

**Suzanne Sawyer Vincent, Ph.D.**  
**Dept. of Biology and Chemistry**  
**Oral Roberts University**  
**7777 S. Lewis Ave.**  
**Tulsa, OK 74171**



Education

- 9/76 - 8/82      Ph.D., **Physiology and Biophysics**, December 1982  
University of Washington, Seattle, WA  
Dissertation: Output Effects from Monkey Motor Cortex on Single Forelimb Motor Units
- 1/72 - 12/74      M.A., **Physiology and Behavioral Biology**, December 1974  
San Francisco State University, San Francisco, CA  
Thesis: Localization of Brain Electrographic Changes in the Pre-seizure State of the Photosensitive Rabbit
- 9/65 - 3/70      B.A., **Biology**, March 1970  
University of California, Santa Cruz, CA

Certifications

- 9/03 - Present      **Certified Professional Senior Fitness Instructor**, American Senior Fitness Association, New Smyrna Beach, FL (also certified in Oct. 2010 as **Cognitive Fitness Facilitator**)
- 1/98 - 1/2000      Certificate of Advanced Graduate Studies, **Rehabilitation Research and Program Evaluation**, January 25, 2000, Boston University, MA
- 9/70 - 1/72      Secondary Teaching Credential for California, Major: **Biology**, Minor: **Physical Sciences (Emphasis: Chemistry)**, January 1972  
San Francisco State University, San Francisco, CA

Postdoctoral Fellowships

- 1/98 - 7/2000      Boston University College of Health and Rehabilitation Sciences, Postdoctoral Research Fellowship funded by NIDRR  
Research: *Program Evaluation, Statistical Analyses, Qualitative & Quantitative Research, Vocational Rehabilitation, Epidemiology, Cultural Competency*

9/82 - 8/84 Geriatric Research, Education and Clinical Center, VA Medical Center, Minneapolis, Postdoctoral Fellowship funded by NIH  
Research: *Rehabilitation of Patients with Parkinson's Disease; Ballistic Movements of Normal Subjects and Parkinson Patients*

### Professional Positions

7/2001 – Present Associate Professor, Department of Biology, Oral Roberts University, Tulsa, OK 74171, Phone (918)-495-6950

8/94 - 12/97 Associate Professor, Department of Physiology/Neuroscience, and Supervisor, Clinical Tutors Program in Neuroscience, St. George's University School of Medicine, Grenada, West Indies

2/90 - 7/94 Associate Professor, Department of Physical Therapy, Texas Tech University School of Allied Health, Lubbock, TX

6/89 - 2/90 Assistant Professor, Department of Physiology, Oral Roberts University School of Medicine, Tulsa, OK

8/86 - 5/89 Assistant Professor, Departments of Kinesiology, and Physiology and Biophysics, University of Illinois at Urbana-Champaign, IL

8/85 - 8/86 Visiting Assistant Professor, Department of Exercise Science and Physical Education, University of Iowa, Iowa City, IA

9/84 - 7/85 Visiting Assistant Professor, Department of Biology, St. Lawrence University, Canton, NY

2/75 - 9/76 Research Technician, Division of Allergy, Immunology and Infectious Disease, Palo Alto Medical Research Foundation, Palo Alto, CA

### Short-Term, Interim, and Consulting Positions

5/2004-8/2004 Summer Part-time: Senior Fitness Instructor, Montereau Retirement Community, Tulsa OK

12/2001-6/2001 Temporary Jobs in St. Louis, MO: Mad-Science After-school Teacher for 1<sup>st</sup> grade, Pearson Education 3<sup>rd</sup> grade Essay Reader, Medical Transcriptionists for St. Luke Breast Cancer Center

7/2000 - 11/2000 Research for Homeless Drug Abuse: Service Use, Needs and Costs of Drug Abuse (SUNCODA), Dept. of Psychiatry, Washington University School of Medicine, 660 S. Euclid, Campus Box 8134, St. Louis, MO 63110

- 8/2000 – 12/2000 Adjunct Faculty of Physiology, Maryville University, School of Liberal Arts & Professional Programs, 13550 Conway Rd., St. Louis, MO 63141
- 1/99 - 5/2000 Evaluation Consultant, M-POWER, Evaluation of SAMHSA Grant “Massachusetts Leadership Academy,” Boston, MA
- 6/99 - 7/99 Education Coordinator, National Youth Leadership Forum on Medicine, Summer Forums, Babson College, Wellesley, MA
- 9/73-1/74 Lecturer, Neuroanatomy Laboratory, San Francisco State University, CA
- 6/71 – 9/71 Research Assistant in Paleontology, California Academy of Sciences, Golden Gate Park, San Francisco, CA
- 3/70 – 7/70 Medical Laboratory Assistant, Henry Fuller, M.D., Santa Cruz, CA

#### Publications

*(Published under the names of Suzanne S. Vincent, Suzanne S. Palmer, and Suzanne Sawyer)*

#### **REFERRED ARTICLES:**

Vincent, S. and I. Soucy. “Benefits of Strengthening and Stretching Exercises from the National Institute of Aging Program for Adults of 50-plus Years on Fitness, Posture, Balance, and Well-Being.” Pages 125-128 in GR Jones et al., editors. *Research to Action for an Aging Society*, London, Ontario: Canadian Centre for Activity and Aging. 2005.

Palmer, SS and Hutton, JT. "Postural Finger Tremor Exhibited by Parkinson Patients and Age-matched Subjects." *Movement Disorders*. 10:658-663, 1995.

Palmer, SS and Kaiser, CL. "The Influence of Task Speed and Head Position on Postural Adjustments Made During Voluntary Arm Movements." *Journal of Human Movement Studies* 24:1-24, 1993.

Palmer, SS. "Changes in Finger Tremor During Prolonged Submaximal Contraction." *Human Movement Science* 10:677-688, 1991.

Palmer, SS, Mortimer, JA and Eisenberg, P. "Premovement Silences of EMG Activity Prior to Movement in Parkinson's Disease." *Electromyography and Clinical Neurophysiology* 31:425-431, 1991.

Kilani, HA, Palmer, SS, Adrian, MJ and Gapsis, JJ. "Block of the Stretch Reflex of Vastus Lateralis During Vertical Jumps." *Human Movement Science* 8:247-269, 1989.

Mortimer, JA, Eisenberg, P and Palmer, SS. "Premovement Silence in Agonist Muscles Preceding Maximum Effects." *Exp. Neurol.* 98:542-544, 1987.

Palmer, SS, Mortimer, JA, Webster, DD, Bistevins, R and Dickinson, GL. "Exercise Therapy for

Parkinson's Disease." *Arch. Phys. Med. Rehab.* 67:741-745, 1986.

Palmer, SS and Fetz, EE. "Discharge Properties of Primate Forearm Motor Units During Isometric Muscle Activity." *J. Neurophysiol.* 54:1178-1193, 1985.

Palmer, SS and Fetz, EE. "Effects of Single Intracortical Microstimuli in Motor Cortex on Activity of Identified Forearm Motor Units in Behaving Monkeys." *J. Neurophysiol.* 54:1194-1212, 1985.

Cheney, PD, Fetz, EE and Palmer, SS. "Patterns of Facilitation and Suppression of Antagonists Forelimb Muscles from Motor Cortex Sites in the Awake Monkey." *J. Neurophysiol.* 53:805-820, 1985.

Williams, DM, Sawyer, S and Remington, JS. "Role of Activated Macrophages in Resistance of Mice to Infection with *Trypanosoma cruzi*." *J. Infectious Diseases* 134:610-614, 1976.

#### **BOUND TEACHING MATERIALS:**

Palmer, SS. 1997. Neuroscience Laboratory Manual. St. George's University School of Medicine, Grenada, West Indies

House, CR and Palmer, SS. 1996. Neuroscience Lecture Notes, Parts 1 and 2. St. George's University School of Medicine, Grenada, West Indies

#### **CHAPTERS IN BOOKS:**

Fetz, EE, Cheney, PD and Palmer, SS. "Activity of Forelimb Motor Units and Corticomotoneuronal Cells During Ramp-and-Hold Torque Responses: Comparisons with Oculomotor Cells. Pages 133-141 in Freund, H-J, Buttner, J, Cohen, B and Noth, J, eds., *The Oculomotor and Skeletalmotor Systems: Differences and Similarities (Prog. Brain Res. vol. 64)*, Elsevier, NY, 1986.

Fetz, EE, Cheney, PD, Mewes, K and Palmer, SS. "Control of Forelimb Muscle Activity by Populations of Corticomotoneuronal and Rubromotoneuronal Cells." Pages 437-449 in Allum, JHJ and Hullinger, M, eds., *Afferent Control of Posture and Locomotion (Prog. Brain Res. vol. 80)*, Elsevier, NY, 1989.

#### **ABSTRACTS:**

Vincent, SS. 2011. Tribute to Heinrich Lissauer: Breakthroughs made in a short life. Neuroscience 2011. Washington DC.

Vincent, SS and Miller KE. 2011. Extent of Lissauer's tract in cross sections of rat lumbar spinal cord delineated using protein markers peripherin, VGLUT2, CGRP, and IB4. Neuroscience 2011. Washington DC.

Vincent, SS. "Evo-devo Theory Contingent on Embryogenesis exhibiting Variation and Adaptation." 82nd Annual Meeting of Southwestern and Rocky Mountain Regional Meeting of AAAS, University of Houston-Clear Lake Campus, April 18-21, 2007.

Vincent, SS, Sherman, K and Jack, L. "Comparison of Postural Measurements in Older Adults." 81st Annual Meeting of Southwestern and Rocky Mountain Regional Meeting of AAAS, University of Tulsa, April 6-8, 2006.

Vincent, SS. "Is It Aging or Disability That Compromises the Lifestyle of the Older Person?" 27th Annual Meeting Partnerships in Aging Conference, Nov. 16-19, 2005, Indianapolis, IN

Vincent, S. "Benefits of Exercise for the Older Adult." 26<sup>th</sup> Annual Meeting Partnerships for Aging Conference, Kansas City, MO, November 10-12, 2004.

Soucy, I. and Vincent, S. "Benefits of Strengthening and Stretching Exercises from the *National Institute of Aging* Program for Adults of 50-plus Years on Fitness, Posture, Balance, and Well-being." *Journal of Aging and Physical Activity*\_12(3): 388-389, 2004.

Vincent, S. "Using Findings from Qualitative Research to Teach Mental Health Professionals about the Experience of Recovery from Psychiatric Disability." Harvard Graduate School of Education Fourth Annual Student Research Conference Program, p.10, 1999.

Palmer, SS and Emenike, EO. "Video Presentation and Clinical Case Discussion in Neuroanatomy Laboratory Sessions." *Soc. Neurosci. Abst.* 22:248, 1996.

Palmer, SS. "Asymmetry of the Posterior Horizontal Ramus of the Lateral Fissure of the Human Brain." *Proc. 2nd Reg. Caribbean Brain Res. Organiz.* 1995.

Butler, CA, Mantilla, J, Stuart, SR, Palmer, SS, Hutton, JT and Gable, CD. "The Effect of Exercise Training with the Incorporation of Karate Techniques on the Posture of Independently Mobile Parkinson's Disease Subjects: A Pilot Study." *Proc. 12th Interntl. Congress of the World Confed. for Phys. Therapy*, 1995.

Palmer, SS and Hutton, JT. "Postural Tremor of Middle Finger in Parkinson Patients and Age-matched Controls." *Soc. Neurosci. Abst.* 19:1051, 1993.

Palmer, SS. "An Optimal Sequence in NEUROSCIENCE for Physical and Occupational Therapy Students." *Soc. Neurosci. Abst.* 17:515, 1991.

Palmer, SS and Hanna, PA. "Finger Tremor during Maintained Extension in Parkinson Patients and Age-matched Controls." *Movement Disorders* 5(Suppl.1):24, 1990.

Kaiser, CL and Palmer, SS. "The Influence of Head Position and Task Speed on Stance during Voluntary Arm Movement." *Soc. Neurosci. Abst.* 15:395, 1989.

Palmer, SS and Bane, SM. "Transition of Physiological Tremor of the Finger into Fatigue Tremor." *Soc. Neurosci. Abst.* 14:1234, 1988.

Kilani, HA, Palmer, SS, Adrian, MJ and Gapsis, JJ. "Dilute Novocaine Block of the Stretch Reflex in Humans During Stretch-shortening Contractions." *Soc. Neurosci. Abst.* 14:1304, 1988.

Haney, JE, Palmer, SS, Khowassah, ML, Seals, DR and Gisolfi, CV. "Mechanism of Naloxone-induced Hypothermia during Exercise." *Iowa Acad. Sci. 98th Session, Program Abstracts*, #152, 1986.

Palmer, SS, Mortimer, JA, Webster, DD, Bistevins, R and Dickinson, GL. "A Comparison of Stretch Exercise and Karate Training as Therapy for Parkinson's Disease." *Arch. Phys. Med. Rehab.* 65:626, 1984.

Eisenberg, P, Palmer, SS and Mortimer, JA. "Pre-movement Silences of EMG in Parkinson's Disease." *Soc. Neurosci. Abst.* 9:631, 1983.

Fetz, E.E. and Sawyer, SL. "Facilitation of Individual Forelimb Motor Units by Single Intracortical Microstimuli in Behaving Monkeys." *J. Physiol.* 341:19-20P, 1983.

Sawyer, S., Cheney, PD, Martin, RF, and Fetz, EE. "Facilitation and Suppression of Forelimb Muscle Activity from Single Intracortical Microstimuli in Behaving Monkeys." *Soc. Neurosci. Abst.* 5:385, 1979.

#### Professional Presentations

**Fundamental Natural Laws of Physics, Chemistry, and Biology discovered by Early Experimental Scientists such as Joule, Lavoisier, Pasteur, and Mendel should serve as a Foundation for Science Education.** Oklahoma Academy of Science Meeting, Southern Nazarene University, Oklahoma City, Oct. 31, 2008.

**Benefits of Exercise for the Older Adult: Program from *National Institute on Aging*,** Montereau Retirement Community, Tulsa, OK, Oct. 14, 2004.

**Lack of Evidence for Hand Dominance in the Nonhuman Primate: Difficulty for the Theory of Evolution,** 3<sup>rd</sup> Internl. Conference on Creationism, Duquesne Univ., Pittsburg, PA, July 1994.

**Limitations of Movement Speed Exhibited by Parkinson Patients,** West TX Parkinsonism Society, St. Mary's Hospital, Lubbock, TX, Sept. 3, 1992.

**Techniques for Measuring Electromyographic and Motor Unit Activity**, Tutorial, Dept. of Orthodontics, University of Oklahoma School of Dentistry, Oklahoma City, OK, Dec. 15, 1989.

**Bradykinesia in Parkinson's Disease**, Neurology Grand Rounds, Div. of Neurosurgery, University of Missouri-Columbia School of Medicine, Columbia, MO, Nov. 16, 1989.

**Effect of Alcohol on the Brain**, Addictions Anonymous Meeting, Horizons House, Danville, IL, May 21, 1988.

**Changes in Motor Unit Synchronization as a Type of Neuromuscular Fatigue**. Midwest Intercollegiate Symposium on Motor Control, Univ. of Illinois at Urbana-Champaign, IL, May 1, 1987.

**Central Nervous System Compensation for Muscle Fatigue**, Departmental Seminar, Dept. of Anatomy, Loyola University School of Medicine, Maywood, IL, April 10, 1987.

**Research on Exercise Therapy for Parkinson's Disease**, Parkinson's Disease Support Group, Courage Center, Golden Valley, MN, April 15, 1984.

**Facilitation and Suppression of Forearm Muscle Activity in Monkeys**. Pacific Cascade Chapter of Society for Neuroscience, Friday Harbor Labs, San Juan Island, WA, June 9, 1979.

**Correlations of Visual Evoked Potential Component Changes with Pre-seizure State in the Rabbit**. The Neuroscience Society's Graduate Research Symposium. San Francisco State University. May 11, 1974.

#### Interviews and Consultations

Consultation on Neurotoxicity of Environment Vinyl Chloride and Metal Pollutants, June 1988, Kenneth Blan, Attorney, Towne Center Bldg., Danville, IL

Radio Interview on Exercise Therapy for Parkinson's Disease, October 21, 1986. Physicians' Radio Network, Stanford, CO

#### Reviews of Grants, Papers and Books

Reviewed CD-ROM for Rice's *Medical Terminology with Human Anatomy*, 2003

*Physical Therapy Journal* (reviewer of research articles, 1992-1993)

*Medicine and Science in Sports and Exercise* (book reviews: *Life Span Motor Development*, April 1988; *Skeletal Muscle in Health and Disease*, October 1991)

*The International Journal of Aging and Human Development*, February 1989

Merit Reviewer, VA Research Grant (Mental Health and Behavioral Sciences), Aug. 1988

Section Reviewer for *The Physiology Coloring Book*, Harper and Row, NY, 1987

*American Journal of Primatology*, June 1986

Membership in Scientific and Professional Societies

*American Physiological Society*, 1987 to Present

*Oklahoma Society of Physiologists*, 2005 to Present

*Society for Neuroscience*, 1979 – 1998, 2010 – Present

*International Society for the History of Neuroscience*, 2011 to Present

*International Society for Aging and Physical Activity*, 2004 to Present

*International Society for the History, Philosophy, and Social Studies of Biology*, 1993 – 1998

Service in Professional Societies

President, Oklahoma Society of Physiologists, 2010-2011

Hosted 30<sup>th</sup> Annual Oklahoma Society of Physiologists Meeting at Oral Robert Univ. 6/3/11

SOUTHWESTERN AND ROCKY MOUNTAIN DIVISION, AAAS

Secretary, Biomedical Sciences Section, 1993 - 1994

Organized Symposium for May 1994 Meeting in Durango, CO

***Methods of Discovery Used by the Scientist***

Chair, Biomedical Sciences Section, 1992 - 1993

Organized Symposia for May 1993 Meeting in Albuquerque, NM

***Topics in Pulmonary Health, and Current Issues In Alcoholism***

Vice-Chair, Biomedical Sciences Section, 1991 - 1992

Honors and Awards

Who's Who Among American Women, Marquis, 2008-2009

Chair's Mentoring Award, Dept. of Biology, Oral Roberts University, 2004-2005

Who's Who Among America's Teachers, 2004-2005, National Academic Affairs.

Outstanding Teacher of the Year, Student Senate of School of Allied Health, Texas Tech University Health Sciences Center, Lubbock, TX, 1993



World Who's Who of Women, 8<sup>th</sup> Edition, 1985, International Biographical Center, Cambridge, England

Valedictorian, Del Norte County High School, Crescent City, CA

Bank of America Achievement Award in Science and Math, Del Norte County High School

#### Grants Received

Vincent, SS. Oral Roberts University Intramural Grant, "Physiological benefits for older adults using the 50 plus exercise program by the National Institute of Aging," April 2003, \$1448.

Palmer, SS and Rice-Spearman, L, School of Allied Health Seed Grant, "The effects of caffeine on electromyographic activity and tremor of the arm and leg," March 1993, \$1572

Palmer, SS, Research Board Grant and Biomedical Research Support Grant, Univ. of Illinois at Urbana-Champaign, School of Life Sciences and College of Medicine, "Data acquisition and analysis of physiological measures from human subjects using the personal computer," Sept. 1986, \$15,500

Palmer, SS, Development of Application Note *Muscle fatigue and tremor research at the University of Iowa* (Application Note #41W-6396) for Tektronix, Beaverton, OR, Nov. 1985, Gift of \$5000 Digital Oscilloscope

Palmer, SS, Postdoctoral Fellowship, NIH-NINCDS, Neuropathology, Geriatric Research, Educational and Clinical Center, VA Medical Center, Minneapolis, MN, Oct. 1982 - Sept. 1984, \$24,500

#### Services to University/Community/School Committees/Councils

Secretary, Faculty of College of Science and Engineering, Oral Roberts University, 2011-2012.

Science Fair Judge of Biomedical, Zoology, Oklahoma State Secondary Schools, April 2003, 2005, 2006, East Central University, Ada, OK

Curriculum Committee, March – May 2003, School of Arts and Sciences, Oral Roberts University

Judicial Panel for Faculty and Staff, January 1997 - December 1997, St. George's University School of Medicine, Grenada

Curriculum Committee, January 1996 - December 1997, St. George's University School of Medicine, Grenada Reviewed Behavioral Science Curriculum Nov.-Dec. 1997

Faculty Council Secretary, 1993-94, School of Allied Health, Texas Tech University Health Sciences Center

Invited Speaker from Texas Tech University for Memorial Services for Cadaver Families, Lubbock Cemetery, Lubbock, TX, 1993

Benefits and Retirement Committee, 1990-92, 1992-1995, Texas Tech University and Health Sciences Center

*United Way* Campaign Coordinator, 1990-91, 1991-92, Dept. of Physical Therapy, School of Allied Health, Texas Tech University Health Sciences Center

Insurance Review Committee, 1991-92, School of Allied Health, Texas Tech University and Health Sciences Center

Affirmative Action Committee, 1987-88, 1988-89, Dept. of Kinesiology, University of Illinois at Urbana-Champaign

#### Teaching Experience

Dept. of Biology, Oral Roberts University, Tulsa, OK

**Human Physiology with Lab, Human Anatomy with Lab, General and Comparative Physiology with Lab, Principles of Biology with Lab, Neuroscience with Lab, Biology 112 Lab, Scientific Terminology, Co-taught Histology, Cadaver Dissection**

Dept. of Biology, Maryville University, St. Louis, MO

**Advanced Physiology** for Physical and Occupational Therapy students

Dept. of Physiology/Neuroscience, St. George's University School of Medicine, Grenada, West Indies **Neuroscience with Neuroanatomy laboratory** codirector

Physical Therapy and Occupational Therapy Programs, Texas Tech University School of Allied Health. Lubbock, TX

**Human Physiology with laboratory, Human Neuroscience with laboratory**, Lectures for **Research Methodology, Patient Evaluation and Management, Pathology** (Muscle Pathology), and **Clinical Psychopathology** (Tutorial on Alzheimer's Disease and Wernicke-Korsakoff Syndrome, Tutorial on Alcohol and Drug Abuse)

Dept. of Physiology, Oral Roberts School of Medicine, Tulsa, OK

**Lectures on Muscle with laboratory**

Depts. of Kinesiology and Physiology, University of Illinois at Urbana-Champaign, IL **Neuromuscular Aspects of Human Performance, Neurophysiological Bases of Therapeutic Exercise**

Dept. of Exercise Science and Physical Education, University of Iowa, Iowa City, IA  
**Exercise Physiology for Practitioners with laboratory**

Dept. of Biology, St. Lawrence University, Canton NY  
**Vertebrate Physiology with laboratory, Advanced Physiology with laboratory, Neurobiology Seminar, Neurophysiology, Winterterm: The Brain: The Bridge between the Mind and the Body**

Students Advised Undergraduate Senior Research Projects at ORU: Functional MRIs and Word Associations (with Univ. of Arkansas), Effects of Strength and Stretching Exercises on Posture and Balance in Senior Citizens, Breast Cancer in Hispanics along the Texas-Mexican Border, Wet-bulb Globe Temperature Assessment, Cognitive & Physical Tasks for Alzheimer's Patients, Use of DynavecMD Machine for Standing & Walking in the Elderly

Undergraduate Senior Literature Papers at ORU: Allergic Asthma, Crohn's Disease, Progeria Premature Aging, Athletic Amenorrhea, Ocular Albinisms, Sickle Cell Anemia and Adolescents, Bell's Palsy, Alzheimer's Disease and Treatments, Fetal Alcohol Syndrome, Uterine Fibroids, Prematurity and Developmental Speech Dyspraxia, Urinary Tract Infections, Effect of Oral Contraceptives on Endometrium, Estrogen and Progesterone and Breast Cancer, Breast Cancer and Hispanics, Cancer and Heart Side Effects of Oral Contraceptives, Pregnancy-Induced Hypertension, Effects of Early Malnutrition on Cognitive Development, Sleep Abnormalities in Bipolar Disorder, Diabetic Foot Infections, Cleft Lip, Sudden Infant Death Syndrome, Dural Sinus Thrombosis

*Advised Master's Degree Student Cathy Kaiser at Univ. of IL: Human Posture*

*Advised Ph.D. Student Hashem Kilani at Univ. of IL: Stretch Reflexes and Jumping*

Training at the EighthFloor, Tulsa, OK

**Blackboard Software for Online Teaching**, Fall 2003, 22 hours

**Intel Teach to the Future**, Academic year 2002-03, 60 hrs.

**Lead Teacher Training**, Fall 2001, 24 hrs.

Statistical Package for Social Sciences (SPSS) Training

**SPSS ANOVA, Tables, Market Segmentation, Basic and Intermediate Statistical Analyses, AnswerTree, Survey Techniques, Regression**, Feb. 1999 – March 2000, Newton, MA

Short Courses Taken

**Brain Fitness for Older Adults**, American Senior Fitness Association, New Smyrna Beach, FL, October 2010.

**Myofascial Slings**, Correspondence Course from Desert Southwest Fitness, Tucson, AZ, July 2010.

**Responsible Conduct in Research**, Oklahoma Society of Physiologists Annual Meeting, Oklahoma State University Osteopathic School, Tulsa, June 26, 2009.

**Kinetic Anatomy**, Correspondence Course from Desert Southwest Fitness, Tucson, AZ, April 2009.

**Language-enriched Exercises for Alzheimer's Patients**, Correspondence Course from Desert Southwest Fitness, Tucson, AZ, February 2009.

**One-day Annual Neurology Course**, University of Oklahoma, Oklahoma City, OK, April 2008.

**5th-8th Annual Women's Health Conferences: Breast Cancer, Ovarian Hormones, Mood Disorders, Nutrition, and Prescribing Exercise**. University of Oklahoma College of Medicine, May 2003, 2004, 2005, 2006, Tulsa, OK.

**The Cultural Competency Continuum** (May 16, 2000), University of Massachusetts Medical School, Office of Multicultural Affairs, Massachusetts Medical Society Conference Center, Boston, MA

**Transforming Society Through Evaluation** (November 4-7, 1998), (Including **The Nature of Evaluation** by Dr. Michael Scriven, 1-4 p.m. Nov.4, 1998) American Evaluation Association Annual Meeting, Chicago Marriott Downtown, Chicago, IL

**Movement Disorders** (with Dr. C. Goetz, Dr. L. Findley, Dr. J. Jankovic, and others, April 13, 1997), American Academy of Neurology, Boston, MA

**"Dissociations in Blindsight,"** IVth Annual Weiskrantz Symposium by Dr. Weiskrantz of Dept. of Experimental Psychology, Oxford University (April 2, 1991), Texas Behavioral and Brain Scientists, Baylor University, Waco, TX

**Exercise in the Practice of Medicine** (November 30-December 1, 1990), Texas Chapter of American College of Sports Medicine, Tyler, TX

**1st International Congress of Movement Disorders** (April 25-27, 1990), Sponsored by Internatl. Medical Society of Motor Disturbances, Movement Disorder Society, and National Inst. Neurol. Disorders and Stroke, and **Tremor Update** (April 28, 1990), Sponsored by Internatl. Tremor Foundation, Omni Shoreham Hotel, WA, DC

**Environmental Design for Dementia** (February 21, 1990), Alzheimer's Disease Institute, Texas Tech. University Health Sciences Center, Lubbock, TX

**Segmental Motor Systems** (Oct. 28-29, 1989), Satellite Meeting of Society for Neuroscience,

University of Arizona, Tucson, AR

**Imaging of the Functioning Brain** (September 10, 1988) Milwaukee Chapter of Society for Neuroscience, Medical College of Wisconsin, Milwaukee, WI

**Alzheimer's Disease** (Nov. 1, 1986), Institute of Gerontology, Ball State University, Muncie, IN

**Health Promotion in Aging Populations** (October 17-18, 1986) Midwest Chapter of American College of Sports Medicine, Michigan State University, East Lansing, MI

**Human Posture, Neurophysiology and Rehabilitation Medicine: The Tie that Binds, Current Concepts in Arm Movement Control, EMG in Prognosis** (Oct. 21- 3, 1984), 46th Annual American Academy of Physical Medicine and Rehabilitation, Boston, MA

**Neurophysiology** (April 25, 1983), **Movement Disorders** (April 26, 1983), American Academy of Neurology, San Diego, CA

**Neurophysiological Bases of Motor Disorders** (Oct. 29-30, 1982), Rehabilitation Institute of Chicago, Northwestern University Medical School, Chicago

**Neurobiology of Disease Workshop: Demyelinating and Degenerative Diseases** (Oct. 17-18, 1981), Satellite Meeting of Society for Neuroscience, University of Southern California, Los Angeles