

CURRICULUM VITAE

September, 2005

Dwight E. Phillips, Ph.D

Professor Emeritus of Anatomy
Department of Cell Biology and Neuroscience
and WWAMI Medical Education Program
Montana State University, Bozeman, MT 59717

PERSONAL:

Born -- August 16, 1944, Lewistown, Montana
Married -- 1967; Wife, Katharine; Children, David, b1970, Joan, b1974

EDUCATION:

B.S., Chemistry, 1966, University of Montana, Missoula, MT
Ph.D., Anatomy, 1971, Tulane University School of Medicine, New Orleans, LA

PROFESSIONAL EXPERIENCE:

1969-1970 Research Assistant, Laboratory of Perinatal Physiology (an intramural laboratory of the National Institute on Neurological Diseases and Stroke of the National Institutes of Health), San Juan, Puerto Rico.
1970-1973 Assistant Professor of Anatomy, University of South Dakota School of Medicine, Vermillion, SD
1973-2004 Assistant, Associate (1976), and Professor (1984) of Human Anatomy in the Cell Biology and Neuroscience Department (formerly Biology Department) and in the WWAMI (Washington, Wyoming, Alaska, Montana, Idaho) Medical Education Program, Montana State University, Bozeman, MT. Retired, June 30, 2004
1984-date Affiliate Appointment, Department of Biological Structure, University of Washington School of Medicine, Seattle, WA
6/99 - 5/01 & 11/03- 6/04 Associate Director, MSU WWAMI Medical Education Program
5/01-11/03 Interim Director, MSU WWAMI Medical Education Program
8/04-date Part-time post-retirement teaching contract for Human Gross Anatomy. MSU WWAMI Medical Education Program. Chair course and teach in entire course
8/05-date Part-time post-retirement teaching contract for Human Gross Anatomy, University of Wyoming WWAMI Medical Education Program. Co-Chair and teach half of course.

AWARDS:

Outstanding Teacher Award -- 1976, 1979, 1980, 1987, 1989, 1990 classes of Montana WAMI Medical Students.
Phi Kappa Phi - Fridley Distinguished Teaching Award, 1980, Montana State University
Deans Award for Outstanding Accomplishment, 1985, presented by the Dean of the University of Washington School of Medicine, for Teaching Excellence
Finalist, Distinguished Basic Science Teacher, University of Washington School of Medicine, 1986, 1988; based on poll of graduating class.
Finalist, WWAMI Distinguished Teaching Award, University of Washington School of Medicine, 1998, 2000; based on poll of WWAMI students in the University of Washington School of Medicine graduating class.
Award for Excellence, Montana State University Alumni Association, 1991, 1994, 1995, 1996 (2), 2000, 2001(2) for teaching and advising.
Science in Medicine Award to Outstanding WAMI Faculty Researcher, 1991, University of Washington School of Medicine, December, 1991
Outstanding Faculty Sponsor Award, Minority Biomedical Research Support Program, Montana State University, 1992, 1993, 1994 and 1995
Mortar Board Professor of the Month, November, 1996

Cox Family Faculty Award for Creative Scholarship and Teaching, 1994, Montana State University Foundation,
Distinguished Teaching Award, University of Washington School of Medicine, Presented by the 2001 Graduating Class

GRANT AWARDS--AS PRINCIPAL INVESTIGATOR:

1986 - 1997 -- National Institutes of Health, National Institute of Alcohol Abuse and Alcoholism,

"Gliogenesis, Myelinogenesis and Alcohol Exposure", \$588,882 direct costs. Original plus 2 competing renewals.

1985 - 1987 -- MONTS-NSF EPSCoR (Montana-NSF Matching Program), "Effects of Ethanol on the Development of Glial Cells and Myelin", \$30,000, direct costs.

1993-1994 -- MONTS-NSF EPSCoR (Montana-NSF Matching Program), "Effects of Cocaine on the Development of Myelin and Glial Cells in the Rat Central Nervous System", \$23,000 direct costs.

GRANT AWARDS--AS SHARED GRANTS:

1985 - 1997 -- National Institutes of Health, Institute of General Medical Sciences, Minority Biomedical Research Support. My Subproject: "Alcohol Induced Effects in the Developing CNS; Glial Cells and Myelin," \$213,427 Direct Costs for my Subproject; Original plus two competing renewals.

1990 - 1992 -- National Science Foundation, EPSCoR, Neurobiology at MSU. My subproject: "Pathology of developing glial cells," \$85,000.

1998 - 2000 - - National Institutes of Health, Institute of General Medical Sciences, Initiative to Support Minority Student Development. My Subproject: "Alcohol Induced Effects in the Developing CNS; Glial Cells and Myelin," I was one of six investigators on this grant who sponsored undergraduate minority students in their laboratory. No direct budget, but the grant paid stipend and travel for the students. P.I. J.A. McMillan

PEER-REVIEWED PUBLICATIONS:

Phillips, D.E., R.G. Hibbs, J.P. Ellison, and H. Shapiro 1972 An electron microscopic study of central and peripheral nodes of Ranvier. *J. Anat.*, 111: 229-238.

Phillips, D.E. 1973 An electron microscopic study of macroglial and microglial development in the lateral funiculus of the spinal cord in the fetal monkey. *Z. Zellforsch. Mikroskop. Anat.*, 140: 145-167.

Phillips, D.E. and V.P. Eroschenko 1982 An electron microscopic study of chlordecone (kepone) induced peripheral nerve damage in adult mice. *Neurotoxicol.*, 3: 155-162.

Crowle, P.K. and D.E. Phillips 1983 Characteristics of mast cells in Chediak-Higashi mice: Light and electron microscopic studies of connective tissue and mucosal mast cells. *Exp. Cell Biol.*, 51: 130-139.

Phillips, D.E. and V.P. Eroschenko 1985 An electron microscopic study of alterations in mouse peripheral nerve and skeletal muscle after chlordecone exposure. *Symposium Report. Neurotoxicol.*, 6(1): 141-150.

Phillips, D.E. and V.P. Eroschenko 1985 Effects of the insecticide chlordecone on the ultrastructure of mouse skeletal muscle. *Neurotoxicol.*, 6(3): 41-52.

Walker, J.J. and D.E. Phillips 1987 An electron microscopic study of endrin induced alterations in unmyelinated fibers of mouse sciatic nerve. *Neurotoxicol.*, 8(1):55-64.

Phillips, D.E. 1989 Effects of limited postnatal ethanol exposure on the development of myelin and nerve fibers in rat optic nerve. *Exp. Neurol.*, 103:90-100.

Phillips, D.E. and S.K. Krueger 1990 Effects of postnatal ethanol exposure on glial cell development in rat optic nerve. *Exp. Neurol.*, 107: 97-105.

Phillips, D.E., S.K. Krueger, and J.E. Rydquist 1991 Short- and long-term effects of combined pre- and postnatal ethanol exposure (three trimester equivalency) on the development of myelin and axons in rat optic nerve. *Int. J. Develop. Neurosci.* 9: 631-647.

Shetty, A.K. and D.E. Phillips 1992 Effects of prenatal ethanol exposure on the development of Bergmann glia and astrocytes in the rat cerebellum: An immunohistochemical study. *J. Comp. Neurol.* 321:19-32.

Phillips, D.E. and S.K. Krueger 1992 Effects of combined pre- and postnatal ethanol exposure (three trimester equivalency) on glial cell development in rat optic nerve. *Int. J. Develop. Neurosci.* 10: 197-206.

Shetty, A.K., R.C. Burrows, and D.E. Phillips 1993 Alterations in neuronal development in the substantia nigra pars compacta following in utero ethanol exposure: Immunohistochemical and Golgi studies. *Neurosci.* 52:311-322.

Shetty, A.K., R.C. Burrows, K.A. Wall and D.E. Phillips. 1994. Combined pre- and postnatal ethanol exposure alters the development of Bergmann glia in rat cerebellum. *Int. J. Develop. Neurosci.*, 12: 651-659.

- Burrows, R.C., A.K. Shetty and D.E. Phillips. 1995. Effects of prenatal alcohol exposure on the postnatal morphology of the rat oculomotor nucleus. *Teratology*, 51: 318-328.
- Phillips, D.E., S.K. Krueger, K.A. Wall, L.H. Smoyer-Dearing and A. K. Sikora. 1997. The development of the blood-brain barrier in alcohol-exposed rats. *Alcohol*, 14: (4) 333-343.
- Krueger, S.K., D.E. Phillips, M.M. Frederick and R.K. Johnson. 1999. Diaminobenzidine (DAB) as a myelin stain in semi-thin plastic sections. *Biotechnic and Histochemistry*, 74(2):105-9.
- Phillips, D.E., J.A. Cummings and K.A. Wall. 2000. Prenatal alcohol exposure decreases the number of nitric oxide synthase positive neurons in rat superior colliculus and periaqueductal gray. *Alcohol*, 22(2): 75-84.

INVITED BOOK CHAPTERS OR REVIEWS:

- Phillips, D. E. and V. P. Eroschenko. 1982. An Electron Microscopic Study of Chlordecone (Kepone) Induced Peripheral Nerve Damage in Adult Mice. In: (Chlordecone (Kepone) Neurotoxicity), Eds., H. A. Tilson, J. M. Cranmer, L. Uphouse, Intox Press, Little Rock, Arkansas. pp. 155-161.
- Phillips, D.E. 1992 Effects of alcohol on the development of glial cells and myelin. In: Alcohol: Neurobiology and Neurophysiology. ed., R.R. Watson, CRC Press, Boca Raton, FL. Pages 83-107.
- Phillips, D. E. 1994. Effects of Alcohol on Glial Cell Development In Vivo: Morphological Studies. In: An Introduction to the Study of Alcohol and Glial Cells in the Central Nervous System, Ed. F. Lancaster, NIH Research Monographs, US Dept. Health and Human Services, Rockville, MD.

INVITED RESEARCH PRESENTATIONS (not including local presentations):

- "An electron microscopic study of alterations in mouse peripheral nerve and skeletal muscle after chlordecone exposure." Presented to: "International Conference on Neurotoxicology of Selected Chemicals, Chlordecone Session", Chicago, September 23-24, 1982. Invited presentation.
- Cover Photo, Neurotoxicology, 1982, Vol. 3. By invitation.
- Cover Photo, Chlordecone (Kepone) Neurotoxicity, 1982. Eds., H. A. Tilson, J. M. Cranmer and L. Uphouse. Intox Press, Little Rock, Arkansas. By invitation.
- "Effects of alcohol on the development of myelin in rat optic nerve." Presented at a symposium "Alcohol Toxicity: Brain White Matter Changes", held at 1993 meetings of the Research Society on Alcoholism, San Antonio, 6/93.
- "Alcohol and the development of CNS glial cells and myelin." Presented at a symposium "Fetal Alcohol Syndrome: Most Recent Findings for CNS Development" held at the 1993 meetings of the Teratology Society, Tucson, 6/93.
- "Morphological studies of the effects of alcohol on glial cell development in vivo; morphological studies." Presented at a symposium "Alcohol and Glial Cells," sponsored by the National Institute of Alcohol Abuse and Alcoholism, NIH, at the 1993 meetings of the Society for Neuroscience, Washington D.C., 11/93.
- "Effects of alcohol on the development of selected CNS cell populations." 1993 Arkansas State Medical Association Invited Lecture, University of Arkansas School of Medicine.

PAPERS PRESENTED AT NATIONAL/INTERNATIONAL MEETINGS:

Twenty-six papers or posters presented at National and International meetings. Most of the presentations were at meetings of the American Association of Anatomists, Society for Neuroscience, and Research Society on Alcoholism. All of these have published abstracts in *Anat. Rec.*, *Soc. Neurosci. Abst.*, or *Alcohol. Clin. Exp. Res.* respectively.

INVITED REVIEW PANELS / JOURNAL REVIEW:

- 1992-1993 -- MONTS Scientific Review Panel. MONTS is an NSF-EPSCoR matching funds program for Montana. Peer evaluations are solicited nationally for all submitted proposals, then the peer reviews and proposals evaluated by the scientific review panel to determine funding priorities.
- 1992 -- Idaho NSF EPSCoR Program, Ad Hoc Reviewer in Neurobiology,
- 1992-1993 -- Montana Space Grant Consortium Scientific Review Panel, Montana-NASA EPSCoR Program
- 1992 -- National Institute of General Medical Studies, Minority Biomedical Research Support Program, Ad

Hoc Mail Reviewer, Neurosciences

1995 -- National Institute of General Medical Studies, Minority Biomedical Research Support Program, Member, Review Panel on Neurosciences and Pharmacology (2/95)

2002 B National Institute of Alcohol and Alcoholism, Toxicology Review Panel, Ad Hoc Telephone Reviewer

1984 B date Ad Hoc Reviewer for the journals: *ALCOHOL; ALCOHOLISM, CLINICAL AND EXPERIMENTAL RESEARCH; NEUROSCIENCE LETTERS; JOURNAL OF NEUROCYTOLOGY; JOURNAL OF COMPARATIVE NEUROLOGY; BIOCHEMICAL PHARMACOLOGY; BRAIN RESEARCH; NEUROSCIENCE LETTERS; DEVELOPMENTAL BRAIN RESEARCH; JOURNAL OF CLINICAL ANATOMY.*

PROFESSIONAL MEMBERSHIPS:

Research Society on Alcoholism, 1985 - date.

Society for Neuroscience, 1979 - date.

Microscopy Society of America, 1972 - 2005.

American Association of Anatomists, 1970 - date.

American Association for the Advancement of Science, 1970 - date.

Sigma Xi Scientific Research Honorary, 1970 - date (Vice-president, MSU Chapter, 1982 - 1983)

Phi Kappa Phi Scholastic Honorary, 1964 - date (Secretary, MSU Chapter, 1995-1998).

COURSES TAUGHT (excluding independent studies and research topics):

Major Responsibility

Medical Gross Anatomy and Embryology (for first-year medical students), 34 years.

Anatomy and Physiology (for nursing and allied health students), 20 years.

Vertebrate Embryology (for undergraduate students), 1 year

Histology (for either medical or undergraduate students), 4 years.

Anatomy of the Extremities (for pre-physical therapy and sports medicine students), 5 years.

Introduction to the Literature for Biomedical Sciences (for undergraduates), 6 years.

Topics in Neurobiology (for graduate students), 4 years (Neurocytology, Developmental Neurobiology).

Comparative Vertebrate Anatomy Laboratories (for undergraduate students), 2 years

Contributed Lectures

Cell Biology (for upper division Biology majors), 15 years.

Neuroscience (for first-year medical students), 5 years.

Frontiers of Neurobiology (for undergraduates), 7 years.

Anatomy of the Extremities (for undergraduates), 6 years.

Histology (for medical students, lectures on nervous system) 10 years

GRADUATE STUDENTS, POSTDOCTORAL FELLOW (Major Advisor):

Have served as sponsor for one postdoctoral fellow, Dr. A.K. Shetty, 1990-1992. Funded by NSF-EPSCoR II funds. Currently Research Professor at Duke University, Dept. Neurosurgery.

I served as the major advisor for one Ph.D. student. He was supported by a competitive Public Health Service National Service Award, an NIAAA predoctoral fellowship.

Have served as major advisor for eight M.S. students at Montana State University, most have gone on for Ph.D., M.D., D.O., or D.V.M. degrees.

Have served as major research advisor for ten medical students at the University of Washington as they did their Independent Study in Medical Science (ISMS) projects and papers required for their M.D. degree.

UNDERGRADUATE STUDENT RESEARCH SPONSORSHIP:

I have sponsored/mentored research projects for approximately 60 undergraduates in my laboratory in the 29 years I had an active research laboratory at MSU. The number has varied from one to three per semester. Most were students in Biology or Biomedical Sciences and most have gone on to either graduate or professional school. Many of them were minority students from Montana. Two have been nominated for Goldwater Scholarships (one won). One was the winner of a Udall Scholarship.

ADMINISTRATIVE ACTIVITIES:

2001-2003 Interim Director, Montana State University WWAMI Program

1999-2001 Associate Director, Montana State University WWAMI Program. Various administrative

- 2003-2004 functions such as schedules, curriculum, student affairs and counseling, budgets, etc.
1984 B 1999 Ad Hoc Acting Director, MSU WWAMI Program. On several occasions, in the Directors absence, I served as acting Director, usually for periods of one or two weeks.
1988 B 2005 Ad Hoc Acting Director of the Animal Resources Center and Chair of the Animal Care and Use Committee. I have served as acting Director on several occasions, usually for one or two weeks.
2002B 2004 Chairman, Institutional Animal Care and Use Committee

SERVICE ACTIVITIES:

Willed Body Program - part of the WAMI Medical Education Program. I founded the Willed Body Program in 1975 and served as its Director for 24 years. As such I was responsible for its day to day administration until 1999 and as its technical consultant from 1999-2004. The program provides human cadaver materials for the WWAMI Medical Education Program as well as for seven other teaching programs in the state.

Continuing Education Offerings - since 1977 I have been the primary faculty member in 67 courses offered to practicing nurses, physicians, physical therapists, and miscellaneous health care providers.

UNIVERSITY COMMITTEES:

Montana State University

Most Recent Committees:

- 2003 - 2004 Chair, Search Committee, University Animal Care and Use Veterinarian
1981- 2004 Student Health Service Advisory Committee.
1975 - 2004 University Animal Care and Use Committee; Chair, 1975 - 1978, 2002 - 2004.

Past Committees:

- 2000 Promotion and Tenure Document Committee, Department of Cell Biology and Neuroscience
1997 - 1999 Search Committee Chair, Molecular Developmental Biologist, Biology Department
1997 - 1998 Fulbright Student Scholar Selection Committee, MSU Office of International Study
1997 - 1998 Search Committee, Dean of the College of Letters and Science
1996 - 1999 University Grievance Committee
1996 - 1997 Search Committee, Animal Physiologist, Biology Department
1993 - 1996 College of Letters and Science Promotion and Tenure Committee
1991 - 1994 Dean's Advisory Council, MSU School of Nursing
1991 - 1992 Search Committee, Director, Student Health Service
1991 - 1992 Search Committee, Administrative Coordinator, American Indian Research Opportunities
1990 - 1996 University Student Conduct Board
1990 - 1991 University Grievance Committee
1989 - 1990 Search Committee, Dean, School of Nursing.
1984 - 1985 Search Committee, Department Head, Biology Department.
1984 - 1985 Search Committee Chair, Anatomist/Neurobiologist, Biology Dept. and WAMI Program
1981 - 1984 Executive Committee of the Biology Department, Chair, 1988 - 1989

University of Washington School of Medicine Committees

- 2001B date Year One Curriculum Committee (serving as Director of the MSU WWAMI Program)
2000 B date Steering Committee, R/UOP Program (serving as Director of the MSU WWAMI Program)
2000- 2001 Curriculum Implementation Committee, Faculty Development
1999 - 2000 Curriculum Revision Committee, Subgroup on Specific Content
1994 -1995 LCME Accreditation Subcommittee on Medical School Departments
1981 - 1983 LCME Self-Study Committee for Accreditation, Subcommittee on Faculty
1974 - 1985 Course Committee, Head, Neck, Ear, Nose and Throat
1973 - date Course Committee, Gross Anatomy

SERVICE COMMITTEES:

- 1987 - 1993 Board of Directors, Montana Division of the American Cancer Society.
1981 - date Montana Committee on Trauma, Advisory Member, American College of Surgeons.
1980 - 1989 Student Scholarship Committee, Montana Chapter, American Cancer Society.