-191.
16. Crick, D.C., Andres, D.A., and Waechter, C.J. (1997) Novel Salvage Pathways Utilizing Farnesol and Geranylgeraniol for Protein Isoprenylation. **Biochemical Biophysical Research Communications**, 237, 483-487.
17. Crick, D. C., Andres, D. A., Danesi, R., Macchia, M., and Waechter, C. J. (1998) Geranylgeraniol Overcomes the Block of Cell Proliferation by Lovastatin in C6 Glioma Cells. **Journal of Neurochemistry**, 70, 2397-2405.
18. Finlin, B. S. and Andres, D. A. (1999) Phosphorylation-dependent Association of the Ras-Related GTP-binding Protein Rem with 14-3-3 Proteins. **Archives of Biochemistry and Biophysics**, 368, 401-412
19. Shao, H., Okuda, K, Finlin, B.S., and Andres, D.A. (1999) Biochemical Characterization of the Ras related GTPases Rit and Rin. **Archives of Biochemistry and Biophysics**, 371, 207-219.
20. Andres, D. A., Crick, D. C., Finlin, B. S., and Waechter, C. J. (1999) Rapid Identification of Cysteine-Linked Isoprenyl Groups By Metabolic Labeling with [³H]Farnesol and [³H]Geranylgeraniol. In: Protein Lipidation Protocols, Methods in Molecular Biology Vol. 116, 107-123. Ed. Gelb, M. H.
21. Finlin, B.S., Kadono-Okuda, K., Guo, N., and Andres, D.A. (2000) Rem2 a New Member of the Rad/Gem/Kir Family of Ras-related GTPases. **Biochemical Journal**, 347, 223-231.
22. Chehade, K.A.H, Andres, D.A., Morimoto, M., and Spielmann, H.P. (2000) Synthesis and Transfer of Farnesyl Pyrophosphate Analogs to Ras by Protein Farnesyltransferase. **Journal of Organic Chemistry**, 65, 3027-33.
23. Andres, D. A. (2000) Expression cloning to identify monomeric GTP-binding proteins by GTP overlay. **Methods in Enzymology**. 332, 203-210.
24. Andres, D. A. (2000) Expression cloning of novel prenylated proteins. **Methods in Enzymology**. 332, 195-202.
25. Rusyn, E.V., Reynolds, E.R., Shao, H., Grana T.M., Chan, T.O., Andres, D.A., and Cox, A.D. (2000) Rit, a non-lipid-modified Ras-related protein, transforms NIH3T3 cells without activating the ERK, JNK, p38 MAPK or PI3K/Akt pathways. **Oncogene**. 19, 4685-4694.
26. Shao, H. and Andres, D. A. (2000) A Novel RalGEF-like Protein, RGL3, as a Candidate Effector for Rit and Ras. **Journal of Biological Chemistry**, 275, 26914-26924.
27. Than, C., Morimoto, H., Williams, P.G., Chehade, K. A. H., Andres, D.A., and Spielmann H. P. (2001) Preparation, NMR Characterization and Labeling Reactions of Tritiated Triacetoxy Sodium Borohydride. **Journal of Organic Chemistry**, 66, 3602-3605.
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29. Micali, E, Chehade, K.A.H., Isaacs, R.J., Andres, D.A., and Spielmann, H.P. (2001) Protein farnesyltransferase isoprenoid substrate discrimination on isoprene double bonds and branched methyl groups. **Biochemistry**. 40, 12254-12265.
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31. Spencer M., Shao, H., Tucker, H.M., and Andres D.A. (2002) Nerve growth factor-dependent activation of the small GTPase Rin. **Journal of Biological Chemistry** 277, 17605-17615.

32. Spencer, M., Shao, H. and Andres, D.A. (2002) Induction of neurite outgrowth in pheochromocytoma cells by the Rit GTPase. **Journal of Biological Chemistry**, 277, 20160-20168.
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34. Hynda, D.L., Spencer, M.L., Andres, D.A., and Snow, D.M. (2003) Rit promotes MEK-independent neurite branching in human neuroblastoma cells **Journal of Cell Science**,116(10),1925-1935.
35. Finlin, B.S. Crump, S., Satin, J., and Andres, D.A. (2003) Regulation of Voltage-gated Calcium Channel Activity by the Rem and Rad GTPases. **Proceedings of the National Academy of Sciences USA**, 100(24), 14469-14474.
36. Andres D. A. (2004) Nonradioactive Methods for Detecting Activation of Ras-related Small G Proteins. **Methods in Molecular Biology**, 284, 163-173.
37. Troutman, J. M., Chehade, K. A., Kiegiel, K., Andres, D. A., and Spielmann, H. P. (2004) Synthesis of acyloxymethyl ester prodrugs of the transferable farnesyl transferase substrate farnesyl methylenediphosphonate. **Bioorganic and Medicinal Chemistry Letters**, 14(19), 4979-4982.
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39. Shi, G. -X and Andres, D.A. (2004) Rit Contributes to NGF-Induced Neuronal Differentiation via Activation of B-Raf-ERK and p38 MAP kinase Cascades, **Molecular and Cellular Biology**, 25(2), 830-846.
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42. Shi, G. -X., Han, J., and Andres, D.A. (2005) Rin GTPase Couples Nerve Growth Factor Signaling to p38 and B-Raf/ERK Pathways to Promote Neuronal Differentiation. **Journal of Biological Chemistry**. 280(45), 37599-37609.
43. Troutman, J.M., Roberts, M.J., Andres, D.A., and Spielmann, H.P. (2005) Tools to Analyze Protein Farnesylation in Cells. **Bioconjugate Chemistry** 16(5), 1209-1217.
44. Subramanian, T., Wang, Z., Troutman, J.M., Andres, D.A., and Spielmann, H.P. (2005) Directed Library of Anilinogeranyl Analogues of Farnesyl Diphosphate via mixed Solid- and Solution-phase Synthesis. **Organic Letters**. 7(11), 2109-2112.
45. Andres, D.A., Crump, S. M., Correll, R. N., Satin, J., and Finlin, B. S. (2005) Analyses of Rem/RGK Signaling and Biological Activity. **Methods in Enzymology** Vol. 407, 484-498.
46. Andres, D. A., Rudolph, J. L., Sengoku, T., and Shi, G., -X. (2005) Analysis of Rit Signaling and Biological Activity. **Methods in Enzymology** Vol. 407, 499-512.

47. Key, M. D., Andres, D.A., Der, C. J., and Repasky, G. A. (2005) Characterization of *RERG*: An estrogen-regulated tumor suppressor gene. **Methods in Enzymology** Vol. 407, 513-527.
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49. Finlin, B. S., Correll, R. N., Crump, S. M, Pang, C., Satin, J., and Andres, D. A. (2006) Analysis of the Complex Between Ca^{2+} Channel β Subunit and the Rem GTPase. **Journal of Biological Chemistry** 281(33), 23577-23566.
50. Shi, G.-X., Rehmann, H., and Andres, D.A. (2006) A Novel cAMP-dependent Epac-Rit Signaling Pathway Contributes to PACAP38-mediated Neuronal Differentiation. **Molecular and Cellular Biology** 26(23), 9136-1947.
This article has highlighted in a perspectives review for Science STKE: Gerdin, M.J. and Eiden, L. E. Sci. STKE (2007) v2007(382) p pe15. <http://stke.sciencemag.org/cgi/content/full/sigtrans;2007/382/pe15>
51. Roberts, M.J., Troutman, J.M., Chehade, K.A., Cha, H.C., Kao, J.P., Huang, X., Zhan, C.G., Peterson, Y.K., Subramanian, T., Kamalakkannan, S., Andres, D.A., and Spielmann, H.P. (2006) Hydrophobic Anilino-geranyl Diphosphate Prenyl Analogs Are Ras Function Inhibitors. **Biochemistry**, 45(51), 15862-15872.
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53. Schroder, E.A., Magyar, J., Burgess, D.E., Andres, D.A., and Satin, J. (2007) Chronic Verapamil Treatment Remodels $I_{Ca,L}$ in Mouse Ventricle. **Am. J. Physiol: Heart Circ. Physiol.**, 292(4), H1906-1916.
54. Lein, P. J., Guo, X., Shi, G. -X., Moholt-Siebert, M., Brunn, D., and Andres, D. A. (2007) The Novel GTPase Rit Differentially Regulates Axonal and Dendritic Growth. **J. Neuroscience**, 27(17), 4725-4736.
This article was also highlighted in Science STKE. Kaech, S., Banker, G., and Stork, P. (2007) Sci STKE v2007(416) p pe71. http://stke.sciencemag.org/cgi/content/full/OC_sigtrans;stke.4162007pe71
55. Rudolph, J. L., Shi, G. -X., Erodogan, E., Fields, A. P., and Andres, D. A. (2007) Rit Mutants Confirm the Role of MEK/ERK Signaling in Neuronal Differentiation and Reveal a Novel Par6 Interaction. **Biochim. Biophys Acta.** 1773(12), 1793-1800.
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57. Correll, R. N., Botzet, G. J., Satin, J., Andres, D. A., and Finlin, B. S. (2008) Analysis of the Rem2 - Voltage Dependant Calcium Channel β Subunit Interaction and Rem2 Interaction with Phosphorylated Phosphatidylinositide Lipids. **Cellular Signaling**, 20(2), 400-408. *PMID:18068949*
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- ZMPSTE24 or lead to an accumulation of farnesyl-prelamin A in cells. **Journal of Biological Chemistry** 283(15), 9797-804. *PMID:18230615*.
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78. Shi, G-X., Andres, D.A., and Cai, W. (2011) Ras Family Small GTPase-Mediated Neuroprotective Signaling in Stroke. **Central Nervous System Agents Medicinal Chemistry** *PMID: 21521171*
79. Cai, W., Rudolph, J.L., Harrison, S.M., Jin, L., Frantz, A.L., Harrison, D.A., and Andres, D. A. (2011) An Evolutionarily Conserved Rit GTPase-p38 MAPK Signaling Pathway Mediates Oxidative Stress Resistance. **Molecular Biology of the Cell** 22(17), 3231-3241. *PMID:21737674* *PMCID: PMC3164468*
80. Chang, S.Y., Hudon-Miller, S.E., Yang, S.H., Jung, H.J., Lee, J.M., Farber, E., Subramanian, T., Andres, D.A., Spielmann, H.P., Hrycyna, C.A., Young, S.G., and Fong, L.G. (2012) Inhibitors of protein geranylgeranyltransferase-I lead to prelamin A accumulation in cells by inhibiting ZMPSTE24. **Journal of Lipid Research** 53(6), 1176-82. *PMID: 22448028*
81. Gunton, J.E., Sisavanh, M., Stokes, R.A., Satin, J., Satin, L.S., Zhang, M., Liu, S.M., Cai, W., Cheng, K., Cooney, G.J., Laybutt, D.R., So, T., Molero, J.C., Grey, S.T., Andres D.A., Rolph, M.S., and Mackay C.R. (2012) Mice deficient in GEM GTPase show abnormal glucose homeostasis due to defects in Beta-cell calcium handling. **PLoS ONE** 7(6), e39462. *PMID: 22761801*
82. Cai, W., Carlson, S. W., Mannon, C., Pleasant, J. M., Saatman, K. E., and Andres D. A. (2012) Rit GTPase Signaling Promotes Immature Hippocampal Neuronal Survival. **The Journal of Neuroscience** 32(29), 9887-09897
83. Magyar, J., Kiper, C., Shawn, S. M., Cai, W., Li, L., Smith, N., Andres, D. A., and Satin, J. (2012) Rem GTPase Regulates Cardiac Myocyte L-type Calcium Current. *Accepted: Channels*

Manuscripts Currently Under Review:

- 1) Cai, W., Rudolph, J. L., Sengoku, T., and Andres D.A. (2012) Rit signaling promotes neuronal survival. Under review at *Neuroscience Letters*.
- 2) Shi, G-X and Andres, D.A. (2012) Rit-mediated stress resistance involves a p38-MSK1-dependent CREB activation cascade. Under revision for *J. Biological Chemistry*.
- 3) Crump, S. M., Andres, D. A., Sievert, G., and Satin, J. (2012) The Cardiac L-type Calcium Channel Distal Carboxyl-Terminus Is A Reverse-Use Dependent Inhibitor (RUDI) of Calcium-current in Cardiomyocytes. Under review *J. Molecular and Cellular Cardiology*.

Book Chapters

Andres, D. A., Crick, D. C., Finlin, B. S., and Waechter, C. J. (1999) Rapid Identification of Cysteine-Linked Isoprenyl Groups By Metabolic Labeling with [³H]Farnesol and [³H]Geranylgeraniol. In: Protein Lipidation Protocols, Methods in Molecular Biology Vol. 116, 107-123. Ed. Gelb, M. H.

Andres, D. A. (2000) Expression cloning to identify monomeric GTP-binding proteins by GTP overlay. Methods in Enzymology. 332, 203-210.

Andres, D. A. (2000) Expression cloning of novel prenylated proteins. Methods in Enzymology. 332, 195-202.

Andres, D. A., Crick, D. C., Finlin, B. S., and Waechter, C. J. (2002) The Metabolic Labeling and Analysis of Isorenylated Proteins. In: Protein Purification Handbook 2nd Edition, Chapter 95. Ed. Walker, J. M.

Andres D. A. (2003) Non-radioactive Methods for Detecting Activation of Ras-related Small G Proteins. In: Signal Transduction Protocols, 2nd edition, Methods in Molecular Medicine. Ed. Dickson, R.C. and Mendenhall, M.D.

Andres, D.A., Crump, S. M., Correll, R. N., Satin, J., and Finlin, B. S. (2005) Analyses of Rem/RGK Signaling and Biological Activity. Methods in Enzymology Vol. 407.

Andres, D. A., Rudolph, J. L., Sengoku, T., and Shi, G., -X. (2005) Analysis of Rit Signaling and Biological Activity. Methods in Enzymology Vol. 407.

Key, M. D., Andres, D. A., Der, C. J., and Repasky, G. A. (2005) Characterization of *RERG*: An estrogen-regulated tumor suppressor gene. Methods in Enzymology Vol. 407

Andres, D. A., Crick, D. C., Spielmann, H. P., and Waechter, C. J. (2008) Tools for Labeling and Analysis of Isorenylated Proteins in Cells. In: Protein Purification Handbook. Ed. Walker, J. M.

Cai, W., Rudolph, J. L., and Andres, D. A. (2011) Rin GTPase. Invited review: Encyclopedia of Signaling Molecules (*in press*).

Invited Lectures:

SAAS Annual Meeting, Greensboro, NC, (2/6/1996)

University of Kentucky, Department of Biology, Lexington KY, (2/21/1996)

Somerset Community College, Somerset KY, (6/19/1996)

University of Kentucky, OB/GYN Research Conference, Lexington, KY (7/10/1999)

University of Kentucky, Department of Physiology, Lexington, KY (3/31/1999)

University of Kentucky, Department of Pharmacology, Lexington, KY (5/6/1999)

University of Kentucky, Nephrology/Bone-Mineral Metabolism Division, Lexington, KY (2/2/2000)

Department of Genetics, Cell Biology, and Development, University of Minnesota, Minneapolis, MN (2/13/2001)

Conference on Invasion and Metastasis, International Institute of Anticancer Research, Kapandriti Greece (6/15/2001)

6th World Congress on Advances in Oncology, Hersonissos, Crete, Greece (8/19/2001)

University of Kentucky, Tumor Biology Group: UK Cancer Center, Lexington, KY (9/5/2002)

Indiana University School of Medicine, Department of Biochemistry and Molecular Biology, Indianapolis, IN (9/23/2002)

Case Western Reserve University Department of Physiology and Biophysics, School of Medicine, Cleveland, OH (4/28/2003)

American Heart Association National Meeting, Orlando, FL (11/11/2003)

National Institute on Aging, National Institutes of Health, Baltimore, MD (11/16/2004)

American Heart Association National Meeting, New Orleans, LA, (11/8/2004)

CROET, Oregon Health & Science University, Portland, OR (5/12/2005)

American Diabetes Association National Meeting, San Diego, CA, (6/2005)

Society for Neuroscience National Meeting, Washington D. C. (11/2005)

The Medical College of Wisconsin, Department of Biochemistry. Milwaukee, WI. (10/18/2006)

American Heart Association National Meeting, Chicago, IL (11/13/2006)

Columbia University Department of Pharmacology, New York, NY. (12/11/2006)
 National Biophysical Society Meeting, Baltimore, MD. (3/6/2007). *Session Co-Chair*.
 Wayne State University Department of Molecular and Cellular Biochemistry, Detroit, MI. (5/4/2007)
 Society for Neuroscience National Meeting, San Diego, CA, (11/15/2010)
 University of Louisville, J. G. Brown Cancer Center, Louisville, KY (2/3/2011)
 University of Kentucky, DLAR Meeting, Lexington KY (1/26/2012)
 University of Kentucky, DLAR Meeting, Lexington KY (1/26/2012)
 University of California Davis, Department of Pharmacology, Davis, CA (2/15/2012)

Journals Reviewed for:

Editorial Board, The Journal of Biological Chemistry
 Biochimica et Biophysica Acta
 Journal of Neuroscience
 American Journal of Pathology
 Oncogene
 Journal of Neurochemistry
 Proceedings of the National Academy of Science, USA
 BMC Neuroscience
 Molecular Biology of the Cell
 Biochemistry
 Molecular and Cellular Biology
 Biochemical Pharmacology
 Circulation
 Cancer Research
 FEBS Letters
 Journal of Neuroscience
 Trends in Cell Biology
 Journal of Cell Biology
Associate Editor, The Journal of Biochemistry Letters
Editorial Board, World Journal of Biological Chemistry
Editorial Board, Cell and Developmental Biology
 American Journal of Pathology
 Biochemical Pharmacology
 Journal of Regulatory Peptides
 NeuroReport
 BBA Molecular Cell Research
 Journal of Visualized Experiments
 Journal Neural Signals
 Archives of Biochemistry and Biophysics
 Journal of Cell Science
 Journal of Cellular Biochemistry
 Journal of Molecular Signaling

Extramural Committees:

American Cancer Society: Tumor Biology and Endocrinology Section *Ad-hoc*, 1999, 2000
 UKMC Grant *Ad-hoc* Reviewer *Ad-hoc*, 1999-*present*
 American Heart Association (Southern 5B) Study Section, *Term* 1998-2001
 American Cancer Society: Tumor Biology and Endocrinology Section, *Term* 2002-2005
 American Cancer Society: Tumor Biology and Endocrinology Study Section, **Co-Chair** 2004
 United States-Israel Bi-national Science Foundation, *Ad-hoc* 2007, 2010
 Wellcome Trust *Ad-hoc* Reviewer, *Ad-Hoc* 2002
 Biotechnology and Biological Sciences Research Council, UK *Ad-hoc* reviewer 2003
 Signal Transduction and Cellular Regulation, National Science Foundation *Ad-hoc*, 2003
 Developmental Neurosciences, National Science Foundation *Ad-hoc*, 2004, 2009

American Heart Association: Southeast/Ohio Valley Affiliate Peer Review Committee, **Vice-Chair** 2005, 2006
 American Cancer Society: Tumor Biology and Endocrinology Study Section, **Vice-Chair** 2006, 2007
 American Cancer Society: Tumor Biology and Endocrinology Study Section, **Chair** 2007
 American Heart Association: Southeast/Ohio Valley AHA Affiliate Peer Review Committee, **Chair** 2007
 American Heart Association: Cellular Signaling/Transport Region 1 Peer Review Committee, **Chair**, 2008
 American Heart Association: Basic Cell & Molecular Biology 4, Region 1, Peer Review Comm., **Chair**, 2009
 American Heart Association: Cell Transport Basic Science 3, Region 1 Peer Review Committee, **Chair**, 2010
 American Heart Association, Basic Science 2 AHA, *Ad-hoc* reviewer 2010
 American Heart Association: Cell Transport Basic Science 3, Region 1 Peer Review Committee, **Chair**, 2011
 NIH NINDS, NDPR Study Section, *Ad-hoc* reviewer (10/5/11, 6/1/11, 3/16/12)
 Shota Rustaveli National Science Foundation (SRNSF), Country of Georgia, *Ad-hoc* 2011

University Committees:

Member of THRI/College of Agriculture Faculty Search Committee 1996
 Member College of Medicine Student Progress and Promotions Committee 8/1996-7/1999
 Member Microbiology/Immunology Department 6 year Review Committee 1998
 IBS 604, Cell Biology and Signaling II, Course Committee 1999
 Member, Curriculum Committee, Integrated Biomedical Sciences (IBS) Graduate Program 2003-2007
 Member, UK Senate Hearing Panel (Privilege and Tenure) 2005-2008
 Member, Microbiology/Immunology Department 6 year Review Committee 2006
 University Senate Hearing Panel (Privilege and Tenure) **Chair**, 2008
 Member, Senate hearing Panel (Privilege and Tenure) 2010-2014
 Member, Undergraduate Research Oversight Committee, 2011-present

University Effort:

Judge, College of Medicine Postdoctoral Scholars in Basic and Clinical Sciences Poster Competition

Departmental Committees:

Member, Biochemistry Department New Faculty Search Committee 1994 to 1995
 Selection Committee for Summer Undergraduate Research Students 1994 to 1995
 Biochemistry Department Equipment Committee **Chairman**, 1995-present
 Member, Biochemistry Departmental Graduate Curriculum Subcommittee 1998
 Member, Biochemistry Departmental Signal Transduction Faculty Search Committee 1998
 Member, Departmental Graduate Recruitment Committee 2000
 Member, Departmental IBS Recruitment Committee 2001-present
 Biochemistry Department Summer Undergraduate Program **Director**, 2001-2003
 IBS 604, *Course Director* 2002-2005
 Biochemistry Departmental/Aging Center Faculty Search Committee **Chairman**, Hired Dr Paul Murphy 2003
 Member, New Building Planning Committee 2002
 Department of Molecular & Cellular Biochemistry, Univ. Kentucky, **Departmental Vice-Chair**, 2005-present
 Departmental Teaching Committee **Chair**, 2007-present
 Department of Molecular and Cellular Biochemistry Faculty Search. **Chairman**, Hired: Drs. Matthew Gentry, Craig Vander Kooi, Emilla Galperin, Yvonne Fondufe-Mittendorf, and Konstatin Korotkov 2007-2010
 Member, *Ad hoc* Promotion & Tenure/Dept. Biochemistry Rules Revision Committee 2009

Thesis Committees:

1. Xiao-jie Yuan	Biochemistry	2/94-4/00	Ph.D.
2. Deqin Ma	Biochemistry	3/94-1/98	Ph.D.
3. Brian Finlin	Biochemistry	8/94-9/99	Ph.D.
4. Lisa Quinn Gothard	Biochemistry	11/95-4/97	M.S.
5. Paula Lemons	Biochemistry	11/95-6/99	Ph.D.
6. Liyue Huang	Toxicology	9/99	Ph.D.
7. Haipeng Shao	Biochemistry	8/95-6/00	Ph.D.

8. Nancy Webb	Immunology	10/96-5/99	Ph.D.
9. Bruce A. Waldrop	Pharmacy	10/01	Ph.D.
10. Kareem Chehade	Biochemistry	6/97-6/02	Ph.D.
11. Brian Thompson	Biochemistry	10/97-10/98	M.S.
12. Kristen Morey	Biology	3/98-6/02	Ph.D.
13. Tara Rutledge	Biochemistry	6/99-3/04	Ph.D.
14. Kirk Williams	Biochemistry	6/99-6/00	M.S.
15. Jake Issacs	Biochemistry	6/99-8/03	Ph.D.
16. Michael Spencer	Biochemistry	6/99-11/02	Ph.D.
17. Rongwen Xi	Biology	5/00-11/02	Ph.D.
18. Wangsun Choi	Biochemistry	7/03-11/08	Ph.D.
19. Shannon Whitman	Biochemistry	7/03-2008	Ph.D.
20. Jason Ren	Biochemistry	7/03-2009	Ph.D.
21. Mark Wurth	Biochemistry	7/03-7/06	Ph.D./M.D.
22. Jennifer Rudolph	Biochemistry	6/03-6/08	Ph.D. AHA Ohio Valley Grant Awardee 2006-08
23. Nathan Correll	Biochemistry	6/03-6/08	Ph.D. AHA Ohio Valley Grant Awardee 2004-06
24. Brent Meier	Agriculture	10/03	M.S.
25. Divya Srinivasan	Pharmacology	7/04-10/08	Ph.D.
26. Chiranthani Sumanasekera	Biochemistry	7/04-12/09	Ph.D.
27. Nathan Vandeford	Biochemistry	7/04-5/08	Ph.D.
28. Kathleen Gibson	Biochemistry	5/05-3/08	Ph.D.
29. Steven Smith	Biochemistry	5/05-8/08	Ph.D.
30. Jianing Yang	Biochemistry	5/05-8/10	Ph.D.
31. Malinda L. Spry	Toxicology	5/05-5/07	M.S.
32. Siva K. Gandhapudi	Immunology	5/05-8/09	Ph.D.
33. Chunyan Pang	Chemistry	8/05-8/08	Ph.D.
34. Tun-Lan Huang	Toxicology	11/05	Ph.D.
35. Jamie E. Cantrell	Biochemistry	8/06-8/10	Ph.D.
36. Miranda Byse	Physiology	8/06-6/10	Ph.D.
37. William Velez	Biochemistry	8/06-8/07	M.S.
38. Weikang Cai	Biochemistry	8/06-11/11	Ph.D.
39. Yunjie Huang	Biochemistry	8/09-present	
40. Deepa Jonnalagadda	Biochemistry	8/09-present	
41. Shawn Crump	Physiology	10/08-present	
42. Jinchao Zhang	Biochemistry	8/10-present	
43. Levi Lampe	Biochemistry	8/10-7/11	M.S.
44. Robin C. Shoemaker	Nutrition	8/11-present	

Students in **BOLD** are in my research group

Postdoctoral Fellows Supervised:

Keiko Kadono-Okuda	1995-1996	
Brian Finlin	1999-2006	
Grant (Geng-Xian) Shi	2003-present	(Research Assistant Professor since 2008)
Michael J. Roberts	2003-2005	
Tomoko Sengoku	2004-2008	University of Kentucky Women's Fellowship Awardee 2005-2006
Dana Niedowitz	2006-2008	

Hongge Jia 2011-present

College Service:

Summer Student Undergraduate Advisor

Catherine Mannon	(2011) NSF, REU Program
Yankuba Banda	(2010) Kentucky State, Cardiac Physiology Training Grant
Austin Miller	(2009) NSF, REU program
Meredith Greene	(2008) NSF, REU program
Brittany McCowen	(2007) NSF, REU Program
Sophie Picot	(1999)
Nathan Lucardie	(1998)
Marc Russell	(1997)
Stephen Koh	(1995)
Matthew Beaudet	(1994)

University of Kentucky Undergraduates in the laboratory

Brain Allen (1989)
Ryan Eads (2009)
Alexandria Dailey (2007)

Summer Employment Research Apprenticeship Program.

Student Preceptor: Chicola M. Whitfield (1996)

Community Service:

Science outreach, Dixie Elementary School: Science in the School Program (2002-2005)

YMCA Youth Soccer Coach: 2003-2007 (Spring and Fall seasons)

Howard Hughes Medical Institute (HHMI) Summer Internship Mentor:

Loris E. Sherman (Instructor: Somerset Comm. College) (1996)

Mentor to High School Student, Maggie Pan, Dunbar Math and Science Honor's Program (2006-2007)

Bluegrass Community College, Biotechnology Program

Steering Committee 2007-2010
Advisory Committee board member 2010-present