Curriculum Vitae

DAVID MICHAEL PAYNE, PH.D.

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EDUCATION

1984-1989 **Postdoctoral Training – Molecular/Cell Biology and Biochemistry**
University of Virginia School of Medicine, Charlottesville, Virginia

1984 **Ph.D. – Molecular Biology and Biochemistry**
University of North Texas, Denton, Texas

1978 **B.S. – Biological Sciences and Biochemistry**
University of North Texas, Denton, Texas

PROFESSIONAL AND RESEARCH EXPERIENCE

2015-2016 **Senior Scientist**
CU Systems Biology Center
Division of Research Affairs, Faculty of Medicine
Chulalongkorn University
Bangkok, THAILAND
Mechanisms Regulating Cell Physiology and Signaling

2011 **Senior Scientist**
Stem Cell Medicine, LLC
Germantown, MD
Neural Stem Cell Biology

2002-2006 **Senior Research Fellow**
Metabolic Regulation Section, Pulmonary–Critical Care Medicine Branch
National Heart, Lung and Blood Institute (NHLBI)
National Institutes of Health (NIH)
Bethesda, MD
Mechanisms Regulating Cell Physiology and Signaling

1997-2002 **Research Associate Professor**
Department of Cell Biology and Genetics, and the Institute for Cancer Research
University of North Texas Health Science Center
Fort Worth, TX
Mechanisms for Regulation of Signal Transduction

1990-1997 **Assistant Professor**
Department of Animal and Dairy Sciences
Auburn University
Auburn, AL
Mechanisms for Regulation of Signal Transduction

1989-1990 **Research Assistant Professor**
Department of Microbiology, and the Cancer Center
University of Virginia School of Medicine
Charlottesville, VA
Regulation of Protein Kinases by Posttranslational Modification

(PROFESSIONAL AND RESEARCH EXPERIENCE, continued)

1984-1989 **Postdoctoral Research Associate**
Department of Microbiology, and the Cancer Center
University of Virginia School of Medicine
Charlottesville, VA
Molecular Biology and Biochemistry of Oncogenes

1978-1984 **Graduate Student**
Departments of Chemistry and Biochemistry
University of North Texas and Texas College of Osteopathic Medicine
Denton, TX
ADP-Ribosylation and Chemical Carcinogenesis

1979-1981 **Research Assistant**
Department of Biological Sciences, and the Genetics Center
University of North Texas
Denton, TX
Chemical Carcinogenesis

1974-1978 **Research Technician/Lab Manager**
Departments of Biological Sciences and Biochemistry
University of North Texas and Texas College of Osteopathic Medicine
Denton, TX
Protein Biochemistry

1973-1974 **Research Technician**
Infrared Materials Branch, Electro-Optics Division
Texas Instruments, Inc.
Dallas, TX
Photoconductive Materials for Infrared Imaging Systems

1970-1972 **Undergraduate Research Assistant**
Department of Chemistry
University of North Texas
Denton, TX
Protein Biochemistry

ACADEMIC HONORS, AWARDS AND PROFESSIONAL SOCIETIES

1987-1989 American Cancer Society Postdoctoral Research Fellow

1982-1983 Samuel Roberts Noble Foundation Predoctoral Research Fellow

1992 (Elected) American Society for Biochemistry and Molecular Biology (ASBMB)

American Association for the Advancement of Science (AAAS)

COMPETITIVE RESEARCH SUPPORT

1999 Institute for Cancer Research, UNT Health Science Center
"Molecular and Genetic Analysis of MART-A"
Total Support: $ 5,000

1996-1998 Animal Health & Disease Research Program, Auburn University
"Genetic Regulation of the pMGA-like Agglutinating Antigen(s) of Mycoplasma gallisepticum and Its Role in Virulence"
Victor S. Panangala (PI), D. Michael Payne (Co-PI), Vicky van Santen (Co-PI)
Total Support: $ 36,840

1993-1998 Molecular & Cellular Biosciences (Cell Biology Program),
National Science Foundation (NSF)
"ADP-ribosylation and Regulation of Cellular Functions" (MCB-9220190)
Total Support: $ 200,824

1993 National Institute of General Medical Sciences (AREA Program),
National Institutes of Health (NIH)
"Molecular Probes to Study ADP-ribosyltransferases" (GM49488-01)
Award Total: $ 107,040 (Declined in order to accept NSF award)

1991-1992 Biomedical Research Support Grant, Auburn University/NIH
"Immunological Probes To Study ADP-ribosyltransferases"
Total Support: $ 4,500

1987-1989 Postdoctoral Fellowship, American Cancer Society
"Mechanism of Oncogenic Activation of $p60^{c\text{-}src}$" (PF-2928)
Total Support: $ 43,500

1986 National Research Service Award, National Cancer Institute, NIH
"Mechanism of Oncogenic Activation of $p60^{c\text{-}src}$" (CA08147-01)
Award Total: $ 45,000 (Declined in order to accept ACS award)

Additional Support

1991-1997 Alabama Agricultural Experiment Station (Project #04-007)
"Regulation of Cellular Functions by Posttranslational Modifications of Proteins"
Total Support: $ 50,000

TEACHING AND MENTORING EXPERIENCE

Courses Taught

UNIVERSITY OF NORTH TEXAS HEALTH SCIENCE CENTER, Fort Worth, TX
Physician Assistant Studies Program

2000-2001 PA 4104 – Basic Human Science (Biochem/Genetics, Graduate M.P.A.S. Program)
1998-1999 PA 3104 – Basic Human Science (Biochem/Genetics, B.S. Program)

AUBURN UNIVERSITY, Auburn, AL
Colleges of Agriculture, and Science & Mathematics
Departments of Animal & Dairy Sciences, and Chemistry

1995 ADS 618/CH 640 – Biochemistry (Graduate Level)
1991-1996 ADS 741/CH 641 – Protein Chemistry (Graduate Level)
1992-1995 ADS 645/CH 645 – Biochemical Research Techniques (Graduate Level)
1993-1994 ADS 490 – Introduction to Life Science Research (Junior-Senior level)

UNIVERSITY OF NORTH TEXAS AND TEXAS COLLEGE OF OSTEOPATHIC MEDICINE, Denton, TX
Departments of Biological Sciences, Biochemistry, and Chemistry

1979 Biology 351 – Cell Biology (Junior-Senior Level) [Lab Instructor]
1978 Biology 305 – Developmental Biology (Jr.-Sr. Level) [Lab/Recitation Instructor]
1978 Biochemistry 668 – Enzyme Kinetics (Graduate Level) [Lab Instructor]
1971-1972 Chemistry 141, 143 & 144 – General Chemistry (for Science Majors) [Lab/Recitation Instructor]

Other Contributions to Graduate Teaching

At the request of Course Directors for the following graduate courses, I presented numerous lectures on selected topics:

UNIVERSITY OF NORTH TEXAS HEALTH SCIENCE CENTER, Fort Worth, TX
Graduate School of Biomedical Sciences

1998-1999 BMSC 5600 – Integrative Biomedical Sciences I
2000 BMSC 5610 – Introduction to Laboratory Techniques for Biomedical Sciences

AUBURN UNIVERSITY, Auburn, AL
Colleges of Agriculture, and Veterinary Medicine
Departments of Animal & Dairy Sciences, and Physiology & Pharmacology

1992-1996 ADS 661 – Advanced Reproductive Physiology
1993 VPH 632 – Advanced Endocrinology
1992 ADS 660 – Physiology of Growth

Radiological Safety Office

1992-1996 AU Radiation Safety Course

Extramural Funding for Support of Teaching/Mentoring

1993-1995 "Research Experiences for Undergraduates" (REU) Program,
National Science Foundation (NSF)
(Award to support development and implementation of my
"Introduction to Life Science Research" course at AUBURN UNIVERSITY)
Total Support: $ 7,500

(TEACHING AND MENTORING EXPERIENCE, continued)

Graduate Student Advisory Committees

UNIVERSITY OF NORTH TEXAS HEALTH SCIENCE CENTER, Fort Worth, TX

Marcia Ong — Co-Major Professor (1998-2001)
M.S. (Biomedical Sciences), December 2001

Paramit Gill — *Ad hoc* Committee Member (1998-1999)
M.S. (Biomedical Sciences), August 2001

Jonathan Matthews — Co-Major Professor (1998-2000)
M.S. (Biomedical Sciences)

AUBURN UNIVERSITY, Auburn, AL

Li Liu — Co-Major Professor (1995-1998)
Ph.D. (Pathobiology), September 1999

Dannie D. Zarate — Co-Major Professor (1993-1997)
Ph.D. (Fisheries & Allied Aquaculture), June 1997

Laurimar Fiorentin — Committee Member (1996-1997)
Ph.D. (Pathobiology), December 1999

Dong-Hoon Yoon — Committee Member (1993-1997)
Ph.D. (Animal Science)

Armineh Zohrabian — Major Professor (1995-1996)
Ph.D. (Animal Science)

Christopher Brown — Committee Member (1991-1992)
M.S. (Zoology), August 1992

Elizabeth Lloyd — Committee Member (1991-1992)
M.S. (Zoology), June 1992

Other Mentoring Experience

CHULALONGKORN UNIVERSITY, Bangkok, THAILAND

2015-2016 Primary Mentor/Supervisor – 1 M.Sc. scientist, 1 B.Sc. scientist, and 1 B.Sc. visiting research fellow
Assistant Mentor – 2 Ph.D. scientists, 3 postdoctoral fellows, 3 doctoral students, and 4 M.Sc. scientists

NATIONAL INSTITUTES OF HEALTH, Bethesda, MD

2002-2006 Primary Mentor – 3 postdoctoral fellows
2002-2010 *Ad hoc* Mentor – 5 postdoctoral fellows

UNIVERSITY OF NORTH TEXAS HEALTH SCIENCE CENTER, Fort Worth, TX

1998-2002 *Ad hoc* Mentor – 1 doctoral student and 1 postdoctoral fellow
1999-2000 Mentor, START Program (for exceptional high school students) – 2 students
1997-2002 Supervisor – 2 Science Associates (research technicians)

AUBURN UNIVERSITY, Auburn, AL

1995-1997 *Ad hoc* Mentor – 1 faculty member (new Assistant Professor)
1990-1997 Supervisor – 1 Senior Research Technician

UNIVERSITY OF VIRGINIA, Charlottesville, VA

1988-1990 Co-Mentor – 1 doctoral student
1986-1987 Mentor, lab rotation training program – 2 doctoral students
1985-1990 *Ad hoc* Mentor – numerous doctoral students and postdoctoral fellows

UNIVERSITY OF NORTH TEXAS, Denton, TX
Housing Department

1970-1971 Senior Resident Assistant and Assistant Dormitory Director
1969 Resident Assistant

RESEARCH PUBLICATIONS AND PRESENTATIONS

Manuscripts *Submitted* or *In Preparation*

Saethang, T., Payne, D. M., Avihingsanon, Y. and Pisitkun, T. Prediction of Post-translational Modification Sites in Protein-Protein Interacting Regions, ***BMC Bioinformatics*** (***submitted***, Dec 2015).

Khositseth, S., Charngkaew, K., Somparn, P., Uawithya P., Chomanee, N., Boonkrai, C., Payne, D. M., Fenton, R. A. and Pisitkun, T. Investigation of molecular mechanisms of nephrogenic diabetes insipidus using systems biology approaches - Hypercalcemia-induced nephrogenic diabetes insipidus, ***in preparation***.

Rattanasinganchan, P., Sopitthummakhun, K., Kent, D., Hu X., Pisitkun, T., Payne. D. M. and Leelahavanichkul A. Folic acid-induced rat kidney fibrosis: preliminary evaluation as a potential model for identification of fibrosis biomarkers from urinary exosomes, ***in preparation***.

Published Articles in Refereed Journals

22. Khositseth, S., Uawithya P., Somparn, P., Charngkaew, K., Thippamom, N., Hoffert, J. D., Saeed, F., Payne, D. M., Chen, S.-H., Fenton, R. A. and Pisitkun, T. Autophagic degradation of aquaporin-2 is an early event in hypokalemia-induced nephrogenic diabetes insipidus, (2015) ***Sci. Rep.*** *17*, 18311-18326.
21. Meza-Carmen, V., Pacheco-Rodriguez, Kang, G. S., Kato, J., Donati, C., Zhang, A. C. Y., Vichi, A., Payne, D. M., El-Chemaly, S., Stylianou, M., Moss, J. and Vaughan, M. Regulation of Growth Factor Receptor Degradation by ADP-ribosylation Factor Domain Protein 1 (ARD1), (2011) ***Proc. Natl. Acad. Sci. USA*** *108*, 10454-10459.
20. Vichi, A., Payne, D. M., Pacheco-Rodriguez, G., Moss, J. and Vaughan, M. E3 Ubiquitin Ligase Activity of the Trifunctional ARD1 (ADP-ribosylation Factor Domain Protein 1), (2005) ***Proc. Natl. Acad. Sci. USA*** *102*, 1945-1950.
19. Ong, M. D., Payne, D. M. and Garner, M. H. Differential Protein Expression in Lens Epithelial Whole Mounts and Epithelial Cell Cultures, (2003) ***Exp. Eye Res.*** *77*, 35-49.
18. Zarate, D. D., Lovell, R.T. and Payne, D. M. Effects of Feeding Frequency and Rate of Stomach Evacuation on Utilization of Dietary Free and Protein-Bound Lysine for Growth by Channel Catfish (*Ictalurus punctatus*), (1999) ***Aquacult. Nutrit.*** *5*, 17-22.
17. Liu, L., Payne, D. M., van Santen, V. L., Dybvig, K. and Panangala, V. S. A Protein (M9) Associated with Monoclonal Antibody Mediated Agglutination of *Mycoplasma gallisepticum* Is a Member of the pMGA Family, (1998) ***Infect. Immun.*** *66*, 5570-5575.
16. Mohsen, A.-W. A., Aull, J. L., Payne, D. M. and Daron, H. H. Ligand-Induced Conformational Changes of Thymidylate Synthase Detected by Limited Proteolysis, (1995) ***Biochemistry*** *34*, 1669-1677.
15. Cobb, B. S., Payne, D. M., Reynolds, A. B. and Parsons, J. T. Regulation of the Oncogenic Activity of the Cellular *src* Protein Requires the Correct Spacing Between the Kinase Domain and the C-Terminal Phosphorylated Tyrosine (Tyr 527), (1991) ***Mol. Cell. Biol.*** *11*, 5832-5838.
14. Payne, D. M., Rossomando, A. J., Martino, P., Erickson, A. K., Her, J.-H., Shabanowitz, J., Hunt, D. F., Weber, M. J. and Sturgill, T. W. Identification of the Regulatory Phosphorylation Sites in pp42/Mitogen-Activated Protein Kinase (MAP kinase), (1991) ***EMBO J.*** *10*, 885-892.
13. [§]Wasilenko, W. J., [§]Payne, D. M., Fitzgerald, D. L. and Weber, M. J. Phosphorylation and Activation of EGF Receptors in Cells Transformed by the *src* Oncogene, (1991) ***Mol. Cell. Biol.*** *11*, 309-321. [§]**Authors contributed equally.**
12. Erickson, A. K., Payne, D. M., Martino, P. A., Rossomando, A. J., Shabanowitz, J., Weber, M. J., Hunt, D. F. and Sturgill, T. W. Identification by Mass Spectrometry of Threonine 97 in Bovine Myelin Basic Protein as a Specific Phosphorylation Site for Mitogen-Activated Protein Kinase, (1990) ***J. Biol. Chem.*** *265*, 19728-19735.

(Published Articles in Refereed Journals, continued)

11. Vila, J., Payne, D. M., Zioncheck, T. F., Harrison, M. L., Itarte, E. and Weber, M. J. Phosphorylation and Activation of p40 Tyrosine Kinase by Casein Kinase-1, (1990) ***FEBS Lett.*** *264*, 21-24.
10. Oddie, K. M., Litz, J. S., Balserak, J. C., Payne, D. M., Creutz, C. E. and Parsons, S. J. Modulation of pp60$^{c\text{-}src}$ Tyrosine Kinase Activity During Secretion in Stimulated Bovine Adrenal Chromaffin Cells, (1989) ***J. NeuroSci. Res.*** *24*, 38-48.
9. Rossomando, A. J., Payne, D. M., Weber, M. J. and Sturgill, T. W. Evidence That pp42, a Major Tyrosine Kinase Target Protein, Is a Mitogen-Activated Serine/Threonine Protein Kinase, (1989) ***Proc. Natl. Acad. Sci. USA*** *86*, 6940-6943.
8. Payne, D. M., Jacobson, E. L., Moss, J. and Jacobson, M. K. Modification of Proteins by Mono(ADP-ribosylation) *in vivo*, (1985) ***Biochemistry*** *24*, 7540-7549.
7. Yacoub, N. J., Allen, B. L., Payne, D. M., Masaracchia, R. A. and Harris, B. G. Purification and Characterization of Phosphorylase B from *Ascaris suum*, (1983) ***Mol. Biochem. Parasitol.*** *9*, 297-307.
6. Busbee, D. L., Rankin, P. W., Payne, D. M. and Jasheway, D. W. Binding of benzo[a]pyrene and intracellular transport of a bound electrophilic benzo[a]pyrene metabolite by lipoproteins, (1982) ***Carcinogenesis*** *3*, 1107-1112.
5. Starling, J. A., Allen, B. L., Kaeini, M. R., Payne, D. M., Blytt, H. J., Hofer, H. W. and Harris, B. G. Phosphofructokinase from *Ascaris suum*: Purification and Properties, (1982) ***J. Biol. Chem.*** *257*, 3795-3800.
4. Busbee, D. L., Payne, D. M., Jasheway, D. W., Carlile, S. and Lacko, A. G. Separation and Detection of Lipoproteins in Human Serum by Use of Size-Exclusion Liquid Chromatography: A Preliminary Report, (1981) ***Clin. Chem.*** *27*, 2052-2058.
3. Payne, D. M., Powley, D. G. and Harris, B. G. Purification, Characterization and the Presumptive Role of Fumarase in the Energy Metabolism of *Ascaris suum*, (1979) ***J. Parasitol.*** *65*, 833-841.
2. Dedman, J. R., Payne, D. M. and Harris, B. G. Increased Proteolytic Susceptibility of Aldolase Induced by Actin Binding, (1975) ***Biochem. Biophys. Res. Commun.*** *65*, 1170-1176.
1. Payne, D. M., Porter, D. W. and Gracy, R. W. Evidence against the Occurrence of Tissue-Specific Variants and Isoenzymes of Phosphoglucose Isomerase, (1972) ***Arch. Biochem. Biophys.*** *155*, 122-127.

Invited Papers and Book Chapters

1. Jacobson, M. K., Payne, D. M., Smith, K. P., Cardenas, M. E., Moss, J. and Jacobson, E. L. Mono(ADP-ribosylation) of Proteins at Arginine *in vivo*, (1985) In ADP-ribosylation of Proteins, F. R. Althaus, H. Hilz and S. Shall, Eds., Springer-Verlag, Berlin, 526-529.
2. Jacobson, M. K., Payne, D. M., Juarez-Salinas, H., Alvarez-Gonzalez, R., Sims, J. L. and Jacobson, E. L. Determination of *in vivo* Levels of Polymeric and Monomeric ADP-ribose by Fluorescence Methods, (1984) In ***Methods in Enzymology***, Posttranslational Modifications, vol. 106, F. Wold and K. Moldave, Eds., Academic Press, New York, 483-494.
3. Jacobson, M. K., Smith, J. Y., Mingmuang, M., Payne, D. M. and Jacobson, E. L. Mono- and Poly(ADP-ribose) Metabolism Following DNA Damage, (1983) In Princess Takamatsu Symposia: ADP-ribosylation, DNA Repair and Cancer, vol. 13, M. Miwa, T. Sugimura, S. Shall and M. Smulson, Eds., Japan Scientific Societies Press, Tokyo, 165-174.
4. Jacobson, M. K., Payne, D. M. and Jacobson, E. L. Mono- and Poly(ADP-ribosylation) in Intact Cells, (1983) In Post-Translational Covalent Modification of Proteins, B. Conner Johnson, Ed., Academic Press, New York, 343-358.
5. Payne, D. M., Jasheway, D. and Busbee, D. Separation and Detection of Prestained Human Plasma Lipoproteins Using Gel Filtration High Performance Liquid Chromatography, (1981) ***Altex Chromatogram*** *4*, 3-4.

Published Abstracts

1. Vichi, A., Payne, D. M., Pacheco-Rodriguez, G., Moss, J. and Vaughan, M. E3 Ubiquitin Ligase Activity of the Trifunctional ARD1 (ADP-ribosylation Factor Domain Protein 1), (2005) ***FASEB J.*** *19* (Addendum), LB679, 145-146.
2. Matthews, J., Payne, M. and Garner, M. A Study of Na,K-ATPase in Lens Cells Using a Novel Compound – Texas Red®-Ouabain, (1999) ***IOVS*** *40*, B448.
3. Liu, L., Payne, D. M., van Santen, V. L., Dybvig, K. and Panangala, V. S. A Protein (M9) Associated with Monoclonal Antibody Mediated Agglutination of *Mycoplasma gallisepticum* Is a Member of the pMGA Family, (1999) ***Proc. Res. Work. Animal Diseases*** *80*, 20P.
4. Lonergan, S. M., Huff-Lonergan, E. and Payne, D. M. Purification and Partial Characterization of a High Molecular Weight Bovine Skeletal Muscle Calpastatin, (1997) ***FASEB J.***, A58.
5. Wasilenko, W. J., Payne, D. M., Fitzgerald, D. L. and Weber, M. J. Phosphorylation and Function of the EGF Receptor is Altered in *src*-Transformed Cells, (1988) ***J. Cell Biol.*** *107*, 4098 Abs.
6. Jacobson, M. K., Payne, D. M., Cardenas, M. E., Moss, J. and Jacobson, E. L. Studies of Endogenous Mono(ADP-ribosylation), (1985) ***Fed. Proc.*** *44*, 1587 Abs.
7. Payne, D. M., Mingmuang, M., Jacobson E. L. and Jacobson, M. K. Mono- and Poly(ADP-ribose) Metabolism Following DNA Damage, (1983) ***Fed. Proc.*** *42*, 1986 Abs.
8. Busbee, D., Rankin, P., Payne, M. and Jasheway, D. The *in vitro* Binding of Enzymatically-Activated Benzo[a]pyrene to Human Lymphocyte DNA is Reduced in the Presence of Lipoproteins Capable of Binding Polynuclear Aromatic Hydrocarbons, (1981) ***J. Supramolecular Structure and Cellular Biochemistry****, Supp. 5*, 476.
9. Jacobson, E. L., Juarez, D. and Payne, D. M. Is DNA Polymerase-a Involved in DNA Repair?, (1981) ***J. Supramolecular Structure and Cellular Biochemistry****, Supp. 5*, 193.

Presentations at National/International Meetings

1. Rudick, V. L., Payne, D. M. and Rudick, M. J. Apolipoprotein A-I Stimulates Glycogen Synthesis in Transfected Kidney Cells, 71st Scientific Sessions of American Heart Association, 1998.
2. Rossomando, A. J., Payne, D. M., Weber, M. J. and Sturgill, T. W. Evidence That pp42, a Major Tyrosine Kinase Target Protein, Is MAP Kinase, a Mitogen-Activated Serine/Threonine Protein Kinase, "Fifth Annual Meeting on Oncogenes," July 1989, Hood College, Frederick, MD.
3. Cobb, B. S., Reynolds, A. B., Payne, D. M. and Parsons, J. T. Importance of Spacing Between the Kinase Domain and the C-Terminal Phosphorylated Tyrosine in the Cellular *src* Protein, "Fourth Annual Meeting on Oncogenes," July 1988, Hood College, Frederick, MD.
4. Payne, D. M., Reynolds, A. B., Parsons, J. T. and Weber, M. J. Generation and Characterization of Monoclonal Antibodies Specific for Phosphorylated and Unphosphorylated Forms of $p60^{c\text{-}src}$, "Fourth Annual Meeting on Oncogenes," July 1988, Hood College, Frederick, MD.
5. Potts, W., Reynolds, A., Payne, M., Lansing, T., Weber, M. and Parsons, J. T. Activation of the Cellular *src* Gene: The Role of Somatic Mutations, "Second Annual Meeting on Oncogenes," July 1986, Hood College, Frederick, MD.
6. Reynolds, A., Potts, W., Payne, M., Lansing, T., Weber, M. and Parsons, J. T. Activation of the Cellular *src* Gene: The Role of Somatic Mutations, Meeting on "RNA Tumor Viruses," May 1986, Cold Spring Harbor Laboratory, Cold Spring Harbor, NY.

Presentations at Regional/Local Meetings

1. Payne, D. M. Molecular and Genetic Analysis of MART-A, Research Appreciation Day, March 2001, UNT Health Science Center, Fort Worth, TX.
2. Payne, D. M. Molecular and Genetic Analysis of MART-A, First Annual ICR Symposium, December 2000, Institute for Cancer Research, UNT Health Science Center, Fort Worth, TX.

Invited Research Seminars

1. School of Science
   Mae Fah Luang University, Chiang Rai, THAILAND (March 2014)
2. Department of Anatomy and Cell Biology
   University of North Texas Health Science Center, Fort Worth, TX (August 1997)
3. Department of Biochemistry & Molecular Biology
   University of Arkansas for Medical Sciences, Little Rock, AR (May 1993)
4. Department of Botany & Microbiology
   Auburn University, Auburn, AL (January 1992)
5. Signal Transduction Group
   Regeneron Pharmaceuticals, Inc., Tarrytown, NY (June 1991)
6. Department of Pathobiology
   Auburn University, Auburn, AL (May 1991)
7. Division of Endocrinology & Metabolism, Department of Medicine
   University of Texas Health Science Center, San Antonio, TX (February 1990)

Invited Workshop Presentations

Invited Presenter, Biotechnology Workshops (2 workshops)
"Strategies for Isolation and Characterization of Novel Regulatory Proteins"
Biennial Symposium: Current Concepts of Animal Growth VII
National Meeting of American Society of Animal Science
Minneapolis, MN (July 1994)

PROFESSIONAL SERVICE

Appointments — University/College/Department (Source of Appointment)

UNIVERSITY OF NORTH TEXAS HEALTH SCIENCE CENTER, Fort Worth, TX

1998-2002 *Ad hoc* Member, Equipment Committee
(Department – Chair, Cell Biology & Genetics)

1999-2000 Interviewer, Medical School Applicants
(University – Admissions Committee)

AUBURN UNIVERSITY, Auburn, AL

1990-1997 Member, Graduate Faculty
(University – President)

1996-1997 Member, Biochemistry Program Development Committee
(University – Provost/VP for Academic Affairs)

1994-1996 Chair, BCM Steering Committee, Graduate Emphasis/Minor Program in Biochemistry, Cell and Molecular Biology
(University – Dean, Graduate School)

1995-1996 Member, Seminar Committee
Howard Hughes Future Life Science Scholars Program
(College – Dean, College of Sciences & Mathematics)

1993-1996 Chair, Space Committee
(Department – Head, Animal and Dairy Sciences)

1994-1995 Member, Department Head Interview Committee and
Department Head Search Committee
(College – Dean, College of Agriculture)

1993 *Ad hoc* Member, Seminar Committee for
Howard Hughes Future Life Science Scholars Program
(College – Chair, Seminar Committee, College of Sciences & Mathematics)

1992 Member, Reorganization Committee for Graduate Seminar
(Department – Head, Animal and Dairy Sciences)

1992 Member, Planning Committee for Proposed Teaching Center
(Department – Head, Animal and Dairy Sciences)

1991 Member, Committee on Creation of an Interdepartmental Graduate Program in Molecular Biology and Biochemistry
(University – Dean, Graduate School)

Manuscript & Grant Reviews — National/State/University

1994-1995 *Ad hoc* Reviewer, ***Transgenic Research***

1995 *Ad hoc* Reviewer, ***Journal of the American Oil Chemists Society***

1991-1995 Reviewer, Grant Review Committee, **Alabama Agricultural Exp. Station (AAES)**

1994-1995 Reviewer, Cell Biology Grant Program, **National Science Foundation (NSF)**

1994 Reviewer, Small Instrumentation Grant Program, **Auburn University/NIH**

1992 Reviewer, Biomedical Research Support Grant Program, **Auburn University/NIH**

Other Service Activities — University

UNIVERSITY OF NORTH TEXAS HEALTH SCIENCE CENTER, Fort Worth, TX

1998-2001 I provided management (i.e., monitoring/troubleshooting/training & supervision of maintenance) for ultrapure water systems and ultracold freezers serving the entire department

(**Other Service Activities — University, continued)**

AUBURN UNIVERSITY, Auburn, AL

1990-1997 I also performed the following service functions for **shared/common research activities** of the Animal & Dairy Sciences Department at Auburn University:

(i) management (i.e., monitoring/supervision of maintenance) of central deionized water service and ultrapure water systems serving the entire ADS building

(ii) development, construction and management of Cell Culture Laboratory

(iii) development, construction and management (i.e., training, supervision and maintenance) of the Multi-User Shared Equipment Laboratory (MUSEL) (including autoclave, liquid scintillation counter, Coulter counter, microplate reader, PhosphorImager, PCR thermal cycler, etc.)

1992-1996 At the request of Mr. John King, Radiological Safety Officer for Auburn University, I prepared and delivered lectures/demonstrations for safe handling of high-energy radioisotopes (e.g., ^{32}P) during his "Radiation Safety Course"

Other Service Activities — Consulting

1991-1992 Life Science Group, Bio-Rad Laboratories, Inc., Hercules, CA
(Development of FPLC Instrumentation)