CURRICULUM VITAE

R A N D Y S. H A U N

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EDUCATION

1978	B.S.	University of Iowa, Iowa City, IA - Biochemistry/Microbiology
1988	Ph.D.	Purdue University, West Lafayette, IN - Biochemistry (Jack E. Dixon, Director)

HONORS AND FELLOWSHIPS

1984-1987	Predoctoral Research Fellow, National Institutes of Health
1987	A.H. Ismail Interdisciplinary Program Dissertation Award
1997	Junior Faculty Enhancement Award, Oak Ridge Associated Universities
2003	American Cancer Society Research Scholar

RESEARCH EXPERIENCE

1979-1982	Research Chemist, Uniformed Services University of the Health Sciences, Bethesda, MD (Dr. F. J. Bollum, Director)
1982-1988	Graduate Research Assistant, Department of Biochemistry, Purdue University (Dr. Jack E. Dixon, Director)
1989	Postdoctoral Fellow, Department of Biochemistry, Purdue University (Dr. Jack E. Dixon, Director)
1989-1993	Staff Fellow, National Heart, Lung, and Blood Institute, National Institutes of Health (Dr. Martha Vaughan, Chief)
1993-1995	Senior Staff Fellow, National Heart, Lung, and Blood Institute, National Institutes of Health (Dr. Martha Vaughan, Chief)
1996-1998	Instructor, Department of Biochemistry and Molecular Biology, University of Arkansas for Medical Sciences, Little Rock, AR
1998-1999	Paternity Testing, Apollo DNA Services, Little Rock, AR
1998-2002	Assistant Professor, Department of Biochemistry and Molecular Biology, University of Arkansas for Medical Sciences, Little Rock, AR
2002-2005	Assistant Professor, Department of Pathology, University of Arkansas for Medical Sciences, Little Rock, AR
2005-2011	Associate Professor, Department of Pathology, University of Arkansas for Medical Sciences, Little Rock, AR

2011-2016	Research Health Specialist, Central Arkansas Veterans Healthcare System, Little Rock, AR
2011-2018	Associate Professor, Department of Pharmaceutical Sciences, University of Arkansas for Medical Sciences, Little Rock, AR
2018	Candidate, Arkansas House District 31
2019-present	Senior Scientist, Arkana Laboratories, Little Rock, AR

PROFESSIONAL DUTIES

2002 Scientist Reviewer, DoD Breast Cancer Research Program, Pathobiology #2 (PBY-2), August 11-13, 2002

2002 Invited Participant in NCI Workshop, "*Nutritional Links to Mechanism Underlying Pancreatic Cancer*", Bethesda, MD, December 3, 2002

2003 Scientist Reviewer, DoD Prostate Cancer Research Program, Clinical & Experimental Therapeutics #3 (CET-3), June 8-10, 2003

2004 Scientist Reviewer, DoD Breast Cancer Research Program, Concept Clinical & Experimental Therapeutics

2004 Scientist Reviewer, American Cancer Society IRG, June 2, 2004

2007-2018 **Associate Editor**, ***Molecular Carcinogenesis***

2007 Scientist Reviewer, DoD Breast Cancer Research Program, Cell Biology #1 (CBY-1), August 19-21, 2007.

2008 Scientist Reviewer, DoD Breast Cancer Research Program, Concept Cell Biology #1 (CBY-1)

2009 Mail Reviewer, NIH Challenge Grants Panel 10, ZRG1 OTC-K (58)

2011 Reviewer, ZCA1 RPRB-M M1 P, SPORE in Prostate, Skin, Pancreatic and other GI Cancers

2012 Reviewer, Department of Defense Congressionally Directed Medical Research Programs (CDMRP) Pancreatic Cancer Panel (D-PC-2)

2012 Reviewer, NIH, National Cancer Institute, Cancer Biomarkers Study Section (CBSS), February 9-10.

2012 Reviewer, NIH, National Cancer Institute, Cancer Biomarkers Study Section (CBSS), June 7-8.

2012 Reviewer, NIH, National Cancer Institute, Cancer Biomarkers Study Section (CBSS), October 15-16.

2013 Reviewer, Department of Defense Congressionally Directed Medical Research Programs (CDMRP), December 11-12.

2014 Reviewer, NIH, Special Emphasis Panel (ZRG1 PSE-P 02), March 7, 2014

2015 Reviewer, NIH, Cell Biology, Developmental Biology, and Bioengineering F05-D(21) Fellowship Panel, March 17-18, 2015

2015 Reviewer, NIH, NCI EDRN Review Panel ZCA1 RPRB-B (A2 S), June 9-10, 2015

2015 Reviewer, NIH, NCI Omnibus R03 & R21/SEP-1 Panel (ZCA1 SRB-1 (O1) S), June 29-30, 2015

2015 Reviewer, NIH, NCI Omnibus R21 Review Panel ZCA1 SRB (J1), November 9-10, 2015

2015 **Chair**, Department of Defense Congressionally Directed Medical Research Programs (CDMRP) Peer Reviewed Cancer Research Program Horizon Award Review Panel, November 30-December 2, 2015

2016 Reviewer, NIH, NCI Omnibus R03 & R21/SEP-1 Panel (ZCA1 SRB-1 (M1) S), March 3-4, 2016

2016 Reviewer, NIH, NCI Research Specialist Award Panel (2016/08 ZCA1 SRB-1 (A1) S), June 16-17, 2016

2016 Reviewer, Department of Defense Congressionally Directed Medical Research Programs (CDMRP) Peer Reviewed Cancer Research Program Horizon Award Review Panel, November, 2016

2016 **Chair**, Department of Defense Congressionally Directed Medical Research Programs (CDMRP) Peer Reviewed Cancer Research Program Review Panel, November 13-15, 2016

2017 Reviewer, NIH NCI Special Emphasis Panel ZCA1 TCRB-J (O1), June 19-20, 2017

2017 Reviewer, NCI Clinical and Translational R21 & Omnibus R03: SEP-3 Panel ZCA1 SRB-P (J1), September 25-26, 2017

2017 **Chair**, Department of Defense Congressionally Directed Medical Research Programs (CDMRP) Peer Reviewed Cancer Research Program Review Panel, December 4-5, 2017

PROFESSIONAL SOCIETIES

1987 Member, Psi Lambda Upsilon, Honorary Chemical Society
1989 Associate Member, American Society for Biochemistry and Molecular Biology
1990 Member, American Association for the Advancement of Science
1993 Regular Member, American Society for Biochemistry and Molecular Biology
2000 Member, American Pancreatic Association

2005 Member, American Association for Cancer Research

PUBLICATIONS

1. Deschenes, R.J., L. Lorenz, **R. Haun**, B. Roos, K. Collier, and J.E. Dixon, Cloning and Sequence Analysis of a cDNA Encoding Rat Preprocholecystokinin, *Proc. Natl. Acad. Sci. USA* **81** (1984) 726-730. PMCID: PMC344908
2. Deschenes, R.J., **R.S. Haun**, C. Funckes, and J.E. Dixon, A Gene Encoding Rat Cholecystokinin: Isolation, Nucleotide Sequence and Promoter Activity, *J. Biol. Chem.* **260** (1985) 1280-1286. PMID: 2981840
3. Deschenes, R.J., **R.S. Haun**, D. Sunkel, B. Roos, and J.E. Dixon, Modulation of Cholecystokinin Gene Expression, *Ann. New York Acad. Sci.* **448** (1985) 53-60. PMID: 3861130
4. Lund, T., A. Geurts van Kessel, **R.S. Haun**, and J.E. Dixon, The Genes for Human Gastrin and Cholecystokinin are Located on Different Chromosomes, *Hum. Genet.* **73** (1986) 77-80.
5. Dixon, J.E., **R.S. Haun**, C.D. Minth, and R. Nichols, Neuropeptide Gene Families, In *Neuropeptides and Their Peptidases*, (A.J. Turner, ed.) Ellis Horwood Ltd. (1987).
6. **Haun, R.S.**, C.D. Minth, P.C. Andrews, and J.E. Dixon, Molecular Biology of Gut Peptides, In *Handbook of Physiology*, (G.M. Makhlouf, ed.) American Physiological Society (1989).
7. Seroogy, K., M. Schalling, S. Brene, A. Dagerlind, S.Y. Chai, T. Hokfelt, H. Persson, M. Brownstein, **R. Haun**, J. Dixon, D. Filer, D. Schlessinger, and M. Goldstein, Cholecystokinin and tyrosine hydroxylase messenger RNAs in neurons of rat mescencephalon: peptide/monoamine coexistence studies using in situ hybridization combined with immunocytochemistry, *Exp. Brain Res.* **74** (1989) 149-162.
8. Takeda, K., H. Koshimoto, F. Uchiumi, **R.S. Haun**, J.E. Dixon, and T. Kato, Postnatal Development of Cholecystokinin-Like Immunoreactivity and Its mRNA Level in Rat Brain Regions, *J. Neurochem.* **53** (1989) 772-778. PMID: 2760620
9. **Haun, R.S.**, M. Beinfeld, B. Roos, and J.E. Dixon, Establishment of a Cholecystokinin-Producing Rat Medullary Thyroid Carcinoma Cell Line, *Endocrin.* **125** (1989) 850-856. PMID: 2752980
10. Guan, K., **R.S. Haun**, S.J. Watson, R.L. Geahlen, and J.E. Dixon, Cloning and expression of a protein-tyrosine-phosphatase, *Proc. Natl. Acad. Sci. USA* **87** (1990) 1501-1505. PMCID: PMC53503
11. **Haun, R.S.** and J.E. Dixon, Cholecystokinin Gene Expression, In *Gastrointestinal Endocrinology: Receptors and Post-Receptor Mechanisms*, (J.C. Thompson, ed.) Academic Press, Inc. (1990).
12. **Haun, R.S.** and J.E. Dixon, A Transcriptional Enhancer for the Expression of the Rat Cholecystokinin Gene Contains a Sequence Identical to the -296 Element of the Human c-*fos* Gene, *J. Biol. Chem.* **265** (1990) 15455-15463. PMID: 2118525
13. Pot, D.A., T.A. Woodford, E. Remboutsika, **R.S. Haun**, and J.E. Dixon, Cloning, Bacterial Expression, Purification and Characterization of the Cytoplasmic Domain of Rat LAR, a Receptor-like Protein Tyrosine Phosphatase, *J. Biol. Chem.* **266** (1991) 19688-19696. PMID: 1918076

14. Tsai, S.-C., **R.S. Haun**, M. Tsuchiya, J. Moss, and M. Vaughan, Isolation and Characterization of the human gene for ADP-ribosylation factor 3, a 20-kDa guanine nucleotide-binding protein activator of cholera toxin, *J. Biol. Chem.* **266** (1991) 23053-23059. PMID: 1744102
15. **Haun, R.S.** and J. Moss, Ligation-independent cloning of glutathione *S*-transferase fusion genes for expression in *Escherichia coli*, *Gene* **112** (1992) 37-43. PMID: 1339364
16. **Haun, R.S.**, I.M. Serventi, S.-C. Tsai, C.-M. Lee, E. Cavanaugh, J. Moss, and M. Vaughan, Characterization of the Family of Mammalian Genes Encoding ADP-ribosylation Factors, In *ADP-Ribosylation Reactions*, (G.G. Poirier and P. Moreau, eds.) Springer-Verlag (1992).
17. M.C. Beinfeld, **R.S. Haun**, L.R. Allard, and J.E. Dixon, Regulation of cholecystokinin secretion from a rat medullary thyroid carcinoma cell line: Role of calcium, cyclic nucleotides, glucocorticoids, neurotensin, and calcitonin gene-related peptide, *Peptides* **13** (1992) 545-550. PMID: 1523166
18. Lee, C.-M., **R.S. Haun**, S.-C. Tsai, J. Moss, and M. Vaughan, Characterization of the human gene encoding ADP-ribosylation factor 1, a guanine nucleotide-binding activator of cholera toxin, *J. Biol. Chem.* **267** (1992) 9028-9034. PMID: 1577740
19. Price, S.R., C.F. Welsh, **R.S. Haun**, S.J. Stanley, J. Moss, and M. Vaughan, Effects of Phospholipid and GTP on Recombinant ADP-ribosylation Factors (ARFs), *J. Biol. Chem.* **267** (1992) 17766-17772. PMID: 1517219
20. **Haun, R.S.**, I.M. Serventi, and J. Moss, Rapid, reliable ligation-independent cloning of PCR products using modified plasmid vectors, *Biotechniques* **13** (1992) 515-518. PMID: 1362067
21. Tsai, S.-C., R. Adamik, **R.S. Haun**, J. Moss, and M. Vaughan, Differential Interaction of ADP-ribosylation Factors 1, 3, and 5 with Rat Brain Golgi Membranes, *Proc. Natl. Acad. Sci. U.S.A.* **89** (1992) 9272-9276. PMID: 8496147
22. **Haun, R.S.**, S.-C. Tsai, R. Adamik, J. Moss, and M. Vaughan, Effect of Myristoylation on GTP-dependent Binding of ADP-ribosylation Factor (ARF) to Golgi, *J. Biol. Chem.* **268** (1993) 7064-7068. PMID: 8463239
23. **Haun, R.S.**, J. Moss, and M. Vaughan, Characterization of the Human ADP-ribosylation Factor (ARF) 3 Promoter: Transcriptional Regulation of a TATA-less Promoter, *J. Biol. Chem.* **268** (1993) 8793-8800. PMID: 8473323
24. Tsai, S.-C., R. Adamik, **R.S. Haun**, J. Moss, and M. Vaughan, Effects of Brefeldin A and Accessory Proteins on Association of ADP-ribosylation Factors 1, 3, and 5 with Golgi, *J. Biol. Chem.* **268** (1993) 10820-10825. PMID: 8496147
25. Tsai, S.-C., R. Adamik, **R. Haun**, J. Moss, and M. Vaughan, Selective Association with Golgi of ADP-ribosylation Factors, 20-kDa Guanine Nucleotide-binding Protein Activators of Cholera Toxin, In *Molecular Mechanisms of Membrane Traffic*, (D.J. Morré, K.E. Howell, and J.J.M. Bergeron, eds.) Springer-Verlag Berlin Heidelberg (1993).
26. Hong, J.-X., **R.S. Haun**, S.-C. Tsai, J. Moss, and M. Vaughan, Effect of ADP-ribosylation Factor Amino-terminal Deletions on Its GTP-dependent Stimulation of Cholera Toxin Activity, *J. Biol. Chem.* **269** (1994) 9743-9745. PMID: 8144566
27. Moss, J., **R.S. Haun**, S.-C. Tsai, C.F. Welsh, F.J.S. Lee, S.R. Price, and M. Vaughan, Activation of Cholera-Toxin by ADP-ribosylation Factors - 20-kDa Guanine-nucleotide-binding Proteins, *Meth. Enzymol.* **237** (1994) 44-63.

28. **Haun, R.S.**, Ligation-independent cloning of PCR products, In *Reverse Transcriptase PCR*, (J.W. Larrick and P.D. Siebert, eds.) Ellis Horwood Ltd (1995) 210-231.
29. **Haun, R.S.**, Steps to building a virtual laboratory, *Nature Biotechnol.* **15** (1997) 683-684. PMID: 9219274
30. **Haun, R.S.**, (review of) The Internet for Scientists, *Trends Biotechnol.* **16** (1998) 237.
31. Lebeda, R.A., S.K. Johnson, and **R.S. Haun**, Transcriptional regulation of the human ADP-ribosylation factor 5 (ARF5) gene. *Biochim. Biophys. Acta* **1445** (1999) 314-320. PMID: 10524252
32. Lebeda, R.A. and **R.S. Haun**, Cloning and characterization of the human ADP-ribosylation factor 4 gene. *Gene* **237** (1999) 209-214. PMID: 10524252
33. Lebeda, R.A., Johnson, S.K., M.I. Stewart, and **R. S. Haun**, Sequence, genomic organization, and expression of the human ADP-ribosylation factor 6 gene: a class III ARF. *DNA and Cell Biology* **22** (2003) 737-742. PMID: 14659046
34. Bhattacharyya, S., E.R. Siegel, G.M. Peterson, S.T. Chari, L.J. Suva, and **R.S. Haun**, Diagnosis of Pancreatic Cancer Using Serum Proteomic Profiling. *Neoplasia* **6** (2004) 674-686. PMCID: PMC1531671
35. Johnson, S.K. and **R.S. Haun**, The $GABA_A$ Receptor π Subunit is Overexpressed in Pancreatic Adenocarcinomas. *J. Pancreas* **6** (2005) 136-142. PMID: 15767729
36. Herzog, C., G.P. Kaushal, and **R.S. Haun**, Generation of biologically active interleukin-1β by meprin B. *Cytokine,* **31** (2005) 394-403. PMID: 16095909
37. Johnson, S.K., Dennis, R.A., Barone, G.W., Lamps, L.W., and **R.S. Haun**, Differential Expression of Insulin-like Growth Factor Binding Protein-5 in Pancreatic Adenocarcinomas: Identification Using DNA Microarray, *Molecular Carcinogenesis* **45** (2006) 814-827. PMID: 16865675
38. Johnson, S.K., V.C. Ramani, L. Hennings and **R.S. Haun**, Kallikrein 7 enhances pancreatic cancer cell invasion by shedding E-cadherin. *Cancer* **109** (2007) 1811-1820. PMID: 17354228
39. Yang, C., V. Kaushal, **R.S. Haun**, R. Seth, S.V. Shah, and G.P. Kaushal, Transcriptional Activation of Caspase-6 and -7 Genes by Cisplatin-induced p53 and Its Functional Significance in Cisplatin Nephrotoxicity. *Cell Death and Differentiation* **15** (2008) 530-544. PMID: 18064040
40. Ramani, V.C. and **R.S. Haun**, The extracellular matrix protein fibronectin is a substrate for kallikrein 7. *Biochem. Biophys. Res. Comm.* **369** (2008) 1169-1173. PMID: 18343220
41. Ramani, V.C. and **R.S. Haun**, Expression of kallikrein 7 diminishes pancreatic cancer cell adhesion to vitronectin and enhances urokinase-type plasminogen activator receptor shedding. *Pancreas* **37** (2008) 399-404. PMID: 18953252
42. Ramani, V.C., L. Hennings, and **R.S. Haun**, Desmoglein 2 is a substrate of kallikrein 7 in pancreatic cancer. *BMC Cancer* **8** (2008) 373. PMCID: PMC2628383
43. Herzog, C., **R.S. Haun**, V. Kaushal, P.R. Mayeux, S.V. Shah, and G.P. Kaushal, Meprin A and meprin α generate biologically functional IL-1β from pro-IL-1β. *Biochem. Biophys. Res. Comm.* **379** (2009) 904-8. PMCID: PMC3702385
44. Johnson, S.K. and **R.S. Haun**, Insulin-like growth factor binding protein-5 influences pancreatic cancer cell growth. *World J Gastroenterol* **15** (2009) 3355-3366. PMCID: PMC2712896
45. Ramani, V.C., G.P. Kaushal, and **R.S. Haun**, Proteolytic action of kallikrein-related

peptidase 7 produces unique active matrix metalloproteinase 9 lacking the C-terminal hemopexin domains. *BBA–Mol Cell Res* **1813** (2011) 1525-1531. PMID: 21616098 PMCID: PMC3123393

46. Zhao, H., Q. Zhang, Y. Xue, X. Chen, and **R.S. Haun**, Effects of hyperbaric oxygen on the expression of claudins after cerebral ischemia-reperfusion in rats. *Exp. Brain Res.* **212** (2011) 109-117. PMID: 21626096
47. Iakovlev, V., E.R. Siegel, M.-S. Tsao, and **R.S. Haun**, Expression of kallikrein-related peptidase 7 predicts poor prognosis in patients with unresectable pancreatic ductal adenocarcinoma. *Cancer Epidemiol., Biomarkers Prev.* **21** (2012) 1135-1142. PMID: 22573795
48. Mercado, C.P., S. Byrum, M.L. Beggs, E. Ziu, P. Singh, V.R. Raj, **R.S. Haun**, and F. Kilic, Impact of elevated plasma serotonin on global gene expression of murine megakaryocytes. PLoS One **8** (2013) e72580. PMID: 24013211 PMCID: PMC3754925
49. Makawita, S., A. Dimitromanolakis, A. Soosaipillai, I. Soleas, A. Chan, S. Gallinger, **R.S. Haun**, I.M. Blasutig, E.P. Diamandis, Validation of four candidate pancreatic cancer serological biomarkers that improve the performance of CA19.9, *BMC Cancer* **13** (2013) 404. PMID: 24007603 PMCID: PMC3847832
50. Chrystoja, C.C., E.P. Diamandis, E.P., R. Brand, F. Rückert, **R. Haun**, and R. Molina, Pancreas Cancer, *Clin. Chem.* **59** (2013) 41-46. PMID: 23136253
51. Kaushal, G.P., **R.S. Haun**, C. Herzog, and S.V. Shah, Meprin A metalloproteinase and its role in acute kidney injury, *American Journal of Physiology - Renal Physiology* **304** (2013) F1150-8. PMID: 23427141 PMCID: PMC3651633
52. Kaushal, V., C. Herzog, **R.S. Haun**, and G.P. Kaushal, Caspase Protocols in Mice, In 'Caspases, Paracaspases, Metacaspases' Guy Salvesen and Peter Bozhkov editors, *Methods Mol Biol* 1133 (2014) 141-154. PMID: 24567100 PMCID: PMC4084876
53. Herzog, C., **R.S. Haun**, A. Ludwig, S.V. Shah, and G.P. Kaushal, ADAM10 is the major sheddase responsible for the release of membrane-associated meprin A, *J. Biol. Chem.* 289 (2014) 13308-22. PMID: 24662289 PMCID: PMC4036340
54. **Haun, R.S.**, C.-Y. Fan, S.G. Mackintosh, H. Zhao, and A.J. Tackett, CD109 overexpression in pancreatic cancer identified by cell-surface glycoprotein capture, *J Proteomics Bioinform* Suppl 10 (2014) S10-003. PMID: 25635161, PMCID: PMC4307595
55. Herzog, C., R. Marisiddaiah, **R.S. Haun**, and G. Kaushal, Basement membrane protein nidogen-1 is a target of meprin A in cisplatin nephrotoxicity, *Toxicol. Lett*. 236 (2015) 110-116. PMID: 25957482 PMCID: PMC4457671
56. Dates, C., T. Fahmi, S. Pyrek, A. Yao-Borengasser, B. Borowa-Mazgaj, S.M. Bratton, S.A. Kadlubar, P. Mackenzie, **R.S. Haun**, and A. Radominska-Pandya, Human UDP-Glucuronosyltransferases: Effects of altered expression in breast and pancreatic cancer cell lines, *Cancer Biology and Therapy* 16 (2015) 714-723. PMID: 25996841
57. Kodell, R.L., **R.S. Haun**, E.R. Siegel, C. Zhang, A.B. Trammel, M. Hauer-Jensen, and A.F. Burnett, Novel use of proteomic profiles in a convex-hull ensemble classifier to predict gynecological cancer patients' susceptibility to gastrointestinal mucositis as side-effect of radiation therapy, *J Proteomics Bioinform* 8 (2015) 149-154. PMC4587761
58. **Haun, R.S.**, C.M. Quick, E.R. Siegel, I. Raju, S.G. Mackintosh, and A.J. Tackett, Bioorthogonal Labeling Cell-Surface Proteins Expressed in Pancreatic Cancer Cells to Identify Potential Diagnostic/Therapeutic Biomarkers, *Cancer Biology and Therapy* 16

(2015) 1557-65. PMID: 26176765 PMCID: PMC4587761
59. Chandrika, B.B., C. Yang, Y. Ou, X. Feng, D. Muhoza, A.F. Holmes, S. Theus, S. Deshmukh, **R.S. Haun**, G.P. Kaushal, Endoplasmic reticulum stress-induced autophagy provides cytoprotection from chemical hypoxia and oxidant injury and ameliorates renal ischemia-reperfusion injury, *PLoS One* 10 (2015) e0140025. PMID: 26444017
60. Raju, I., G.P. Kaushal, and **R.S. Haun**, Epigenetic regulation of KLK7 gene expression in pancreatic and cervical cancer cells, *Biol. Chem.* **397** (2016) 1135-1146. PMID: 27279059
61. Herzog, C., **R.S. Haun**, S.V. Shah, and G.P. Kaushal, Proteolytic processing and inactivation of CCL2/MCP-1 by meprins, *Biochemistry and Biophysics Reports* **8** (2016) 146-150.
62. Herzog, C., **R.S. Haun**, and G.P. Kaushal, Role of meprin metalloproteinases in cytokine processing and inflammation, *Cytokine* **114** (2019) 18-25. PMID: 30580156
63. Zhang, L., Y. Yao, S. Zhang, Y. Liu, H. Guo, M. Ahmed, T. Bell, H. Zhang, G. Han, E. Lorence, M. Badillo, S. Zhou, Y. Sun, M.E. Di Francesco, N. Feng, **R. Haun**, R. Lan, S.G. Mackintosh, X. Mao, X. Song, J. Zhang, L.V. Pham, P.L. Lorenzi, J. Marszalek, T. Heffernan, G. Draetta, P. Jones, A. Futreal, K. Nomie, L. Wang, and M. Wang, Metabolic reprogramming toward oxidative phosphorylation identifies a therapeutic target for mantle cell lymphoma, *Sci. Transl. Med.* **11** (2019) PMID: 31068440

INVITED SEMINARS/PRESENTATIONS

Department of Physiology & Biophysics, University of Arkansas for Medical Sciences, Little Rock, AR, "ARF - A Molecular Switch Involved In Vesicular Transport", October 11, 1996

Department of Biology, Austin College, Sherman, TX, "Protein Trafficking: Preventing Gridlock in the Golgi", October 23, 1997

Department of Biology, Rhodes College, Memphis, TN, "Protein Trafficking: Preventing Gridlock in the Golgi", December 3, 1998

Department of Biochemistry and Molecular Biology, University of Arkansas for Medical Sciences, Little Rock, AR, "Molecular Analysis of the ARF GTPase Family", May 5, 1999.

Johnson, S.K. and **R.S. Haun**, Characterization of the Expression of the Zinc Metalloprotease Meprin in Pancreatic Carcinomas. Miami Nature Biotechnology Winter Symposia: DNA, RNA, and Cancer. *Nucleic Acids Symposium Series* **11** (2000) 54.

Johnson, S.K. and **R.S. Haun**, "Expression of the Down-regulated in Adenoma (DRA) Gene in Pancreatic Carcinoma," Combined Meeting of American Pancreatic Association and International Association of Pancreatology, *Pancreas* **21** (2000) 451.

Department of Chemistry, University of Louisiana at Lafayette, Lafayette, LA, "Characterization of Genes Expressed in Pancreatic Cancer", December 1, 2000.

Arkansas Cancer Research Center, University of Arkansas for Medical Sciences, Little Rock,

AR, “Characterization of Genes Expressed in Pancreatic Cancer”, December 18, 2000.

Department of Pharmacology/Toxicology, University of Arkansas for Medical Sciences, Little Rock, AR, “Characterization of Genes Expressed in Pancreatic Cancer”, February 7, 2001.

Department of Biochemistry, Kansas State University, Manhattan, KS, “Characterization of Genes Expressed in Pancreatic Cancer”, September 24, 2001.

Haun, R.S. and S.K. Johnson, “Expression of the metalloproteinase meprin β increases *in vitro* invasiveness of transfected cells”, AACR-NCI-EORTC International Conference on Molecular Targets and Cancer Therapeutics, *Clinical Cancer Research*, November 2001.

Department of Biology, Arkansas Tech University, Russellville, AR, “Characterization of Genes Expressed in Pancreatic Cancer”, November 15, 2001.

Department of Chemistry, Ouachita Baptist University, Arkadelphia, AR, “Characterization of Genes Expressed in Pancreatic Cancer”, February 19, 2002.

Johnson, S.K. and **R.S. Haun**, “Identification of genes expressed in pancreatic cancer using DNA array technology”, *Proc. Amer. Assoc. Cancer Res.* (1st ed.), *44*: 6024, 2003.

Haun, R.S., S. Bhattacharyya, L.J. Suva, G.M. Petersen , S.T. Chari, “Characterization of Serum Biomarkers for Pancreatic Cancer Using SELDI-TOF Mass Spectrometry: Preliminary Findings”, DDW Conference (2003) M2222.

Clinical Laboratory Continuing Education, University of Arkansas for Medical Sciences, Little Rock, AR, “Diagnosis of Pancreatic Cancer Using Serum Proteomic Profiling”, March 11, 2004.

Johnson, S.K. and **R.S. Haun**, “Effects of insulin-like growth factor binding protein-5 on the growth of pancreatic cancer cells”, AACR - Pancreatic Cancer 2004: Advances and Challenges

Johnson, S.K., V. Ramani, and **R.S. Haun**, “Expression of kallikrein 7 in pancreatic adenocarcinomas”, AACR Cancer, Proteases, and the Tumor Microenvironment, Bonita Springs, FL, November 30-December 4, 2005.

Johnson, S.K. and **R.S. Haun**, “Role of insulin-like growth factor binding protein-5 in pancreatic cancer cell survival”, AACR 97th Annual Meeting, Washington, D.C., April 1-5, 2006.

Haun, R.S., “Identification of Serum Biomarkers for Early Detection of Pancreatic Cancer Using Proteomic Profiling”, Dean’s Research Forum, April 25, 2006

Haun, R.S., “High-throughput electrophoretic serum protein fractionation for pancreatic cancer biomarker discovery”, 2008 American Chemical Society's Southwest Regional Meeting, October 3, 2008

Ramani, V.C. and **R.S. Haun**, "Activation of matrix metalloproteinase-9 by kallikrein 7 produces novel proteolytically active products", AACR 100th Annual Meeting, Denver, CO, April 18-22, 2009

Haun, R.S., "Expression and roles of KLK7 in pancreatic cancer", 3rd International Symposium on Kallikreins and Kallikrein-related Peptidases, Munich, Germany, August 30 – September 3, 2009

Haun, R.S., "Suppression of *KLK7* expression inhibits pancreatic tumor growth", 40th Anniversary Meeting of APA and JPS, Honolulu, HI, November 5-7, 2009

Haun, R.S., "Expression and roles of kallikrein 7 in pancreatic cancer", Department of Microbiology & Immunology, UAMS, March 11, 2010.

Haun, R.S., "Expression and roles of kallikrein 7 in pancreatic cancer", Department of Biochemistry & Molecular Biology, UAMS, February 16, 2011.

Haun, R.S., "Pancreatic cancer cell surface proteome", Bioinformatics Seminar, University of Arkansas at Little Rock, October 25, 2011.

Haun, R.S., "Molecular profiling pancreatic cancer", College of Pharmacy, UAMS, Februrary 3, 2012.

Haun, R.S., "In Search of Targeted Therapies for Pancreatic Cancer", Cancer Institute Grand Rounds, UAMS, June 5, 2013.

Haun, R.S., "Effect of suppression of KLK7 on pancreatic tumor development", 2013 International Society of Kallikreins (ISK) meeting, Toronto, 9/28/13-10/1/13.

FUNDING

01BX000828-01A2 (Haun) 07/01/2011-06/30/2015 10.5 calendar
Department of Veterans Affairs $987,000
Role of serine protease KLK7 in pancreatic cancer

The major goals of this project are: 1) Examine the effects of suppression/elimination of *KLK7* expression on pancreatic tumor development, growth, and invasion using experimental models of pancreatic cancer. 2) Examine the mechanism(s) regulating *KLK7* expression in pancreatic cancer. 3) Examine downstream effects of KLK7 proteolytic activity in pancreatic cancer cells.

R01DK081690-01 (Kaushal) 3/1/2010-2/28/2014 10% effort
NIH/NIDDK $800,000
Meprin A Metalloproteinase in Acute Kidney Injury

The major goals of this project are: 1. Examine the temporal relationship between meprin A redistribution, renal injury, leukocyte infiltration, and meprin A shedding during AKI using experimental models of IR and cisplatin nephrotoxicity. 2. Identification of meprin A-mediated in vivo degradation products of the ECM components during IR and cisplatin nephrotoxicity. 3. Determine the mechanisms of meprin A-mediated inflammatory effects and functional significance of meprin A during AKI using a meprin inhibitor and meprin A-deficient mice.

01BX000538-01 (Kaushal) 10/1/2009-9/30/2013 10% effort
Department of Veterans Affairs $650,000
Role of Meprin A in Acute Kidney Injury

The major goals of this project are: 1. Examine the temporal relationship between meprin A redistribution, renal injury, leukocyte infiltration, meprin A shedding, and urinary excretion of meprin subunits during AKI using experimental models of IR and cisplatin nephrotoxicity. 2. Examine meprin A-mediated in vivo degradation products of nidogen during IR and cisplatin nephrotoxicity. 3. Determine the mechanisms of meprin A-mediated inflammatory effects and functional significance of meprin A inhibition after the onset of AKI.

R01CA152667-01 (Kodell) 7/1/2010-6/30/2014 15% effort
NIH/NCI $750,000
Individualizing cancer predictions via selective voting in convex-hull ensembles

The major goals of this project are: 1) To develop a selective-voting algorithm for convex-hull classification ensembles to increase prediction accuracy of cancer diagnoses, prognoses and responses to treatment, 2) To develop a method for using selective voting to identify subpopulation-specific subsets of predictor variables for improved treatment assignment, 3) To collect and use UAMS clinical data on gastrointestinal mucositis with proteomic predictors to validate the new selective voting algorithm in clinical practice and to apply the algorithm to two publicly available cancer datasets with genomic predictors to demonstrate its increased accuracy.

UAMS 1/1/2009-12/31/2009 5% effort
Medical Research Endowment $15,000
Proteomic analysis of gemcitabine chemoresistance in pancreatic cancer

The major goal of this project is to use high-throughput electrophoretic fractionation followed by mass spectrometry to identify proteins in pancreatic cell lines that are significantly altered upon exposure to gemcitabine.

1R21CA118164-02 7/1/2006-6/30/2009 20% effort
NIH/NCI $200,000
Early Detection of Pancreatic Cancer

The major goals of this project are: 1) Use two-dimensional liquid chromatography to produce profiles of serum proteins from patients with and without pancreatic cancer to identify changes in serum proteins that may predict the presence of early, treatable pancreatic cancer in an asymptomatic population. 2) Monitor serum protein profiles in patients who have undergone pancreatic resection.

(Kaushal) 10/1/04-9/30/08 10% effort
Department of Veterans
Affairs
Role of proteasomes in acute renal failure

RSG-02-142-01-CNE (Haun) 07/01/02-06/30/06 50% effort
American Cancer Society $604,000
Protease expression in pancreatic cancer

The major goals of this project are: 1) examine meprin expression in pancreatic tumors to determine whether meprin β expression and enzyme activity are correlated with tumor progression and to determine the localization of meprin protein and mRNA using immunocytochemistry and *in situ* hybridization, respectively; 2) meprin β will be expressed in various human cell lines with and without the α subunit and the functional effects will be examined using *in vitro* invasion assays; 3) analyze the *in vivo* effects of meprin β expression in tumor cells using an experimental metastasis assay in immunodeficient mice; 4) to investigate the mechanism(s) whereby meprin may facilitate the spread of pancreatic tumors, in vitro assays will be performed to examine the ability of meprin to degrade biologically important substrates.

1P01DK058324-01A1 (Shah) 08/21/01-07/31/06 10% effort
NIH, NIDDK $832,075
Mechanisms of renal tubular epithelial cell injury

This program project grant application represents a multidisciplinary collaborative effort among basic scientists and clinician scientists around a central theme of elucidating the cellular and molecular basis of rental tubular epithelial cell injury, including concepts that have been learned from the study of apoptosis.

R21CA95488-01 (Haun) 06/01/02-05/31/04 20% effort
NIH/NCI $200,000
Inhibition of a proteinase involved in tumor invasion

The major goals of this project are: 1) to identify peptide inhibitors of meprin activity using phage display and 2) to obtain mouse monoclonal antibodies against human meprin that inhibit tumor cell invasion.

(Chari) 1/1/04-12/31/04 5% effort
Lustgarten Foundation for Pancreatic Cancer Research $15,000
Serum proteomics of pancreatic cancer- induced diabetes

The goals of this project are: 1) To determine if the LC/MS/MS technique can identify protein(s) that can differentiate PaCDM from type 2 DM, 2) To determine if the high-throughput SELDI-TOF technique can identify unique serum protein profiles for PaCDM and type 2 DM.

UAMS 01/01/02-12/31/02
Tobacco Funds $10,000
Preliminary Clinical Characterization of Serum Markers for Pancreatic Neoplasms

The goal of this pilot project is to use surface-enhanced laser desorption/ionization (SELDI) time of flight mass spectroscopy (TOF-MS) to produce protein profiles of complex mixtures; namely serum, to identify serum proteins that are differentially expressed in patients with pancreatic cancer

01/01/02-6/30/02
Wendy Will Case Cancer Fund $12,500
Protease expression in pancreatic cancer

The goal of this project is to confirm that meprin is expressed in pancreatic tumors but not normal pancreas.

UAMS 01/01/01-12/31/01
Medical Research Endowment $14,400
Gene expression in pancreatic cancer

The goals of this project are: 1) To identify differentially expressed genes in pancreatic ductal adenocarcinomas, and 2) to prepare a custom microarray to verify pancreatic specific gene expression.

9810088AR 7/1/98-6/30/00

American Heart Association – $58,550
Arkansas Affiliate
Cloning and characterization of a novel human cardiac ADP-ribosylation factor

The goals of this project are: 1) To complete the cloning and characterization of the cDNA(s) encoding this novel ARF, 2) To prepare peptide antibodies to specifically detect the novel ARF, and 3) To determine the chromosomal localization of the novel ARF.

IRG-021-06 1/1/99-12/31/99
American Cancer Society $15,000
Institutional Research Grant
Characterization of Metalloproteinases Expressed in Pancreatic Cancer

The goals of this project are: 1) To isolate and clone proteinases expressed in pancreatic ductal adenocarcinomas and normal duct, 2) To determine the differential expression of the cloned proteinases, and 3) To clone the full-length cDNAs encoding novel proteinases differentially expressed in pancreatic ductal adenocarcinomas.

UAMS 1/1/98-12/31/98
Medical Research Endowment $4,700
Novel *cis*-acting elements controlling TATA-less gene expression during brain development

UAMS 10/1/97-9/30/98
Intramural Pilot Study $11,375
Differential mRNA Expression in Human Pancreatic Neoplasms

5/1/97-4/30/98
Oak Ridge Associated $5,000
Universities Junior Faculty
Enhancement Award
Targeted Expression of Cholecystokinin in Pancreatic Acinar Cells

97-B-32 1/31/97-1/30/98
Arkansas Science & $40,000
Technology Authority
ADP-ribosylation Factor Functional Specificity in Vesicular Transport

Mentoring

Residents

7/20/09-6/30/2011	Elias Kiwan, M.D. (Hem/Onc Fellow)

Student Laboratory Rotations - Graduate Students

8/23/96-10/18/96	Sarah Johnson
1/6/97-2/28/97	Erik Yang
1/6/97-2/28/97	Yurick Zhukov
8/25/97-10/17/97	Holly Hill
1/1/09-3/15/09	Majipa Rajeedy
3/16/09-5/15/09	Klressa Barnes
8/10/09-12/15/09	Jihane Khalife
9/13/10-12/10/10	Centdrika Dates
1/18/11-3/19/11	Lindsey James
3/5/12-5/4/12	Serra Ucer

Summer Students - Undergraduate Students

6/2/97-8/8/97	Sara Vester, Ouachita Baptist University
6/98-8/98	Christy Wooldridge, Austin College
6/99-8/99	Salima Shaikh, Wesley College
6/02-8/02	Rachel Blackwell, University of Arkansas at Pine Bluff
5/04-8/04	Kimberly Coates, Williams Baptist College
4/05-08/05	Raksha Kapoor, Case Western Reserve
5/13-8/13	Ronak Chokhani, Baylor University
6/13-9/13	Katherine (Xiaoke) Feng, University of Arkansas at Fayetteville

Summer Students - Medical Students

6/02-8/02	Richard (Erin) McElvey, UAMS
5/06-7/06	Joshua Morrison, UAMS

Master's Thesis Committees

Yurick Zhukov (Drs. Hurlburt/Drake), M.S. 1998
Chunlai (April) Zuo (Dr. Fan, Pathology), M.S. 2004
Hannah Goyne (Dr. Cannon, Microbiology), M.S. 2011
FeAna Francis Devaraj (Dr. Radominska, Biochemistry), M.S. 2014
Klressa Barnes (Dr. Griffin. IBS), M.S. 2015

Ph.D. Thesis Committees

Punita Dhawan (Dr. Mehta, Biochemistry), Ph.D. 2000
Bating Ning (Dr. Elbein, Biochemistry), Ph.D. 2000

Joel Mroczkowski (Dr. Reis, Biochemistry), Ph.D. 2003
Meiyun Fan (Dr. Chambers, Biochemistry), Ph.D. 2000
Stas Zaharkin (Dr. Benes, Biochemistry), Ph.D. 2002
Jabbar Joshua (Dr. Blevins, Physiology & Biophysics), Ph.D. 2000
Shenyang Li (Dr. Wight, Physiology & Biophysics), Ph.D. 2001
Fred Buzen (Dr. Bannon, Biochemistry), Ph.D. 2002
Alicia Byrd (Dr. Raney, Biochemistry), Ph.D. 2003
Lihua Du (Dr. Chambers, Biochemistry), Ph.D. 2004
Bhuvanesh Dave (Dr. Raney, Biochemistry), Ph.D. 2005
Jian Cui (Dr. Jennings, Physiology & Biophysics), Ph.D., *Posthumous Honoris Causa* 2009
Yingfeng Chen (Dr. Raney, Biochemistry), Ph.D. 2006
Robert Eoff (Dr. Raney, Biochemistry), Ph.D. 2005
Haihong Zhang (Dr. Fan, Pathology), Ph.D. 2006
Debra Mayes (Dr. Zhou, Neurobiology), Ph.D. 2006
Sherri Finnie (Dr. Tackett, Biochemistry), Ph.D. 2010
Avis Simms (Dr. Tom Kelly, Pathology), Ph.D. 2013
Joshua Eichhorn (Dr. Chambers, Biochemistry), Ph.D. 2013
Adam Brown (Dr. Frank Simmons, IBS), Ph.D. 2015
April Bostian (Dr. Robert Eoff, IBS), Ph.D. 2016
David Alagpulinsa (Dr. Robert Reis, IBS), Ph.D. 2015
Centdrika Dates (Dr. Radominska-Pandya, IBS), Ph.D. 2015
Nathan Avaritt (Dr. Tackett, Biochemistry), Ph.D., Ph.D. 2014
Aaron Storey (Dr. Wahls, Biochemistry), Ph.D.
Gauri Lamture (Dr. Crooks, Pharmaceutical Sciences), Ph.D.
Rose Cooper (Dr. Price, Pharmaceutical Sciences), Ph.D.

Master's Thesis Advisor

8/96-7/99 Ray Lebeda, subsequently received M.D. from UAMS (2003)

Ph.D. Thesis Advisor

9/97-5/01 Sarah K. Johnson, currently Research Assistant Professor (UAMS)
3/21/05-5/08 Vishnu P. Ramani, currently Senior Scientist, Stanford University

Postdoctoral Fellows

10/21/96-2/28/97	Wei Song, M.D.
9/1/99-12/15/99	Malcolm Stewart, Ph.D.
7/1/02-7/31/04	Christian Herzog, Ph.D.
7/1/11-9/16/13	Yang Ou, Ph.D.
12/1/13-6/30/16	Ilangovan Raju, Ph.D.

Visiting Research Scholars

3/13/11-6/14/11 Hong Zhao, Ph.D.

Teaching

1984 Teaching Assistant, Department of Biochemistry, Purdue University (H. Lee Weith, Director). Undergraduate Biochemistry Lab: prepared laboratory exercises, supervised students, and graded laboratory reports for one semester undergraduate course.
1989 Lecturer, Department of Biochemistry, Purdue University (Dr. V. Rodwell, Instructor). Undergraduate Biochemistry: presented six 1 hr lectures on molecular biology to undergraduate course.
1995 Lecturer, Medical Technology Program, Montgomery Community College (M. Scott, Coordinator). Renal Physiology and Body Fluids: presented lectures and prepared laboratory exercises for one semester course for Medical Technology students.
1997 Lecturer, Cell Biology Course – 5093 Spring, University of Arkansas for Medical Sciences (Dr. Cave, Coordinator). Presented three 1.5 hr lectures on protein and vesicular transport.

Summary, Academic Year 1996-1997: 4.5 contact hours

1997 Lecturer, Genetic Biochemistry – 5304 Fall, University of Arkansas for Medical Sciences (Dr. P. Zimniak, Course Director). Presented two 1.5 hr lectures and one tutorial on cell organization, cell division.
1997 Lecturer, Biochemical Methods – 5042 Fall, University of Arkansas for Medical Sciences (Dr. C. Bhuvaneswaran, Course Director). Presented two 1 hr lectures on nucleic acid techniques.
1998 Lecturer, Special Topics – Signal Transduction, Spring, University of Arkansas for Medical Sciences (Dr. T. Chambers, Course Director). Presented five 1.5 hr lectures on signal transduction.
1998 Discussion leader, Medical Biochemistry, Spring, University of Arkansas for Medical Sciences (Dr. G. Bannon, Course Director). Led discussion group for seven 1 hr Problem Based Learning Exercises.
1998 Lecturer, Genetic Biochemistry – 5304 Spring, University of Arkansas for Medical Sciences (Dr. P. Zimniak, Course Director). Presented four 1.5 hr lectures and two tutorials on oncogenes and cancer.

Summary, Academic Year 1997-1998: 26.5 contact hours

1998 Lecturer, Genetic Biochemistry – 5304 Fall, University of Arkansas for Medical Sciences (Dr. K. Mehta, Course Director). Presented two 1.5 hr lectures and one tutorial on cell organization, cell division.
1998 Lecturer, Biochemical Methods – 5042 Fall, University of Arkansas for Medical Sciences (Dr. H. Benes, Course Director). Presented two 1 hr lectures on nucleic acid techniques.
1999 Discussion leader, Medical Biochemistry, Spring, University of Arkansas for Medical Sciences (Dr. G. Bannon, Course Director). Led discussion group for seven 1 hr Problem

Based Learning Exercises.

1999 Lecturer, Biochemical Methods – 5042 Spring, University of Arkansas for Medical Sciences (Dr. H. Benes, Course Director). Presented four 1 hr lectures on gene cloning techniques.

1999 Lecturer, Cell Biology Course – 5093 Spring, University of Arkansas for Medical Sciences (Dr. D. Cave, Coordinator). Presented three 1.5 hr lectures on protein and vesicular transport.

1999 Lecturer, Genetic Biochemistry – 5304 Spring, University of Arkansas for Medical Sciences (Dr. K. Mehta, Course Director). Presented three 1.5 hr lectures and two tutorials on oncogenes and cancer.

Summary, Academic Year 1998-1999: 28 contact hours

1999 Lecturer, Genetic Biochemistry – 5304 Fall, University of Arkansas for Medical Sciences (Dr. K. Mehta, Course Director). Presented two 1.5 hr lectures and one tutorial on cell organization, cell division.

1999 Lecturer, Special Topics – Signal Transduction, Fall, University of Arkansas for Medical Sciences (Dr. T. Chambers, Course Director). Presented three 1.5 hr lectures on signal transduction.

1999 Lecturer, Biochemical Methods – 5042 Fall, University of Arkansas for Medical Sciences (Dr. H. Benes, Course Director). Presented four 1 hr lectures on nucleic acid techniques.

1999 Lecturer, Biochemistry and Molecular Biology – 5103 Fall, University of Arkansas for Medical Sciences (Dr. C. Winter, course Director), Presented six 1 hr lectures on protein translation, transcription, recombinant DNA technology.

2000 Lecturer, Biochemical Methods – 5042 Spring, University of Arkansas for Medical Sciences (Dr. H. Benes, Course Director). Presented four 1 hr lectures on gene cloning techniques.

2000 Discussion leader, Medical Biochemistry, University of Arkansas for Medical Sciences (Dr. G. Bannon, Course Director). Led discussion group for seven 1 hr Problem Based Learning Exercises.

2000 Lecturer, Cell Biology Course – 5093 Spring, University of Arkansas for Medical Sciences (Dr. D. Cave, Coordinator). Presented three 1.5 hr lectures on protein and vesicular transport.

2000 Lecturer, Biological Chemistry – 5204 Spring, University of Arkansas for Medical Sciences (Dr. R. Drake, Course Director), Presented two 1.5 hr lectures and one tutorial on protein degradation.

2000 Lecturer, Genetic Biochemistry – 5304 Spring, University of Arkansas for Medical Sciences (Dr. K. Mehta, Course Director). Presented three 1.5 hr lectures and two tutorials on oncogenes and cancer.

Summary, Academic Year 1999-2000: 44.5 contact hours

2000 Lecturer, Genetic Biochemistry – 5304 Fall, University of Arkansas for Medical Sciences (Dr. K. Mehta, Course Director). Presented two 1.5 hr lectures and one tutorial on cell organization, cell division.

2000 Lecturer, Biochemical Methods – 5042 Fall, University of Arkansas for Medical Sciences (Dr. H. Benes, Course Director). Presented four 1 hr lectures on nucleic acid techniques.
2000 Lecturer, Biochemistry and Molecular Biology – 5103 Fall, University of Arkansas for Medical Sciences (Dr. C. Winter, course Director), Presented six 1 hr lectures on protein translation, transcription, recombinant DNA technology.
2001 Lecturer, Biochemical Methods – 5042 Spring, University of Arkansas for Medical Sciences (Dr. H. Benes, Course Director). Presented five 1 hr lectures on gene cloning techniques.
2001 Lecturer, Medical Biochemistry, University of Arkansas for Medical Sciences (Dr. R. Drake, Course Director). Presented six 1 hr lectures on membranes, receptors, cancer.
2001 Lecturer, Cell Biology Course – 5093 Spring, University of Arkansas for Medical Sciences (Dr. D. Cave, Coordinator). Presented three 1.5 hr lectures on protein and vesicular transport.
2001 Lecturer, Biological Chemistry – 5204 Spring, University of Arkansas for Medical Sciences (Dr. R. Drake, Course Director), Presented two 1.5 hr lectures and one tutorial on protein degradation.
2001 Lecturer, Genetic Biochemistry – 5304 Spring, University of Arkansas for Medical Sciences (Dr. K. Mehta, Course Director). Presented three 1.5 hr lectures and two tutorials on oncogenes and cancer.

Summary, Academic Year 2000-2001: 40 contact hours

2001 Lecturer, Biochemical Methods – 5042 Fall, University of Arkansas for Medical Sciences (Dr. H. Benes, Course Director). Presented eight 1 hr lectures on nucleic acid techniques, gene cloning.
2001 Lecturer, Biochemistry and Molecular Biology – 5103 Fall, University of Arkansas for Medical Sciences (Dr. C. Winter, course Director), Presented seven 1 hr lectures on protein translation, transcription, recombinant DNA technology.
2001 Course Director, Student Seminar - 5031 Fall, University of Arkansas for Medical Sciences. Coordinate student seminar program.
2002 Lecturer, Special Topics – Signal Transduction, Spring, University of Arkansas for Medical Sciences (Dr. T. Chambers, Course Director). Presented two 2 hr lectures on signal transduction.
2002 Lecturer, Medical Biochemistry, University of Arkansas for Medical Sciences (Dr. D. Mock, Course Director). Presented nine 1 hr lectures on transcription, molecular tools, membranes, receptors.
2002 Lecturer, Cell Biology Course – 5093 Spring, University of Arkansas for Medical Sciences (Dr. D. Cave, Coordinator). Presented three 1.5 hr lectures on protein and vesicular transport.
2002 Course Director, Biochemistry Student Seminar - 5031 Spring, University of Arkansas for Medical Sciences. Coordinate student seminar program.

Summary, Academic Year 2001-2002: 32.5 contact hours

2003 Lecturer, Molecular and Biochemical Pathobiology – PATH 5043, Spring, University of

Arkansas for Medical Sciences (Dr. T. Kelly, Course Director). Presented two 1.5 hr lectures on ectodomain shedding.

2003 Lecturer, Cell Biology Course – 5093 Spring, University of Arkansas for Medical Sciences (Dr. D. Cave, Coordinator). Presented three 1.5 hr lectures on protein and vesicular transport.

Summary, Academic Year 2002-2003: 7.5 contact hours

2004 Course Director, Molecular and Biochemical Pathobiology – PATH 5043, Spring, University of Arkansas for Medical Sciences.

2004 Lecturer, Molecular and Biochemical Pathobiology – PATH 5043, Spring, University of Arkansas for Medical Sciences (Dr. R. Haun, Course Director). Presented two 1.5 hr lectures on ectodomain shedding.

2004 Lecturer, Cell Biology Course – 5093 Spring, University of Arkansas for Medical Sciences (Dr. D. Cave, Coordinator). Presented five 1 hr lectures on protein and vesicular transport.

Summary, Academic Year 2003-2004: 8 contact hours.

2005 Course Director, Molecular and Biochemical Pathobiology – PATH 5043, Spring, University of Arkansas for Medical Sciences.

2005 Lecturer, Molecular and Biochemical Pathobiology – PATH 5043, Spring, University of Arkansas for Medical Sciences (Dr. R. Haun, Course Director). Presented two 1.5 hr lectures on ectodomain shedding.

2005 Lecturer, Cell Biology Course – 5093 Spring, University of Arkansas for Medical Sciences (Dr. D. Cave, Coordinator). Presented four 1 hr lectures on protein and vesicular transport.

Summary, Academic Year 2004-2005: 7 contact hours.

2006 Course Director, Molecular and Biochemical Pathobiology – PATH 5043, Spring, University of Arkansas for Medical Sciences.

2006 Lecturer, Molecular and Biochemical Pathobiology – PATH 5043, Spring, University of Arkansas for Medical Sciences (Dr. R. Haun, Course Director). Presented two 1.5 hr lectures on mouse models of human cancer.

Summary, Academic Year 2005-2006: 3 contact hours.

2007 Course Director, Molecular and Biochemical Pathobiology – PATH 5043, Spring, University of Arkansas for Medical Sciences.

2007 Lecturer, Molecular and Biochemical Pathobiology – PATH 5043, Spring, University of Arkansas for Medical Sciences (Dr. R. Haun, Course Director). Presented two 1.5 hr lectures on mouse models of human cancer.

Summary, Academic Year 2006-2007: 3 contact hours.

2008 Course Director, Molecular and Biochemical Pathobiology – PATH 5043, Spring, University of Arkansas for Medical Sciences.
2008 Lecturer, Molecular and Biochemical Pathobiology – PATH 5043, Spring, University of Arkansas for Medical Sciences (Dr. R. Haun, Course Director). Presented two 1.5 hr lectures on mouse models of human cancer.

Summary, Academic Year 2007-2008: 3 contact hours.

2009 Course Director, Molecular and Biochemical Pathobiology – PATH 5043, Spring, University of Arkansas for Medical Sciences.
2009 Lecturer, Molecular and Biochemical Pathobiology – PATH 5043, Spring, University of Arkansas for Medical Sciences (Dr. R. Haun, Course Director). Presented two 1.5 hr lectures on mouse models of human cancer.
2009 Lecturer, Hem/Onc Board Review Course, Spring, University of Arkansas for Medical Sciences (Dr. I. Makhoul, Course Director). Presented one hour lecture on multi-step tumorigenesis.
Summary, Academic Year 2008-2009: 4 contact hours.

2010 Lecturer, Molecular and Biochemical Pathobiology – PATH 5043, Spring, University of Arkansas for Medical Sciences (Dr. K. Das, Course Director). Presented two 1.5 hr lectures on mouse models of human cancer.
2010 Lecturer, Biology of Cancer – BIOC6122, Spring, University of Arkansas for Medical Sciences (Dr. T. Chambers, Course Director). Presented one 2 hr lecture on tumor suppressor genes.
2010 Lecturer, Hem/Onc Board Review Course, Spring, University of Arkansas for Medical Sciences (Dr. I. Makhoul, Course Director). Presented one 1.5 hour lecture on multi-step tumorigenesis.

Summary, Academic Year 2009-2010: 6 contact hours.

2011 Lecturer, Molecular and Biochemical Pathobiology – PATH 5043, Spring, University of Arkansas for Medical Sciences (Dr. K. Das, Course Director). Presented two 1.5 hr lectures on mouse models of human cancer.
2011 Lecturer, Hem/Onc Board Review Course, Spring, University of Arkansas for Medical Sciences (Dr. I. Makhoul, Course Director). Presented one 1.5 hour lecture on multi-step tumorigenesis.

Summary, Academic Year 2010-2011: 4 contact hours.

2012 Lecturer, Hem/Onc Board Review Course, Spring, University of Arkansas for Medical Sciences (Dr. I. Makhoul, Course Director). Presented one 1.5 hour lecture on multi-step tumorigenesis.
2012 Lecturer, Biology of Cancer – BIOC6122, Spring, University of Arkansas for Medical Sciences (Dr. T. Chambers, Course Director). Presented one 2 hr lecture on tumor

suppressor genes.

Summary, Academic Year 2011-2012: 4 contact hours.

2013 Lecturer, Hem/Onc Board Review Course, Spring, University of Arkansas for Medical Sciences (Dr. I. Makhoul, Course Director). Presented one 1.5 hour lecture on multi-step tumorigenesis.

2013 Lecturer, Hem/Onc Board Review Course, Spring, University of Arkansas for Medical Sciences (Dr. I. Makhoul, Course Director). Presented one 1.5 hour lecture on multi-step tumorigenesis.

Summary, Academic Year 2012-2013: 1.5 contact hours.

2014 Lecturer, Hem/Onc Board Review Course, Spring, University of Arkansas for Medical Sciences (Dr. I. Makhoul, Course Director). Presented one 1.5 hour lecture on multi-step tumorigenesis.
2014 Lecturer, Biology of Cancer – BIOC6122, Spring, University of Arkansas for Medical Sciences (Dr. T. Chambers, Course Director). Presented one 2 hr lecture on tumor suppressor genes.

Summary, Academic Year 2013-2014: 3.5 contact hours.

2015 Lecturer, Hem/Onc Board Review Course, Spring, University of Arkansas for Medical Sciences (Dr. I. Makhoul, Course Director). Presented one 1.5 hour lecture on multi-step tumorigenesis.

Summary, Academic Year 2014-2015: 1.5 contact hours.

2016 Lecturer, Hem/Onc Board Review Course, Spring, University of Arkansas for Medical Sciences (Dr. I. Makhoul, Course Director). Presented one 1.5 hour lecture on multi-step tumorigenesis.
2016 Lecturer, Biology of Cancer – BIOC6122, Spring, University of Arkansas for Medical Sciences (Dr. T. Chambers, Course Director). Presented one 2 hr lecture on tumor suppressor genes.
2016 Lecturer, **Pharmacology II – PhSci4134**, Spring, University of Arkansas for Medical Sciences (Dr. A. Castleberry, Course Director). Presented three 1 hr lectures on diuretics.

Summary, Academic Year 2015-2016: 6.5 contact hours.

***Ad hoc* Reviewer**

Biochimica et Biophysica Acta (BBA) – Gene Structure and Expression
Biotechniques
Biotechnology Progress

British Journal of Cancer
Cancer Epidemiology, Biomarkers and Prevention
Cancer Letters
Cancer Research
Comparative Biochemistry and Physiology
Endocrine-Related Cancer
Future Oncology
Gene
International Journal of Cancer
Journal of Biological Chemistry
Journal of Cancer Research and Clinical Oncology
Oncotarget
Proceedings of the National Academy of Sciences
Protein Expression and Purification
Proteomics