

# Kristan A. Leech

Email: k-leech@northwestern.edu • Phone: 312-238-6538

January 10, 2013

## CURRENT POSITIONS

Graduate Student, Interdepartmental Neuroscience Program, Northwestern University, Chicago, IL

## EDUCATION

Northwestern University	PhD	Neuroscience	Expected: May 2015
University of Illinois at Chicago	DPT	Physical Therapy	May 2010
University of Arizona	BS	Physiology, Chemistry	May 2007

## PROFESSIONAL LICENSE

Physical Therapist, State of Illinois, IDPR, Division of Professional Regulation

License Number: 070017896

## RESEARCH EXPERIENCE

*Northwestern University: Sensory Motor Performance Program* April 2011-present

- Graduate student under advisement of Dr. George Hornby

*Northwestern University: Dept. of Physical Therapy & Human Movement Sciences* January 2011-March 2011

- Laboratory rotation with Dr. Colum MacKinnon
- Participated in the conduction of research relating to effects of transcranial direct current stimulation to the supplementary motor area on the excitability of the primary motor cortex

*Northwestern University: Department of Physiology* September 2010-December 2010

- Lab rotation with Dr. Matthew Tresch
- Participated in the conduction of research relating to motor and behavioral effects of pharmacological enhancement of residual serotonin following SCI in mice

*University of Illinois at Chicago: Department of Physical Therapy* August 2007-Present

- Research Aide in the Locomotor Recovery Laboratory with Dr. George Hornby
- Participated in the conduction of research relating to the effectiveness of physical therapy interventions in people with stroke and spinal cord injuries

*University of Arizona: Department of Physiology* August 2006 – December 2006

- Research Aide in the Farley Laboratory with Dr. Becky Farley
- Participated in the performance of research examining the effects of intensive whole body (speech and limb) amplitude training to improve handwriting in people with Parkinson's disease

## CLINICAL EXPERIENCE

*Rehabilitation Institute of Chicago: Physical Therapist* June 2010-September 2010

- Inpatient rehabilitation setting: patients with a wide variety of neurological, integumentary, orthopedic, cardiopulmonary conditions, complex medical diagnoses, and comorbidities
- Majority of treatment performed with patients with spinal cord injury or stroke

*Rush University Medical Center: Physical Therapy Intern* January 2010-March 2010

- Inpatient rehabilitation setting: patients with a wide variety of neurological, integumentary, orthopedic, cardiopulmonary conditions, complex medical diagnoses, and comorbidities

*John H. Stroger Jr. Hospital of Cook County: Physical Therapy Intern* August 2009-November 2009

- Acute care setting: primarily trained in intensive care units including neurological, burn, and trauma

*Cary Physical Therapy: Physical Therapy Intern* May 2009-August 2009

- Outpatient setting: treated patients with primarily orthopedic conditions

## TEACHING EXPERIENCE

*Northwestern University: Interdepartmental Neuroscience Program* January 2012-March 2012

- NUIN 440 – Advanced Neuroanatomy (25 students)
- Teaching Assistant
- Individualized training in brainstem dissection with Dr. Randolph Perkins

*Northwestern University: Dept. of Physical Therapy & Human Movement Sciences* September 2011-December 2011

- NUPT 513-2 – Neuroscience II (75 students)
- Teaching Assistant and Guest Lecturer on supraspinal mechanisms of locomotion

*University of Illinois at Chicago: Department of Physical Therapy* April 2009 – April 2011

- Physical Therapy 605 - Plasticity of Tissues and Organ Systems (52 students)
- Guest Lecturer on exercise physiology

## PROFESSIONAL ACTIVITIES

*Northwestern University: Dept. of Physical Therapy & Human Movement Sciences* January 2011 - Present

- Student Tutor: Neuroscience II and Physiology

*University of Illinois at Chicago: Department of Physical Therapy* August 2007 – August 2010

- Class President: Class of 2010
- Student Tutor: Human Physiology, Plasticity of Tissue and Organ Systems

*Susan G Komen Breast Cancer Three Day: Sports Medicine Crew Captain* August 2008-2011

- Facilitated a partnership between the Susan G Komen Three Day and the UIC Department of Physical Therapy, recruited and prepared 35 volunteers
- Treated event participants as a supervised student physical therapist (2008-2009)
- Supervised physical therapy students (2010-2011)

## HONORS AND AWARDS

Chicago Biomedical Consortium Scholar	2012
Promotion of Doctoral Studies Scholarship – I, Foundation for Physical Therapy	2012-2013
Barnes-Leahy Award, Foundation for Physical Therapy	2012
Florence P Kendall Doctoral Scholarship, Foundation for Physical Therapy	2010-2011
College of Applied Health Sciences Achievement Award, University of Illinois at Chicago	2010
Donna K Roach Award, University of Illinois at Chicago	2009

## PROFESSIONAL MEMBERSHIPS

American Physical Therapy Association, Neurology and Research Section member 2007-Present

## **PUBLICATIONS**

- Saraf P, Rafferty MR, Kahn JH, Moore JL, Hendron K, **Leech K**, Hornby TG. Daily stepping in individuals with incomplete spinal cord injury. *Phys Ther*. Feb 2010.
- Straube D, **Leech K**, Moore J, Lewek M, Hornby TG. Psychometric analysis of the Berg Balance Scale in individuals with subacute and chronic stroke. (in press: *J Neurol Phys Ther*)

## **PRESENTATIONS**

- Straube D, **Leech K**, Hornby TG. Psychometric Analysis of the Berg Balance Scale in an Ambulatory Population with Subacute and Chronic Stroke. *Physical Therapy Combined Sections Meeting*. San Diego, CA. Feb 2010.
- Leech, K.A.**, Thompson, C.K., Kinnaird, C., Hornby, T.G. Effects of serotonergic agents on locomotor performance in individuals with motor incomplete spinal cord injury. Movement and Rehabilitation Sciences Training Day, Northwestern University, September 2012, Chicago, IL.
- Leech, K.A.** and Hornby T.G. Blood, Spit, and Tears: the search for biomarkers of neuroplasticity. Neurohike 2012, University of Calgary, September 2012, Calgary, AB, Canada.

## **ABSTRACTS**

- Leech, K.A.**, Thompson, C.K., Kinnaird, C., Hornby, T.G. Effects of serotonergic agents on locomotor performance in individuals with motor incomplete spinal cord injury. Combined Sections Meeting of the American Physical Therapy Association, January 2013, San Diego, CA. *Accepted*.
- Leddy A.L., **Leech K.A.**, Matsubara J., Pasquinell K., Holleran C., Hornby, T.G. Changes in cardiopulmonary efficiency and gait economy following 8-weeks of high intensity locomotor speed and skill training in individuals post-stroke. Combined Sections Meeting of the American Physical Therapy Association, January 2013, San Diego, CA. *Accepted*.