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## **CURRICULUM VITAE**

### **EDUCATION**

- 1991        Ed.D., Motor Learning, Movement Sciences and Education Department, Teachers College, Columbia University, New York, NY.
- 1986        M.A., Motor Learning, Movement Sciences and Education Department, Teachers College, Columbia University, New York, NY.
- 1984        B.S., Physical Therapy, University of Utah, Salt Lake City, UT.

### **RESEARCH EXPERIENCE**

- 2002-  
Present        ASSOCIATE PROFESSOR with TENURE, Division of Physical Therapy, The Ohio State University, Columbus, OH.
- ASSOCIATE PROFESSOR with TENURE, Department of Neuroscience, The Ohio State University, Columbus, OH.
- 1996-  
2002        ASSISTANT PROFESSOR, Division of Physical Therapy, The Ohio State University, Columbus, OH.
- 1996        RESEARCH SCIENTIST, Department of Cell Biology, Neurobiology & Anatomy, The Ohio State University, Columbus, OH.
- 1992-1995    POSTDOCTORAL FELLOW under the direction of Drs. Jacqueline Bresnahan and Michael Beattie, Department of Cell Biology, Neurobiology & Anatomy, The Ohio State University, Columbus, OH.
- 1991-1992    POSTDOCTORAL FELLOW under the direction of Dr. Michael Goldberger, Department of Anatomy and Neurobiology, Medical College of Pennsylvania, Philadelphia, PA.
- 1989-1991    RESEARCH AFFILIATE with Dr. Donald Stein, Brain Research Lab, Institute of Animal Behavior, Rutgers University, Newark, NJ.
- 1987        RESEARCH ASSISTANT for Dr. Jean Held, Physical Therapy Program, University of Vermont, Burlington, VT.

## **ACADEMIC EXPERIENCE**

- 1993-1999    LAB INSTRUCTOR, Medical Neuroscience, The Ohio State University College of Medicine, Columbus, OH.
- 1991            TEACHING ASSISTANT, Gross Anatomy, Physical Therapy, Medical College of Pennsylvania, Philadelphia, PA.
- 1986-1988    GRADUATE STUDENT ADVISOR, Motor Learning Program, Teachers College, Columbia University, New York, NY.
- 1986-1987    INSTRUCTOR, Motor Learning Program, Teachers College, Columbia University, New York, NY.
- 1987            TEACHING ASSISTANT, Analysis of Human Movement, Teachers College, Columbia University, New York, NY.
- 1985            TEACHING ASSISTANT, Gross Anatomy, Physical Therapy Program, University of Utah, Salt Lake City, UT.

## **HONORS AND AWARDS**

- 2005            **National Research Award**, Neurology Section, American Physical Therapy Association
- 2001            **Outstanding Faculty Research Award**, School of Allied Medical Professions
- 1997            **Distinguished Diversity Enhancement Award**, The Ohio State University
- 1998            **Co-Director**, Outreach Program for African-American Women, selected to fulfill the Alliances Objective for the OSU Medical Center: a National Center of Excellence in Women's Health

## **RESEARCH FUNDING**

- 2002-2007    Principal Investigator, NIH NINDS, "Sparing and Exercise Training Promote Recovery in SCI". TDC: \$1,050,000
- 2002-2007    Co-Investigator, Jacqueline Bresnahan, PI, NIH-NINDS, "Facilities for Research Excellence in Spinal Cord Injury". Annual Direct Costs: \$510,000
- 2002-2004    Principal Investigator, Christopher Reeve Paralysis Foundation grant, "Developing a New Locomotor Rating Scale for Mice with SCI". TDC: \$103,215
- 2003-2007    Co-Investigator, Dana M. McTigue, PI, NIH NINDS, "Oligodendrocyte Progenitors in SCI Repair". TDC: \$800,000

### **RESEARCH FUNDING (continued)**

- 2004-2008 Co-Investigator, Lyn Jakeman, PI, NIH NINDS, "Axons and the extracellular matrix in spinal cord injury". TDC: \$948,125
- 1998-2002 Co-Investigator, Bruce H. Dobkin, PI, NIH NCMRR, "Locomotor Therapy Trial for Spinal Cord Injury." Proposal TDC: \$4,124,547, OSU TDC: \$468,973.
- 1999-2001 Principal Investigator, Christopher Reeve Paralysis Foundation grant, "Training-induced Improvement of Locomotor Recovery after Experimental Spinal Cord Injury." TDC \$99,857.
- 1999-2000 Principal Investigator, Ohio State University Seed Grant, "Exercise Parameters that Facilitate Recovery of Locomotion and Neuromuscular Plasticity after Spinal Cord Injury in Rats". TDC \$20,000.
- 1998 Co-Investigator, Deborah A. Kegelmeyer, PI, APTA – Geriatric Section, "Fellowship for Geriatric Research Award." TDC \$2,412.
- 1997 Co-Investigator, Bradford T. Stokes, PI, International Spinal Research Trust, "Wound Healing and Functional Recovery in a Mouse Model of Traumatic Spinal Cord Injury." TDC \$283,128.
- 1997 Principal Investigator/Developer, University Technology Services, Instructional Small Grant: An interactive computer program to increase understanding of the nervous system using video, magnetic resonance images and CAT scans. TDC \$1000.
- 1993-1996 Investigator, Michael S. Beattie, PI, Jacqueline C. Bresnahan, PI, American Paralysis Association Grant, "Substrates for Recovery of Locomotor Function after Contusion Injuries of the Spinal Cord." TDC \$108,370.

### **POSTDOCTORAL TRAINEES**

- 2001-2004 Anne Kloos, Ph.D.

### **GRADUATE STUDENT TRAINEES**

- 2000 Ph.D., Karen J. Hutchinson, Assistant Professor, Northeastern University
- 2002 M.S., Michele (Balistrari) Williams
- 2005 M.S., Kristen (Graedke) Smith
- Current Ph.D. student, Megan R. Detloff

### **UNDERGRADUATE HONORS TRAINEES**

- 2005-2006 Sarah Snyder
- 2005 Kristen Gratop
- 2004-2005 Jeff Owdom
- 2003-2005 Chris Meyer

**UNDERGRADUATE HONORS TRAINEES (Continued)**

2002 -2004 Cortney Michalec  
 2001- 2003 Dan Meyer  
 2001 -2002 Elizabeth Lewis  
 1999 -2000 Sarah (Woodruff) Obermiller  
 1997- 1998 Craig Voll, Jr.

**UNDERGRADUATE SROP TRAINEES**

1999 Demarco Speight, Albany State University, Albany, GA  
 1998 Lori Leduff, Xavier University, New Orleans, LA

**HIGH SCHOOL STUDENTS**

2003-2005 Zachary Kloos  
 1996-1999 Kris Newsome  
 1997-1998 Angela Lipscomb

**EDUCATION COURSES TAUGHT**Undergraduate

2000-2001 PT693D 2 quarters, Distance Learning Course in Pathology  
 1998-2000 PT480 Procedures I, 50% responsibility, course director  
 1999-2001 PT693B 2 quarters, Critical Readings in PT, 100% resp., course director  
 1998-2002 AM680 Research Design in Biomedical Sciences, 5% responsibility  
 1998,2000 PT595 Management in PT, 12.5% responsibility

Honors Undergraduate

1998-2002 AM693H Research in PT, 100% responsibility

Graduate

1996-1999 NSC724,725 2 quarters, Structure and Function of Nervous System, 13% resp.  
 1997,1999 PT795 Advanced Evaluation Strategies, 100% responsibility  
 2000 PT730 Advanced Concepts in Neuromotor Control, 17% responsibility  
 1999 AM693 Special Dissection of the Nervous system, 100% responsibility

Professional

2002-2003 PT752 Distance Learning Course in Pathology  
 2001-2004 PT795 3 quarters, Advanced Topics in Research, course coordinator  
 2004 PT795 Clinical Skills, 30% responsibility  
 1996-1999 Med662 2 quarters, Medical Neuroscience, 13% responsibility

Graduate Research

1996-2000 NSC999 Multiple quarters, Research in Neuroscience, 100% responsibility  
 1996-1999 NSC693 Multiple quarters, Individual studies in neuroscience, 100% resp.  
 2002 NSC797 Seminar in Neuroscience

**SERVICE-Profession**

- 2004-2008 COUNCILOR, Neurotrauma Society
- 2005 NIH STUDY SECTION MEMBER, Brain Disorders and Clinical Neuroscience Integrated Review Group (March, October)
- 2004 NIH STUDY SECTION MEMBER, Pharmacology and Diagnostics for Neuropsychiatric disorders/Brain Disorders and Clinical Neuroscience/SBIR
- 2003 SYMPOSIUM CO-ORGANIZER, Evidence Based Practice: A Hands-on seminar for Catching up on CATs. Ohio Physical Therapy Association Fall Conference (October)
- 2002 SYMPOSIUM CO-ORGANIZER, Demystifying Evidence-based practice: A step-by-step, case-based approach in applying these tools to practice. Ohio Physical Therapy Association Fall Conference (October)
- 2002 SYMPOSIUM ORGANIZER, Advances in Spinal Cord Injury Treatment and Research, Ohio Physical Therapy Association 67<sup>th</sup> Annual Conference (March)
- 2001 NIH STUDY SECTION MEMBER, Synaptic Degeneration Review
- 2001, 1997 GRANT REVIEWER, Kentucky Research Foundation  
Christopher Reeve Paralysis Foundation  
Spinal Cord Research Foundation
- 2000 NIH STUDY SECTION MEMBER, Synaptic Degeneration Review
- 1996-  
Present JOURNAL REVIEWER, Experimental Neurology, Journal of Neurotrauma, Physical Therapy, Restorative Neurology and Neuroscience , Neurology Report
- 1997-2001 ELECTION COMMITTEE, Women in Neurotrauma

**SERVICE-University**

- 2004-2006 CHAIR, STUDENT AFFAIRS COMMITTEE, School of Allied Medical Professions, The Ohio State University, Columbus, OH
- 2003-2006 FACULTY COUNCIL ALTERNATE, College of Medicine, The Ohio State University, Columbus, OH
- 2003-2004 CHAIR, CURRICULUM COMMITTEE, School of Allied Medical Professions, The Ohio State University, Columbus, OH
- 2001-2003 DIVERSITY COMMITTEE MEMBER, University Senate, The Ohio State University, Columbus, OH

**SERVICE-University (Continued)**

- 2003 CURRICULUM COMMITTEE, School of Allied Medical professions, The Ohio State University, Columbus, OH
- 2003 AD HOC ACADEMIC MISCONDUCT COMMITTEE, Chair, Division of Physical Therapy, The Ohio State University, Columbus, OH
- 2001 DISCUSSION LEADER, The John Rudolph Book Program, The Ohio State University, Columbus, OH
- 1992-2001 FOUNDING MEMBER, Committee for Minority Recruitment, Neuroscience Training Program and Department of Cell Biology, Neurobiology and Anatomy, The Ohio State University, Columbus, OH.
- 1996-1999, 2001-2002 FACULTY AFFAIRS COMMITTEE, School of Allied Medical Professions, The Ohio State University, Columbus, OH
- 2000-2001 HONORS AND RESEARCH COMMITTEE CHAIR, School of Allied Medical Professions, The Ohio State University, Columbus, OH
- 1998-1999 MENTOR, Medical/Science Research Initiative Program, The Ohio State University, Columbus, OH.
- 1998-1999 MENTOR, Summer Research Opportunities Program, Graduate School, The Ohio State University, Columbus, OH.
- 1998 FACULTY REPRESENTATIVE, Dormstorming for the Honors Center, The Ohio State University, Columbus, OH.

**SERVICE-Community**

- 1997-2000 REPRESENTATIVE, Historically Black Colleges and Universities Campus Visitation – New Orleans, LA., Graduate School, The Ohio State University, Columbus, OH.
- 1996-1999 RESEARCH WORKING GROUP, The OSU National Center for Excellence in Women's Health, Columbus, OH.
- 1994-1996 PRESIDENT, Health Sciences Postdoctoral Fellow Research Association, The Ohio State University, Columbus, OH.
- 2002 JUDGE, Research and Interest Fair, St. Joseph's Montessori School, Columbus, OH
- 2000 CO-DIRECTOR OF COMMUNITY OUTREACH PROGRAM, Workshops for African American Women's Health Across the Lifespan, Columbus, OH

**SERVICE-Community (continued)**

- 2000 COMMUNITY OUTREACH, Young Women in Science and Technology, Columbus, OH
- 1997 JUDGE and KEY NOTE SPEAKER, Science Fair, Mt. Vernon, OH
- 1996 SPECIAL AWARDS JUDGE, Central District Science Fair-Junior High and High School, Columbus Community College, Columbus, OH. (February)
- 1995-1997 PROGRAM DIRECTOR, Minority High School Neuroscience Workshop Series, The Ohio State University, Columbus, OH.
- 1995 CO-ORGANIZER, The Second Multicenter Animal Spinal Cord Injury Study (MASCIS) Behavioral Training Sessions. (February)
- 1994 COURSE DEVELOPMENT, Neuroscience Elective for the Young Scholars Program, The Ohio State University, Columbus, OH. (July)
- 1994 JUDGE, Bennett Society Scientific Presentations, The Ohio State University, Columbus, OH. (April)
- 1993 COORDINATOR AND INSTRUCTOR, Career Exploration Experience for the Young Scholars Program, The Ohio State University, OH. (June)
- 1993 CO-ORGANIZER, Multicenter Animal Spinal Cord Injury Study (MASCIS) Behavioral Training Session. (September)
- 1988 CONFERENCE COORDINATOR, Motor Learning, Teachers College, Columbia University, New York, NY. (June)
- 1987 CONFERENCE COORDINATOR, Skill Learning, Teachers College, Columbia University, New York, NY. (October)
- 1986 CONFERENCE COORDINATOR, Neural Basis of Motor Control, Teachers College, Columbia University, New York, NY. (June)

**INVITED ADDRESSES: International Meetings**

- 2003 “Recovery of Function after Spinal Cord Injury: From Bench to Bedside.” 2<sup>nd</sup> Dutch Endo-Neuro-Psycho Meeting, Dorwerth, Holland. (June)
- 2001 “Recovery of Sensory and Motor Function after Spinal Cord Injury: Harnessing inherent potential through training?” Functional Recovery after Spinal Cord Injury, Ascona, Switzerland. (April)

**INVITED ADDRESSES: International Meetings (continued)**

- 2001 “Development of Behavioral Tests for Spinal Cord Injured Mice: Are mice tiny rats?” Christopher Reeve Paralysis Foundation Consortium Workshop, Chicago, IL. (March)
- 2001 “The Best Outcome Measures for Spinal Cord Injury”. Christopher Reeve Paralysis Foundation Consortium Workshop, Chicago, IL. (March)

**INVITED ADDRESSES: National and State Meetings**

- 2005 “Mouse BMS Locomotor Scale.” National Neurotrauma Society 2005, Washington, DC (November)
- 2002 “Demystifying Evidence-based practice: A step-by-step, case-based approach in applying these tools to practice.” Ohio Physical Therapy Association Fall Conference 2002, Columbus, OH (October)
- 2002 “Cross curricular integration using a research seminar series in concert with clinical application courses to support the development of critical thinking and evidence-based practice.” Faculty Summer Institute: Teaching Evidence-based Practice in Rehabilitation Professional Curriculum, Boston, MA (June)
- 2002 “SCI: Exercise Parameters and Underlying Mechanisms.” Ohio Physical Therapy Association 67<sup>th</sup> Annual Conference, Columbus, OH. (March)
- 2001 “Behavioral testing after spinal cord injury: congruities, complexities and controversies”. Kentucky Spinal Cord and Head Injury Research Trust Symposium, Louisville, KY (June)
- 2000 “Methods in Neurotrauma Research: Are our endpoints the best?”. 18<sup>th</sup> Annual National Neurotrauma Society Meeting, New Orleans, LA. (November)
- 2000 “Response of the CNS to Spinal Cord Injury: Implications for neuromotor control of locomotion and recovery”. Neural Control of Movement 2000: Satellite Meeting on Computational Models. Key West, FL. (April)
- 2000 “Moving from Bench to Bedside: Basic science research, applied research and clinical trials”. Pre-conference Symposium: Recovery of Walking after CNS Insult: Basic research in the control of locomotion as a foundation for developing rehabilitation strategies. Combined Sections Meeting, American Physical Therapy Association, New Orleans, LA. (February)
- 2000 “Journal Symposium: Spinal Cord Injury and Physical Therapy-2000 & Beyond.” The Annual Conference and Exposition of the APTA, Indianapolis, IN. (June)

**INVITED ADDRESSES: University/Biotech Sponsored Seminars**

- 1998 “Activity-Dependent Neuroplasticity Improves Locomotor Recovery after Traumatic Spinal Cord Injury”. NEUROPLASTICITY: Interface of basic and applied sciences in clinical practice. American Physical Therapy Association, Section on Research, 1998 Research Retreat, Newport, RI. (August)
- 2005 “Why Basic Science Matters to Clinicians: My trip from the lab bench to the treadmill.” Department of Physical Therapy, Temple University, Philadelphia, PA (October)
- 2005 “Evaluating Mouse Locomotion after spinal cord injury.” Kentucky Spinal Cord Research Center, University of Louisville, Louisville, KY (June)
- 2004 “Recovery of Function after Spinal Cord Injury: Impact of Neuroanatomical and Muscle Plasticity.” Department of Anatomy, The Ohio State University, Columbus, OH (April)
- 2004 Fundamentals of Evidence Based Practice in PT: Student Requirements for Clinical Experiences. PT Clinical Instructors Annual Meeting, School of Allied Medicine, The Ohio State University, Columbus, OH (February)
- 2003 “Selecting the Best Assessments Quantify Behavioral Recovery after SCI: matching Assessments to Hypotheses.” Biogen, Boston, MA (December)
- 2003 “Using 3-D Kinematics to Measure Recovery of Locomotion after Spinal Cord Injury.” Wittenberg University, Springfield, OH. (November)
- 2003 “Recovery after spinal cord injury: Factors that Bias Outcome and How to Build on Them to Improve Function.” Wittenberg University, Springfield, OH. (November)
- 2003 Brown Bag Seminar Series: Evidence Based Practice for Allied Medical Professions. School of Allied Medical Professions, The Ohio State University, Columbus, OH (October)
- 2003 “Activity Dependent Neuroplasticity and Recovery after Spinal Cord Injury.” Teachers College, Columbia University. New York, NY. (September)
- 2003 “The Substrates of Sensory and Motor Recovery after Spinal Cord Injury.” Psychobiology Seminar Series, Ohio State University, Columbus, OH (March)
- 2002 “Neuroplasticity and Neurorehabilitation after Spinal Cord Injury.” Jewish Hospital Rehabilitation Center, Louisville, KY. (October)

**INVITED ADDRESSES: University/Biotech Sponsored Seminars (continued)**

- 2002 “The Role of Activity Dependent Neuroplasticity in Recovery of Sensory and Motor Function after Spinal Cord Injury”. University of Louisville, Louisville, KY. (February)
- 2001 “Recovery of sensory and motor function after spinal cord injury: The role of neural substrates and activity dependent plasticity”. The Miami Project to Cure Paralysis, University of Miami, Miami, FL (June)
- 2001 “A Basic Science Approach to the Treatment of SCI”. Motor Control Research: Basic Advances and Applications to Rehabilitation, The Ohio State University, Columbus, OH. (April)
- 2001 “Recovery of Function after Spinal Cord Injury: The Role of Neural Substrates and Activity Dependent Plasticity”. Loyola University, Chicago, IL. (March)
- 2000 “Overview of Motor Learning in PT Practice”. Exercise Training and Motor Control: Application to Orthopedic, Neurologic and Pediatric Practice, The Ohio State University, Columbus, OH. (October)
- 2000 “The CNS response to Spinal Cord Injury: Implications for motor recovery”. Department of Physical Therapy, University of Utah, Salt Lake City, UT. (June)
- 2000 “A Basic Science Approach to Treatment of Spinal Cord Injury”. Neuroscience Seminar, University of Utah, Salt Lake City, UT. (June)
- 1999 “Animal Models of Neuroplasticity: Spinal Cord”. Department of Physical Therapy, Seton Hall University, South Orange, NJ. (June)
- 1999 “Three Exercise Programs Differentially Improve Recovery of Locomotion after Spinal Cord Contusion in Rats”. Department of Physical Therapy, Chapman University, Orange, CA. (February)
- 1998 “The Effect of Minimal Neuroanatomical Sparing on Behavioral Recovery after Spinal Cord Injury”. Department of Neurology, University of California, Los Angeles, CA. (March)
- 1998 “The Role of Biomedical Research in Determining Effective Treatment after Spinal Cord Injury”. Department of Physical Therapy, Chapman University, Orange, CA. (March)
- 1997 “Locomotor Correlates of Aging-related Declines in Hindlimb Muscles of Rats”. Department of Physical Activity and Exercise Science Colloquium, The Ohio State University, Columbus, OH. (February)

**INVITED ADDRESSES: University/Biotech Sponsored Seminars (continued)**

- 1996 "Substrates of Recovery after Spinal Cord Injury". Neuroscience Seminar Series, University of Cincinnati Medical Center, Cincinnati, OH. (December)
- 1996 "Designing Effective Behavioral Studies to Understand Components of the Central Nervous System". Neuroscience Seminar Series, OSU, Columbus, OH. (October)
- 1996 "Neuroanatomical Substrates of Recovery after Spinal Cord Injury in Rats." Physiology Seminar Series, Ohio State University, Columbus, OH. (October)
- 1996 "Functional Recovery after Spinal Cord Injury." Physical Medicine and Rehabilitation Grand Rounds, Ohio State University, Columbus, OH. (September)
- 1996 "Neuroscience: Helping Our Minds Grow." Keynote Speaker: Knox County Science Day, Mt. Vernon Nazarene College, Mt. Vernon, OH. (March)
- 1995 "Substrates of Locomotor Recovery Following Spinal Cord Injury." Regeneron Pharmaceuticals, Tarrytown, NY. (December)
- 1995 "Axonal Sparing After Spinal Cord Injury and Its Role in Locomotor Recovery." University of Wisconsin, Department of Kinesiology, Madison, WI. (October)
- 1995 "Neuroanatomical Substrates of Locomotor Recovery After Spinal Cord Injury in Rats." University of Kentucky, Division of Neurosurgery, Lexington, KY. (September)
- 1994 "A New Locomotor Rating Scale for Open Field Testing After Spinal Cord Contusion." Playfair Neuroscience Seminar, The Toronto Hospital, Toronto Western Division, Toronto, Ontario, Canada. (June)
- 1993 "Recovery and Plasticity After Spinal Cord Injury." Helix Biology Honors Society, The Ohio State University, Columbus, OH. (November)
- 1992 "Three Dimensional Kinematic Analysis of Locomotor Recovery in Cats." Spinal Cord Injury Research Center, The Ohio State University, Columbus, OH. (March)
- 1992 "Differential Locomotor Recovery After Spinal Cord Hemisection in Cats." The Miami Project to Cure Paralysis, University of Miami, Miami, FL. (February)

**PUBLICATIONS**

Basso DM, Fisher LC, Anderson AJ, Jakeman LB, McTigue DM, Popovich PG (2005) The Basso Mouse Scale for Locomotion (BMS) Detects Differences in Recovery After Spinal Cord Injury in Five Common Mouse Strains. J Neurotrauma, (submitted)

**PUBLICATIONS (continued)**

- Williams M and Basso DM (2005) The Effect of Heterogeneity by Profession on Group Effectiveness and Perceptions of Occupational and Physical Therapy Students. Physical Therapy, (submitted)
- Dobkin BH, Apple D, Barbeau H, Basso DM, Behrman A, Deforge D, Ditunno J, Dudley G, Elashoff R, Fugate L, Harkema S, Saulino M, Scott M (2005) Randomized Trial of Weight-Supported Treadmill vs Conventional Training for Walking after Incomplete SCI. Neurology, (submitted)
- Kloos AD, Fisher LC, Detloff MR, Hassenzahl DL, Basso DM (2005) Stepwise Motor and All-or-None Sensory Recovery is Associated with Non-Linear Sparing After Incremental Spinal Cord Injury in Rats. Experimental Neurology, 191:251-265
- Engesser-Cesar C, Anderson AJ, Basso DM, Edgerton VR, Cotman CW (2005) Voluntary Wheel Running Improves Recovery from a Moderate Spinal Cord Injury. J Neurotrauma, 22:157-171.
- Hutchinson KJ, Gomez-Pinilla F, Crowe MJ, Ying Z, Basso DM (2004) Three Exercise Paradigms Differentially Improve Sensory Recovery after Spinal Cord Contusion in Rats. Brain, 127:1403-1414.
- Basso DM (2004) Behavioral testing after Spinal Cord Injury: congruities, complexities and controversies. J Neurotrauma, 21:395-404.
- Jones TB, Ankeny DP, Guan Z, McGaughy V, Fisher LC, Basso DM, Popovich PG (2004) Passive or Active Immunization with Myelin Basic Protein Impairs Neurological Function and Exacerbates Neuropathology after Spinal Cord Injury in Rats. J Neuroscience, 24: 3752-3761.
- Dobkin BH, Apple D, Barbeau H, Basso DM, Behrman A, Deforge D, Ditunno J, Dudley G, Elashoff R, Fugate L, Harkema S, Saulino M, Scott M (2003) Methods for a randomized trial of weight-supported treadmill training versus conventional training for walking during inpatient rehabilitation after incomplete traumatic spinal cord injury. Neurorehab & Neural Repair, 17:153-167.
- Heiss DG and Basso DM (2003) Improvements in students' confidence in their ability to interpret and apply research to clinical practice after participating in a mock trial. Journal of Allied Health 32:202-210.
- Popovich PG, Guan Z, McGaughy V, Fisher L, Hickey WF, Basso DM (2002) The neuropathological and behavioral consequences of intraspinal microglial/macrophage activation. J Neuropath Exp Neur 61:623-633.

**PUBLICATIONS (continued)**

- Basso DM, Beattie MS, Bresnahan JC. (2002) Descending systems contributing to locomotor recovery after mild or moderate spinal cord injury in rats. Restorative Neurology and Neuroscience 20:189-218.
- Jones TB, Basso DM, McCallum B, Lee S, Whitacre CC, Popovich PG. (2002) Pathological central nervous system autoimmune disease is triggered by traumatic spinal cord injury. J Neurosci, 22:2690-2700.
- Ma M, Basso DM, Walters P, Stokes BT, Jakeman LB. (2001) Behavioral and histological outcomes following graded spinal cord contusion injury in the C57Bl/6 mouse. Experimental Neurology, 169:239-254.
- Hutchinson KJ, Linderman JK, Basso DM. (2001) Time course of skeletal muscle adaptations to spinal cord contusion injury in rat: Relationship to locomotor function. Journal of Neurotrauma, 18:1075-1089.
- Basso DM. (2000) Neuroanatomical substrates of functional recovery after experimental spinal cord injury: Implications of basic science research for human spinal cord injury. Physical Therapy, 80:808-817.
- Basso DM, Behrman AL, Harkema SJ. (2000) Recovery of walking after central nervous system insult: Basic research in the control of locomotion as a foundation for developing rehabilitation strategies. Neurology Report, 24:47-54.
- Wang XM, Basso DM, Terman JR, Bresnahan JC, Martin GF. (1998) Adult opossums (*Didelphis virginiana*) demonstrate near normal locomotion after spinal cord transection as neonates. Experimental Neurology, 151:50-69.
- Basso DM. (1998) Neuroplasticity of descending and segmental systems after spinal cord contusion. Neurology Report, 22:48-53.
- Basso DM, Beattie MS, Bresnahan JC. (1996) Graded histological and locomotor outcomes after spinal cord contusion using the NYU weight-drop device versus transection. Experimental Neurology, 139:244-256.
- Basso DM, Beattie MS, Bresnahan JC, Anderson DK, Faden AI, Gruner JA, Holford TR, Hsu CY, Noble LJ, Nockels R, Perot PL, Salzman SK, Young W. (1996) MASCIS evaluation of open field locomotor scores: Effects of experience and teamwork on reliability. Journal of Neurotrauma, 13:343-359.
- Basso DM, Beattie MS, Bresnahan JC. (1995) A sensitive and reliable locomotor rating scale for open field testing in rats. Journal of Neurotrauma, 12:1-21.

### **PUBLICATIONS (continued)**

Basso DM, Murray M, Goldberger ME. (1994) Differential recovery of bipedal and overground locomotion following complete spinal cord hemisection in cats. Restorative Neurology and Neuroscience, 7:95-110.

Bresnahan JC, Beattie MS, Berhmann DL, Basso DM. (1994) Pharmacologic enhancement of recovery of function after spinal cord injury. Activity-dependent plasticity: Enhancing recovery after spinal cord injury. APA Conference Proceedings, pp 273-276.

Basso DM. (1991) Central, peripheral and behavioral consequences of sensorimotor cortex lesions in adult rats. Dissertation Manuscript, Teachers College, Columbia University.

Slavin MD, Held JM, Basso DM, Lesensky S, Curran E, Gentile AM, Stein DG. (1988) Fetal brain tissue transplants and recovery of locomotion following damage to sensorimotor cortex in rats. In: Progress in Brain Research: Transplantation into the Mammalian CNS, J Sladek (ed.), 78: 33-40.

Basso DM, Knapp L. (1987) Comparison of two continuous passive motion protocols for patients with total knee implants. Physical Therapy, 67: 360-363.

### **PUBLICATIONS: ABSTRACTS**

Mctigue DM, Barbe MF, Lash LC, Basso DM (2005) Treadmill training improves locomotor recovery after moderate spinal cord injury in rats. Society for Neuroscience, 35:Program Number 105.2 (CD-ROM).

Detloff MR, Lavik E, Fisher LC, Langer R, Basso DM (2005) Polyethylene glycol administration after moderate spinal cord injury decreases lesion size and improves locomotor recovery. Society for Neuroscience, 35:Program Number 672.6 (CD-ROM).

Detloff MR, Fisher LC, Kloos ZA, Kloos AD, Miller EL, McGaughy V, Popovich PG, Basso DM (2004) Neuropathic pain after spinal cord injury and its relationship to glia and ATP receptor upregulation. Society for Neuroscience, 34:Program Number 458.5 (CD-ROM).

Detloff MR, Fisher LC, Kloos ZA, Kloos AD, Miller EL, McGaughy V, Popovich PG, Basso DM (2004) Neuropathic pain after spinal cord injury and its relationship to glia and ATP receptor upregulation. JNeurotrauma, 21:1276.

Kloos AD, Fisher LC, Hassenzahl DL, Myer DM, Detloff MR, Basso DM (2003) Thresholds of motor and sensory recovery after incremental spinal cord injury in rats. J Neuro PT 27:189.

Basso DM and Fisher LF (2003) The Basso Mouse Scale for Locomotion (BMS) is a More Sensitive Indicator of Recovery than the BBB Scale in Mice with Spinal Cord Injury. J Rehab Research Devel 40 (supplement 3): 26.

**PUBLICATIONS: ABSTRACTS (continued)**

- Jakeman LB, McTigue DM, Lucin K, Basso DM (2003) Mice with L1-CAM deletion have deficits in hindlimb locomotor function: behavioral and histological comparisons with mild contusion injury to the mid-thoracic spinal cord. . *J Rehab Research Devel* 40 (supplement 3): 26.
- Basso DM and Fisher LF (2003) The Basso Mouse Scale for Locomotion (BMS) is a More Sensitive Indicator of Recovery than the BBB Scale in Mice with Spinal Cord Injury. *Society for Neuroscience*,33:Program Number 76.13 (CD-ROM).
- Kloos AD, Fisher LC, Hassenzahl DL, Myer DM, Detloff MR, Basso DM (2003) Thresholds of motor and sensory recovery after incremental spinal cord injury in rats and the critical descending systems that support them. *Society for Neuroscience*,33 :Program Number 498.4 (CD-ROM).
- Jakeman LB, McTigue DM, Lucin K, Basso DM (2003) Mice with L1-CAM deletion have deficits in hindlimb locomotor function: behavioral and histological comparisons with mild contusion injury to the mid-thoracic spinal cord. *Society for Neuroscience*, 33: Program Number 745.19 (CD-ROM).
- Jones TB, Basso DM, Fisher LC, Popovich PG (2003) Expansion of myelin-reactive T-cells via passive or active immunization impairs motor function and exacerbates neurodegeneration in a model of rat spinal cord injury. *Society for Neuroscience*, 33: Program Number 954.3 (CD-ROM).
- Hassenzahl DL, Fisher LC, Popovich PG, Basso DM (2002) Inherent locomotor differences in mouse strains impact recovery after spinal cord injury. *J Neurotrauma*, 19: 1316.
- Lewis E, Fisher LC, McGaughy V, Hassenzahl DL, Popovich, Basso DM (2002) Ventral Funiculus lesions of the spinal cord produce lasting sensory but not motor deficits. *J Neurotrauma*, 19: 1317.
- Heiss DG, Basso DM (2002) Improvements in students confidence in their ability to interpret and apply research to clinical practice after participating in a mock trial to foster evidence-based practice. <http://www.ptjournal.org/abstracts/pt2002/abstractsPt2002.cfm?pubNo=PO-RR-32-TH>
- Gomez-Pinilla F, Ying Z, Hutchinson KJ, Crowe MJ, Basso DM. (2001) Differential expression of neurotrophins and functional recovery associated with specific types of exercise in spinal cord injured rats. *Society for Neuroscience*,27:Program Number 829.1 (CD-ROM).
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**AUDIO-VISUAL PRODUCTION**

Basso DM (2003) DVD: Basso Mouse Scale for Locomotion

Basso DM. (1994) Video Tape: Assessing open field locomotion in rats using the Basso, Beattie, Bresnahan Locomotor Rating Scale.

**LICENSES, PROFESSIONAL MEMBERSHIPS**

Member, Society for Neuroscience

Member, American Physical Therapy Association

Member, Neurology Section

Member, Research Section

Member, Women in Neurotrauma

Member, Neurotrauma Society

Member, American Association for Advancement of Science

Current Physical Therapy Licensure: Ohio

Past Physical Therapy Licensure: Utah, Vermont, New York, Pennsylvania