

CURRICULUM VITAE
Gerald V. Smith, PT, PhD
Associate Professor (Tenured)
Director: Program in Physical Therapy

Date: March 2011

Personal Information:

Business Address: University of Central Florida,
College of Health and Public Affairs,
Department of Health Professions
Program in Physical Therapy
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Post Secondary Education:

1975-78 BS, Physical Therapy, May 1978,
TEMPLE UNIVERSITY, Philadelphia, PA.
1983-87 PhD, Anatomy, Neuroscience Concentration, Conferred May 1988,
MEDICAL COLLEGE OF VIRGINIA, VIRGINIA COMMONWEALTH
UNIVERSITY, Richmond, VA.

Post Graduate Education:

1987-89 Post-Doctoral Fellowship, Neurobiology,
GEORGETOWN UNIVERSITY,
Washington, DC.

Professional Licensure: (Physical Therapy)

Florida 2004 (Current - # 21506)

Military Service:

Sergeant/E-5, U.S. Army, Viet Nam Era (1969-1972) Honorably Discharged.

Employment History:

Staff Therapist, Ingle-Szymcek Associates, Charlotte, NC 1978-1979
Physical Therapist, Physical Therapy of Gastonia, Gastonia, NC 1979-1980

Chief Physical Therapist, Jackson Regional Hospital, Jackson, TN	1980-1983
Graduate Research Assistant, Medical College of Virginia, Richmond, VA	1983-1987
Post-doctoral Fellow, Georgetown University, Washington, DC	1987-1989
Assistant Professor, University of Maryland, Baltimore, MD	1989-2003
Associate Investigator, VAMHSC, Rehabilitation Research Service, Department of Medicine, Division of Gerontology, Baltimore, MD	2000-2003
Associate Professor, University of Central Florida, Orlando, FL	2004-present

Professional Memberships:

Member, American Physical Therapy Association	1976-1999; 2002
Member, Society for Neuroscience	1985-1997
Member, International Brain Research Organization (IBRO)	1985-present
Member, National Stroke Association	2001-present

Honors and Awards:

Riese Award in Neuroanatomy, School of Basic Sciences, MCV, Richmond, VA	1987
Graduate Student Day - Forbes Award for "Research in Progress", School of Basic Sciences, MCV, Richmond, VA	1987

Administrative Service:

Institutional Service:

University of Maryland-Baltimore, School of Medicine – Member, Student Affairs Committee	1992-1996
University of Maryland-Baltimore, School of Medicine – Member, Judicial Board	1999-2003
University of Maryland-Baltimore, School of Medicine – Member, Dean’s Council	2001-2003

Departmental Service:

University of Maryland-Baltimore, Ad hoc Accreditation Committee, Member 1990 (CAPTE accreditation for B.S. program. Granted-8 years with biennial compliance report)	
University of Maryland-Baltimore, Ad hoc Accreditation Committee, Member 1992 (CAPTE accreditation compliance for B.S. program. Granted-6 years with no further annual reports)	
University of Maryland-Baltimore, Student Affairs Committee, Chair	1992-1996
University of Maryland-Baltimore, Clinical Services Committee, Member	1992-1997
University of Maryland-Baltimore, Secretary, UMB Physical Therapy Associates.	1992-1997
University of Maryland-Baltimore, Ad hoc Accreditation Committee, Member	

1995
 (Interim CAPTE accreditation for MPT program. Granted-site visit scheduled)
 University of Maryland-Baltimore, Ad hoc Accreditation Committee, Member

1996
 (CAPTE accreditation for MPT program. Granted-8 years, no deficiencies.)
 University of Maryland-Baltimore, Ad hoc Ph.D. Development Committee, Member
 1997-1998
 (Graduate School Prospectus - Physical Rehabilitation Sciences Ph.D.
 Program. Maryland Higher Education Commission - Approved)
 University of Maryland-Baltimore, Research Committee, Member 1996-2001
 Chair 2001 to 2003
 University of Maryland-Baltimore, Ad Hoc DPT Development Committee, Member
 1999- 2003
 (Interim CAPTE accreditation for DPT program. Granted)
 University of Maryland-Baltimore, Grievance Committee 2000- present
 University of Central Florida, Research Incentive Program,
 (Awards Committee Member) 2005
 University of Central Florida, COHPA, Graduate Council 2004-present

National Service:

Associate Editor: *American Journal of Lifestyle Medicine* 2006-present
 Ad hoc journal manuscript reviewer:
Archives of Physical Medicine and Rehabilitation 1997-present
Journal of Neurorehabilitation and Neural Repair 1998-present
Journal of Rehabilitation Research and Development 2000-present
 Ad hoc grant reviewer:
 VA Rehabilitation Research Service 2000-present
 New Zealand Neurological Foundation 2001-present
 Co-Organizer/Speaker, Mini-Symposia, "Training Induced Mechanisms to Enhance
 Recovery and Neural Plasticity in Chronic Stroke Patients." Gerontological
 Society of America, Annual Meeting, Washington, DC. November 2000

Teaching Responsibilities:

Medical College of Virginia, 1984-1987

- (1) Graduate Teaching Assistant, Medical Gross Anatomy, 15 SHC, 1984-86
- (2) Graduate Teaching Assistant, Medical Neuroscience, 4 SHC, 1986-87
- (3) Graduate Teaching Assistant, Graduate Neuroscience, 4 SHC, 1985-86
- (4) Graduate Teaching Assistant, Dental Gross Anatomy, 12 SHC, 1985-86
- (5) Graduate Teaching Assistant, Dental Histology, 4 SHC, 1984
- (6) Graduate Teaching Assistant, Pharmacy Anatomy, 4SHC, 1985

Georgetown University: 1987-1988

- (1) Guest Lecturer, Medical Neuroscience, 4 SHC, 1988

University of Maryland-Baltimore, School of Medicine, Dept. of Physical Therapy and Rehabilitation Science 1989-2003

- (1) Block Leader, DPTE 513 Basic Sciences Block 2, 15 SHC, 2003
- (2) Course Director, PTAB 520 Assessment and Management of the Neurological Patient I, 4 SHC, 1992-2003
- (3) Course Director, PTAB 580 Plasticity in the Nervous System, 2 SHC, 1992-2003
- (4) Course Coordinator (Team Taught) PTAB 582- Seminars in Physical Therapy; 1 SHC, 1992-2003
- (5) Course Director, PRS 706 Applied Neuroscience 2 SHC 1999-2003.

Students/Fellows Mentored		
Name	Current Status	
Pre-Doctoral Students:		
Todd Cade, PhD, PT	Graduated – May 2002	Post Doctoral Fellowship – Washington University, St. Louis, MO
Rich Lovering, PhD, PT	Graduated – May 2003	Post Doctoral Fellowship – Dept. of Physiology, UMB
Ellen Wruble-Hakim, DScPT, PT, CWS	Graduated – May 2003	Assistant Professor, UMB, SOM, Dept PT & Rehab Sci
Michelle Harris-Love, MPT	Graduated – May 2005	
Sandy McCombe Waller, MS, PT, NCS	Graduated – May 2004	Assistant Professor, UMB, SOM, Dept PT & Rehab Sci
Post-Doctoral Fellows:		
Larry Forrester, PhD	Completed	Assistant Professor, Dept. PT & Rehab Sci, UMB
Hellena Scott-Okafor, MD	Completed	Private Practice, FL
Steve Urban, MD	Completed	Private Practice, TN
David Heydrick, MD	Completed	Private Practice, MD

University of Central Florida, College of Health and Public Affairs, Department of Health Professions, 2004 to present

- (1) Course Director, PHT 5115/5115L Gross Anatomy/Neuroscience I, 4 SHC
- (2) Course Director, PHT 5005 Foundations of Physical Therapy II, 2 SHC
- (3) Course Director, PHT 5118/5118L Gross Anatomy/Neuroscience II, 4 SHC
- (4) Course Director, PHT 5718/5718L Neurological Physical Therapy I, 3 SHC
- (5) Course Director, PHT 6719/6719L Neurological Physical Therapy II, 3 SHC
- (6) Course Director, PHT 6606 Research Methods, 2 SHC
- (7) Course Coordinator, PHT 6618 Research Applications, 2 SHC
- (8) Course Coordinator, PHT 6938 Special Topics in Physical Therapy, 2 SHC

- (9) Course Director, PHT 6115C Gross Anatomy/Neuroscience, 6 SHC
(10) Course Director, PHT 6118C Gross Anatomy/Neuroscience II, 6 SHC

Grants:

- 1985-87 NSF Grant # BSN-8416911 and BSRG Grant # 5SO7RRO5697-17 Pre-Doctoral educational support of basic science studies of CNS axonal regeneration. Direct costs: \$22,000.00
JA Stevenson, MD, PhD, Principal Investigator.
GV Smith, PT, Co-Investigator
- 1987-89 NIA Grant # AG-06648, NINCDS Grant # NS-23522 (03-05) and March of Dimes Birth Defects Foundation Grant # 1-1004 (03-04) Post-Doctoral Fellowship supporting basic science studies of cholinergic neuronal development and regeneration. Direct costs: \$ 42,000.00
GV Smith, PhD, PT
LF Kromer, PhD, Fellowship Advisor/Mentor
- 1991-92 University of Maryland, Physical Therapy Alumni Association #1-91 "Analysis of EEG and EMG Activity in Young Adults and Elderly Humans Following Balance Disruption." Direct costs: \$ 3,000.00
GV Smith, PhD, PT, Principal Investigator
- 1991-92 University of Maryland, The Pangborn Fund, "Correlation of EEG and EMG Activity with Reaction and Recovery Times in Humans Following Postural Disruption." Direct costs: \$ 5,615.00
GV Smith, PhD, PT, Principal Investigator
PA Anderson, PhD, Co-Principal Investigator
- 1995-96 University of Maryland, GGREC/Claude D. Pepper NIA - Older Americans Independence Center Pilot Grant, "Aerobic Exercise in the Elderly Stroke Population." Direct Costs: \$ 30,000.00
RF Macko, MD & KHC Silver, MD, Co-Principal Investigators
GV Smith, PhD, PT, Co-Investigator
- University of Maryland, Elan Pharmaceutical Company, Gainsville, GA., Contracted Studies. "Pharmacokinetics, Tolerability and Evaluation of Single Dose Famperdine SR Tablets Under Fed and Fasted Conditions; Pharmacokinetics, Tolerability and Evaluation of Famperdine SR Capsules Under Fed and Fasted Conditions; Pharmacokinetics, Tolerability and Evaluation of Single Dose Famperdine SR/ Multiple Dose Under Fed and Fasted Conditions in Patients with Multiple Sclerosis.
Direct Costs: \$106,000.00
CT Bever, MD, Principal Investigator (Sub-contract to GV Smith, PhD, PT)
- 1997-1998 University of Maryland, GGREC/NIA Claude D. Pepper Center, Research

- Development Core-Pilot Grant, "Electromagnetic Motor Evoked Potentials (MEPs) as a Prognostic Measure of Functional Outcomes in Stroke Patients." Direct Costs: \$15,000.00.
GV Smith, PhD, Principal Investigator
AP Goldberg, MD, RF Macko, MD,
KHC Silver, MD Co-Investigators
- 1997-2001 VA Career Development Award, "Physiological and Functional Effects of Task-Oriented Aerobic Exercise in Older Patients with Hemiparetic Stroke", Direct Costs: \$425,000.00.
RF Macko, MD, Principal Investigator
GV Smith, PhD, PT, KHC Silver, MD et. al. Co-Investigators
- 1997-2002 NIA/NIH, R29 Grant, "Effects of Exercise on Patients with Hemiparetic Stroke", Direct Costs: \$350,000.00.
RF Macko, MD, Principal Investigator
GV Smith, PhD, PT, KHC Silver, MD et. al. Co-Investigators
- 1997-2002 VAMC Baltimore, MD, RR&D Merit Grant, "Effects of Aerobic Exercise in Chronic Hemiparetic Veterans." (# E1820-2RC) Direct Costs \$393,250.00
KHC Silver, MD - Principal Investigator
GV Smith, PhD, PT, RF Macko, MD, et al. - Co-Investigators
- 1998-1999 University of Maryland, GGREC/NIA Claude D. Pepper Center, Research Development Core-Pilot Grant, "Muscle Fiber Plasticity in Hemiparetic Patients after an Aerobic Exercise Program" Direct Costs: \$18,500.00
P DeDeyne, PhD, PT, Principal Investigator
GV Smith, PhD, PT, RF Macko, MD, et al. - Co-Investigators
- 1999-2000 University of Maryland, GGREC/NIA Claude D. Pepper Center, Research Development Core-Pilot Grant, "Quantitative Measures of Neuromuscular Adaptation Following "Task-Oriented" Locomotor Exercise", Direct Costs: \$20,000.00 LW Forrester, PhD, Post-Doctoral Fellow, Principal Investigator
GV Smith, PhD, PT (Primary Mentor) and RF Macko, MD - Co-Investigators
- 2001-2006 University of Maryland - Baltimore, GGREC/NIA Claude D. Pepper Center, RRC-B Functional Performance and Neuromuscular Mechanisms Core, Direct Core Costs: \$ 869,000.00
GV Smith, PhD, PT, Principal Investigator (Core Leader)
MM Rodgers, PhD, PT, DF Hanley, MD, Leonardo Cohen, MD, Senior Investigators
- 2006-2008 NINDS, R21, fMRI Studies of Lower Extremity NMES Post Stroke, Direct Costs: \$371,249 (Pending)
GV Smith, PhD, PT, Principal Investigator
T Angelopoulos, PhD; JM Rippe, MD; R Wagner, DPT, PT, Co-Investigators

Publications and Presentations:

Peer-Reviewed Articles:

1. **Smith GV** and JA Stevenson (1988) Peripheral Nerve Grafts Lacking Viable Schwann Cells Fail to Support Central Nervous System Axonal Regeneration. Exp. Brain Res. 69:299-306.
2. Bever CT, Anderson PA, **Smith GV**, Panitch H, Johnson KP (1995) Isometric Measurements of Hamstrings and Quadriceps Strength in Multiple Sclerosis Patients. J. Neuro. Rehab. 9:221-227.
3. Macko RF, Katzel LI, Yataco A, Tretter LD, DeSouza CA, Dengel DR, **Smith GV** and Silver KH (1997) Low-Velocity Graded Treadmill Stress Testing in Hemiparetic Stroke Patients. Stroke 28(5):988-992.
4. Macko RF, DeSouza CA, Tretter L, Silver KHC, **Smith GV**, Anderson PA, Tomoyasu N, Gorman P and Dengel DR (1997) Treadmill Aerobic Exercise Training Reduces Energy Expenditure and Cardiovascular Demands of Hemiparetic Gait in Chronic Stroke Patients. Stroke 28:326-330.
5. **Smith GV**, Macko RF, Silver KHC and Goldberg AP (1998) Treadmill Aerobic Exercise Improves Quadriceps Strength in Chronic Hemiparetic Stroke Patients: a Preliminary Report. J. Neuro. Rehab. 12(3):111-117.
6. Alon G., Syron SC, **Smith GV** (1998) Is Transcranial Electrical Stimulation (TCES) a Safe Intervention for Children with Cerebral Palsy? J. Neuro. Rehab. 12:65-72.
7. **Smith GV**, Silver KHC and Goldberg AP, Macko RF (1999) "Task-Oriented" Aerobic Exercise Improves Hamstring Strength in Chronic Stroke Patients: a Preliminary Report. Stroke 30:2112-2118.
8. Alon G, Kantor G and **Smith GV** (1999) Peripheral Nerve Excitation and Plantar Flexion Force Elicited by Electrical Stimulation in Males and Females. JOSPT 29(4): 208-214.
9. Alon G, Kantor G, **Smith GV** (1999) Editorial Discussion JOSPT 29(4): 216-217.
10. **Smith GV**, Forrester LW, Silver KHC and Macko, RF (2000) Effects of Treadmill Training on Translational Balance Perturbation Responses in Chronic Hemiparetic Stroke Patients. J. Stroke Cerebrovas. Dis. 9(5):238-245.
11. Silver KHC, Macko RF, Forrester L, Goldberg AP, **Smith GV** (2000) Effects of Aerobic Treadmill Training on Gait Velocity, Cadence and Gait Symmetry in Chronic Hemiparetic Stroke: A Preliminary Report J. Neuro. Rehab. 14(1):65-71.

12. Ryan AS, Dobrovoly CL, Silver KHC, **Smith GV** and Macko RF (2000) Cardiovascular Fitness after Stroke: Role of Muscle Mass and Gait Deficit Severity. *J. Stroke Cerebrovas. Dis.* 9(4):185-191.
13. Macko RF, **Smith GV**, Dobrovoly L, Sorkin J, Goldberg AP and Silver KHC (2001) Treadmill Training Improves Fitness Reserve in Chronic Hemiparetic Stroke Patients. *Arch. Phys. Med. Rehab.* 82(7):879-884.
14. Gardner AW, Forrester LW and **Smith GV** (2001) Altered Gait Profile in Subjects with Peripheral Arterial Disease. *Vascular Medicine* 6(1):31-34.
15. Harris-Love M, Forrester L, Macko RF, Silver KHC, and **Smith GV** (2001) Hemiplegic Gait Parameters in Overground Versus Treadmill Walking *J. Neuro. Rehab. Neural Rep.* 15(2):105-112.
16. Macko RF, Haeuber E, Shaughnessy M, Coleman KL, Boone DA, **Smith GV** and Silver KHC (2002) Microprocessor-Based Ambulatory Activity Monitoring in Hemiparetic Stroke Patients. *Med. Sci. Sports Ex.* 34(3):394-399.
17. Luft AR, **Smith GV**, Forrester L, Whitall J, Macko RF, Goldberg AP, and Hanley DF (2002) Comparing Brain Activation Associated with Isolated Upper and Lower Limb Movement Across Corresponding Joints. *Human Brain Mapping* 17(2):131-140.
18. Ryan A, Dobrovoly L, **Smith GV**, Silver K, Macko R. (2002) Hemiparetic Muscle Atrophy and Increased Intra-Muscular Fat after Stroke. *Arch. Phys. Med. Rehab.* 83 (12): 1703-1707.
19. **Smith GV**, Alon G, Roys SR, Gullapalli RP, (2003) fMRI Determination of a Dose-Response Relationship to Lower Extremity Neuromuscular Electrical Stimulation in Healthy Subjects. *Exp. Brain Res.* 150:33-39.
20. Luft AR, McCombe-Waller S, Forrester L, **Smith GV**, Whitall J, Macko RF, Schulz JB, Goldberg AP, Hanley DF (2004) Lesion Location Alters Brain Activation in Chronically Impaired Stroke Survivors. *Neuroimage* 21(3):924-935.
21. Gullapalli RP, Maitra R, Roys SR, Greenspan J, **Smith GV**, Alon G (2005) Reliability Estimation of Grouped Functional Imaging Data using Penalized Maximum Likelihood *Mag Res Med* 53:1126-1134.
22. Alon G and **Smith GV** (2005) Tolerance and Conditioning To Electrical Stimulation Within and Between Sessions and Gender. *J. Sports Sci. & Med* 4:395-405.
23. LeRoy EC, Forrester L, Silver KHC, Sorkin J, DeLateur B, **Smith GV** (2004) Comparison of Progressive Rate vs. Progressive Resistance Training in Healthy Young Adults. *Am J PM&R* (Submitted)

Books/Chapters:

Smith GV, (1988) Promotion of Axonal Regeneration by Schwann Cells, Ph.D. Dissertation, Medical College of Virginia/Virginia Commonwealth University.

Smith GV, (1995) Motor Function. In: Key Words in Physical Rehabilitation: A Guide to Contemporary Usage. Cammack, S. and Eisenberg, M.G. (eds.) Springer, NY

Forrester L, Macko R and **Smith GV** (2002) Short-term Treadmill Exercise in Chronic Stroke: Evidence of Differential Fatigue Effects in Quadriceps Muscles. Battistin L, Dam M and Tonin E (eds) In: Neurological Rehabilitation, Monduzzi Editore S.p.A., Bologna, Italy

Published Abstracts: (Selected)

1. **Smith GV** and Stevenson JA (1986) Axon Regeneration Through Peripheral Nerve Segments After Schwann Cell Killing. Soc. Neurosci. Abstr. 12:701.

2. **Smith GV** and Stevenson JA (1987) Schwann Cell Involvement in Nerve Graft Promoted CNS Axonal Regeneration. Anat. Rec. 218:155A.

3. **Smith GV** and Stevenson JA (1987) Schwann Cell Proximity Influences Central Nervous System Axonal Regeneration. Proceedings of the 2nd International Symposium on Transplantation in the Central Nervous System, Schmitt Neurological Sciences Symposium, University of Rochester Press.

4. **Smith GV** and Kromer LF (1988) Effects of Hippocampal Transplants With or Without Nerve Growth Factor (NGF) on Septal Cholinergic Neuron Survival. Soc. Neurosci. Abstr. 14:763.

5. Anderson PA, Alon G, Hege-Maisel TY, and **Smith GV** (1992) Stepping Performance of Healthy Subjects on the MotionSpec™ Balance and Motor Control System. Phys. Ther. 72(6):92S

6. Anderson PA, Alon G and **Smith GV** (1992) Dynamic Equilibrium in Young Adult and Elderly Human Subjects. Phys. Ther. 72(6):91S

7. Anderson PA, **Smith GV** and Alon G (1992) Equilibrium Performance Parameters in Normal Subjects and Subjects with Multiple Sclerosis. Phys. Ther. 72(6):63S

8. Anderson PA, **Smith GV** and Alon G (1992) Postural Reaction and Recovery Times in Normal Subjects and Subjects with Multiple Sclerosis. Phys. Ther. 72(6):63S

9. Anderson PA, Laking JD, **Smith GV** and Alon G (1992) The Influence of Movement Direction, Learning the Task, and Safety Harness on Balance Reaction of Healthy Subjects. Phys. Ther. 72(6):92S

10. Anderson PA, Alon G, Laking JD and **Smith GV** (1992) Validity, Reliability and Reproducibility of MotionSpec™ Platform Movement Kinematics. Proceedings of 9th International Congress of ISEK, Florence, Italy.
11. Anderson PA, Alon G, and **Smith GV** (1992) Multivariate Analysis of Motion Spec™ Movement Kinematics. Proceedings of 9th International Congress of ISEK, Florence, Italy.
12. Anderson PA, Bever CT and **Smith GV** (1992) Latency Measures of Spasticity in Multiple Sclerosis Patients. Soc. Neurosci. Abst. 22:1403.
13. **Smith GV** and Anderson PA (1994) EMG Latencies in Seven Postural Muscles Following Postural Perturbation in Young Adults. Proceedings of the 10th International Congress of ISEK, Charleston, S.C.
14. Anderson PA, **Smith GV**, and Alon G (1994) A Preliminary Kinematic Analysis of Normal Balance. Proceedings of the 10th International Congress of ISEK, Charleston, S.C.
15. Macko RF, Katzel LI, MacDonald B, Silver KH, Keyser RE, **Smith GV**, Anderson PA, Gorman P and Goldberg AP (1995) Graded Treadmill Exercise Performance in Hemiparetic Stroke Patients. Arch. Phys. Med. Rehabil. 76:333.
16. Macko RF, Dengel D, DeSouza CA, MacDonald B, Silver KH, Keyser RE, **Smith GV**, Anderson PA, Gorman P and Goldberg AP (1995) Diminished Physiological Reserve in Hemiparetic Stroke Patients. Arch. Phys. Med. Rehabil. 76:333-334.
17. **Smith GV**, Shybunko-Gould A and Bever C (1997) Quantitative Measures of Spasticity and Concentric Force Output in Patients with Multiple Sclerosis Undergoing Famperidine SR Treatment. Phys. Ther. 77(5):S80.
18. Harvey, LC, Oberle, GM, Bechtel and **Smith GV** (1997) EMG Analysis of Medial and Lateral Quadriceps Components During Clinical Exercises. JOSPT 25(1):79.
19. Alon G, Daisey S and **Smith GV** (1997) A Proposed Battery of Objective Tests for Patients with Low Back Dysfunction. Phys. Ther. 77(5):S102.
20. Harvey LC, Bechtel R, Oberle G and **Smith GV** (1997) The Effects of Straight Leg Raise Variation Exercises on Vastus Medialis Oblique to Vastus Lateralis Ratios. Phys. Ther. 77(5) S41.
21. **Smith GV**, Anderson PA, Silver KHC and Macko RF (1997) "Task-Oriented" Treadmill Exercise Training Reduces Spasticity and Improves Hamstring Strength in Chronic Hemiparetic Stroke Patients: a Preliminary Report. Ann. Neurol. 122(S):63.
22. **Smith GV**, Anderson PA, Silver KHC and Macko RF (1997) Aerobic Treadmill Exercise Training Improves Leg Strength and Reduces Spasticity in Chronic Hemiparetic Stroke Patients: A Preliminary Report. J. Neuro. Rehab. 4(S):12.

23. Silver KHC, **Smith GV**, Goldberg E and Macko RF (1997) Improved Hemiparetic Gait Patterns on Treadmill Compared to Floor Walking. *J. Neuro. Rehab.* 4(S):28.
24. **Smith GV**, Anderson PA, Silver KHC and Macko RF (1997) Task-Oriented Aerobic Exercise Improves Cadence and In-Place Stepping Parameters in Chronic Hemiparetic Stroke Patients: a Preliminary Report. *J. Neuro. Rehab.* 4(S):30.
25. Alon G and **Smith GV** (1998) Local Anesthetic and Alteration of Sensory Perception Induced by Standard, and a New Anesthetic TENS. *Phys. Ther.* 78(5):S58.
26. **Smith GV**, Silver KHC and Macko RF (1998) "Task-Oriented" Locomotion Training Improves Volitional Quadriceps Strength in Chronic Hemiparetic Subjects. Proceedings of the 51st Annual Scientific Meeting of the Gerontological Society of America. Philadelphia, PA.
27. Macko RF, **Smith GV**, Silver KHC, Dobrovoiny CL, and Goldberg AP (1998) Treadmill Exercise Training Improves Physiologic Fitness Reserve Following Hemiparetic Stroke. Macko, R. Proceedings of the 51st Annual Scientific Meeting of the Gerontological Society of America. Philadelphia, PA.
28. Silver KHC, Dobrovoiny L, **Smith GV**, Macko RF and Goldberg AP (1998) Improvement in Locomotion Following Treadmill Training in Elderly Chronic Hemiparetic Stroke Patients. Proceeding of the 1st Annual VA Rehabilitation Research and Development Service, Washington, D.C.
29. Macko RF, **Smith GV**, Silver KHC, Dobrovoiny L, and Goldberg AP (1998) Treadmill Aerobic Exercise Improves the "Physiological Fitness Reserve" in Chronic Hemiparetic Stroke Patients. Proceeding of the 1st Annual Meeting of the VA Rehabilitation Research and Development Service, Washington, D.C.
30. Scott-Okafor H, **Smith GV**, Silver KHC, and Macko RF (1998) Treadmill Locomotion Training Improves Peak Hamstrings Torque in Chronic Hemiparetic Subjects. Proceeding of the 1st Annual Meeting of the VA Rehabilitation Research and Development Service, Washington, D.C.
31. **Smith GV**, Silver KHC, and Macko RF (1998) Aerobic Treadmill Locomotion Training Improves Quadriceps Strength in Chronic Hemiparetic Subjects. Proceedings of the 1st Annual Meeting of the VA Rehabilitation Research and Development Service, Washington, D.C.
32. Forrester LW, **Smith GV**, Silver KHC, and Macko RF (1999) Treadmill Training Influences on Lower Extremity Strength: A Case Study of Chronic Cerebellar Stroke Rehabilitation Via Treadmill Training. Proceeding of the 2nd World Congress in Neurological Rehabilitation. Toronto, Canada.

33. Forrester LW, **Smith GV**, Silver KHC, and Macko RF (1999) Relationships Between Lower Limb Strength and Functional Tasks: A Case Study of Chronic Cerebellar Stroke Rehabilitation Via Treadmill Training. Proceeding of the 2nd World Congress in Neurological Rehabilitation. Toronto, Canada.
34. **Smith GV**, Forrester LW, Silver KHC and Macko RF (2000) Effects of Treadmill Training on Translational Balance Perturbation Responses in Chronic Hemiparetic Stroke Patients. Proceedings of the 2nd Annual Meeting of the VA Rehabilitation Research and Development Service, Arlington, VA.
35. **Smith GV**, Forrester LW, and Macko RF (2000) Altered Lower Extremity Transcranial MEPs and Torque Output in Hemiparetic Stroke with Fatiguing Exercise. *J. Stroke Cerebrovas. Dis.* 9(4):203.
36. Luft AR, Waller SM, Whittall J, **Smith GV**, Forrester L, Macko RF, Goldberg AP, Hanley DF (2002) Repetitive bilateral arm training in long-term stroke survivors induces cortical reorganization. *Stroke* 33 (1): P305
37. Gullapalli R, Alon G, **Smith GV**, Estrada L, Lewis M, Arya R. (2002) Group Analysis of Dose-Response Relationships Between Electrical Peripheral Nerve Stimulation and Cortical Response Using fMRI. Proceedings of the International Society for Magnetic Resonance in Medicine, Honolulu, 10:1510.
38. Harris-Love M, Forrester LW, Macko RF and **Smith GV** (2002) Activation Patterns of the Vastus Lateralis in Individuals with Stroke Walking Overground and on a Treadmill. *Phys. Ther.* 83 (7): S
39. Forrester L, Macko R and **Smith GV** (2002) Short-term Treadmill Exercise in Chronic Stroke: Evidence of Differential Fatigue Effects in Quadriceps Muscles. Proceeding of the 3rd World Congress of Neurological Rehabilitation. Venice, Italy.
40. Alon G, Estrada L, Lewis M, **Smith GV**. (2003) Gender and Dose-response relations between neuromuscular electrical stimulation (NMES) and activation of brain loci subserving the locomotor system. 14th International Congress, World Confederation for Physical Therapy, Barcelona, Spain. June 7-12, 2003.
41. Luft AR, Waller S, Whittall J, Forrester L, **Smith GV**, Macko R, and Hanley DF (2004) Bilateral training induces functionally relevant recruitment of contralesional motor cortex in chronic stroke survivors *Stroke* 35 (6): E184-E184 JUN 2004. 5th World Stroke Congress, Vancouver, BC, Canada, June 23-26, 2004.
42. Orem DM, **Smith GV**, and Bedwell JS (2006) Pituitary volume in first-degree relatives of persons with schizophrenia. *Biolog Psych* 59(8) S1:203 Proceedings of the Society for Biological Psychiatry Annual Convention, Toronto, Ontario, Canada. May, 2006.

Invited Lectures (Selected):

1. **Smith GV** (1989) *“Role of Nerve Growth Factor in Promoting CNS Axonal Regeneration.”* Northeastern University, Bouve School of Health Sciences, Department of Physical Therapy, Boston, MA.
2. **Smith GV** (1989) *“Schwann Cell Proximity and NGF Production in Promoting CNS Axonal Regeneration.”* University of Maryland, School of Medicine, Department of Physical Therapy, Baltimore, MD.
3. **Smith GV** (1991) *“The Neurological Examination”*, The Visiting Nurse Association of DC. Capitol Hill Hospital, Washington, DC.
4. **Smith GV** (1992) *“Evaluation of the Neurological Patient”*, Parts I & II, Continuing Education Series, Medical Rehab Support Services Corp., Rockville, MD.
5. **Smith GV** (1996) *“Spasticity: Physical Therapy Management.”* American Academy of Neurology and the American Society of Neurorehabilitation Conference: The Neurorehabilitation of Spinal Cord Injury, Spinal Cord Disease and Neuromuscular Disease. James Lawrence Kernan Hospital. Baltimore, MD.
6. **Smith GV** (1996) *“Effects of Aerobic Exercise in Chronic Stroke Patients.”* Department of Neurology - Grand Rounds. University of Maryland Medical System Hospital, Baltimore, MD.
7. **Smith GV** (1997) *“Quantitative Measures of Quadriceps and Hamstring Strength in Chronic Hemiparetic Patients.”* GRECC Seminar Series, Baltimore VA Medical Center.
8. **Smith GV** (1997) *“Outcome Measures in Chronic Stroke Survivors Following Aerobic Treadmill Training.”* NIA Pepper Center External Advisory Committee, Annual Meeting. Baltimore VA Medical Center.
9. **Smith GV** (1999) *“Functional Outcomes in Chronic Hemiparetic Stroke Survivors Following Aerobic Treadmill Training.”* NIH, Neurocognitive Laboratory. Bethesda, MD
10. **Smith GV** (2000) *“Exercise Induced Mechanisms to Enhance Neural Recovery”* (Stroke Care: The Changing Image). Sponsored by Health Care Professions Seminars and UMB, SOM, Dept. of P.T., Baltimore, MD.
11. **Smith GV** (2000) Keynote Speaker: PT Month, *“Exercise-Induced Mechanisms to Promote Functional Recovery and Neural Plasticity.”* NIH, Department of Rehabilitation Medicine, Bethesda, MD.
12. **Smith GV** (2000) Mini-Symposium Speaker, *“Training Induced Mechanisms to Enhance Recovery and Neural Plasticity in Chronic Stroke Patients.”* Gerontological Society of America, 51st Annual Meeting, Washington, DC.

13. **Smith GV** (2001) *"Training Induced Mechanisms to Enhance Recovery and Neural Plasticity in Chronic Stroke Patients."* Advances in Stroke Rehabilitation, Chesapeake Health Education Program (CHEP), GRECC Annual Symposium, VAMC, Baltimore, MD

14. **Smith GV** (2003) *"Mechanistic Studies of Neural Plasticity in Chronic Stroke Patients"* University of Florida, McKnight Brain Institute, Gainesville, FL