

CURRICULUM VITAE

Kathryn A. Harman, Ph. D.

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CURRENT POSITIONS

- Clinical Graduate Program Director, Exercise Physiology Graduate Program** **May 2019**
Department of Health and Sport Sciences, University Louisville, Louisville, KY
- Clinical Assistant Professor, Exercise Physiology Undergraduate Program** **January 2017**
Department of Health and Sport Sciences, University Louisville, Louisville, KY
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EDUCATION

- University of Louisville, School of Medicine, Louisville, KY*
Ph.D. Anatomical Sciences and Neurobiology **2013 - 2016**
- University of Louisville, School of Medicine, Louisville, KY*
M.S. Anatomical Sciences and Neurobiology **2010 - 2013**
- University of Louisville, Louisville, KY*
B.S. Psychology with a Minor in Biology **2004 - 2009**
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RESEARCH

- University of Louisville, Kentucky Spinal Cord Injury Research Center** **2018-present**
Projects: *Evaluating the effects of restricted activity, exercise, and clinically-relevant rehabilitation techniques on cardiovascular, sensory, and locomotor function following experimental spinal cord injury in rodents.*
- University of Louisville, Department of Anatomical Sciences & Neurobiology** **2010-2016**
Ph.D. Dissertation Research
Advisor: Dr. David S.K. Magnuson
Dissertation: *Evaluating cardiovascular dysfunction during increased activity and exercise rehabilitation following incomplete thoracic spinal cord injury in the adult rat.*
- University of British Columbia, International Collaboration on Repair Discoveries** **2015**
ICORD Scholarship for International Trainees
Advisors: Drs. Andrei Krassioukov and Christopher West
Title: *The effects of active and passive exercise training on cardiovascular dysfunction following incomplete spinal cord injury.*
- University of Louisville, Department of Neurological Surgery** **2011**
Predoctoral Training
Advisor: Dr. Alexander Ovechkin
Project: *Implementation of neurophysiology methods to examine cardiovascular and pulmonary disorders following clinical spinal cord injury.*

Undergraduate Research Program

Advisor: Dr. Cynthia Corbitt

Project: *Exploratory study on the timing of multiple sclerosis symptoms.*

 TEACHING EXPERIENCE AND TRAINING

Clinical Assistant Professor, Department of Health & Sport Sciences	2017 - Present
University of Louisville, College of Education & Human Development	
Courses: Biomechanics; Anatomy & Physiology; Anatomy & Physiology Laboratories I and II	
Medical Case Presentation Evaluator, Department of Anatomical Sciences & Neurobiology	2015 - 2016
University of Louisville, School of Medicine	
Courses: Medical Neuro Anatomy; Medical Neural Systems	
Instructor, Department of Health & Sport Sciences	2014 - 2016
University of Louisville, College of Education & Human Development	
Course: Biomechanics	
Graduate Teaching Assistant, Department of Anatomical Sciences & Neurobiology	2012 - 2016
University of Louisville, School of Medicine	
Courses: Medical Neural Anatomy; Medical Neural Systems	
Medical Student Tutor, Department of Anatomical Sciences & Neurobiology	2012 - 2014
University of Louisville, School of Medicine	
Course: Medial Neuro Anatomy (individual & small group sessions)	
Guest Instructor, Department of Anatomical Sciences & Neurobiology	2014
University of Louisville, School of Medicine	
Course: Medical Gross Anatomy (Head & Neck Anatomy)	
Graduate Teaching Academy	2012 - 2013
University of Louisville, Delphi Center for Teaching & Learning	
Graduate Teaching Micro Teaching Sessions & Evaluation	2013
University of Louisville, Delphi Center for Teaching & Learning	
Title: <i>Lower Respiratory System Development</i>	

 SELECTED SCIENTIFIC PUBLICATIONS & PROFESSIONAL ABSTRACTS

- Chariker JH, Gomes C, Brabazon F, **Harman KA**, Saraswat Ohri S, Magnuson DSK, Whittemore SR, Petruska J, Rouchka E (2019). Transcriptome of dorsal root ganglia caudal to spinal cord injury with modulated behavioral activity. *Scientific Data* (in print).
- Chariker JH, Saraswat Ohri S, Gomes C, Brabazon F, **Harman KA**, DeVea KM, Magnuson DSK, Hetman M, Petruska J, Whittemore SR, Rouchka E (2019). Activity/exercise-induced changes in the liver transcriptome after chronic spinal cord injury. *Scientific Data* (in print).
- Harman KA**, States G, Wade A, Stepp C, Wainwright G, DeVea KM, King K, Shum-Sui A, Magnuson DSK (2018). Temporal analysis of cardiovascular control and function following incomplete T3 and T10 spinal cord injury in rodents. *Physiol Rep*, 6(6), e13634. doi:10.14814/phy2.13634
- DeVea KM, **Harman KA**, Squair JW, Krassioukov AV, Magnuson DSK, West CR (2017). A comparison of passive hind-limb cycling and active upper limb exercise provides new insights into systolic dysfunction following spinal cord injury. *Am J Physiol Heart Circ Physiol*, ajpheart.00046.02017. doi:10.1152/ajpheart.00046.2017

Squair JW, DeVeau KM, **Harman KA**, Poormasjedi-Meibod MS, Hayes B, Liu, J, Magnuson DSK, Krassioukov AV, West, CR (2017). Spinal cord injury causes systolic dysfunction and cardiomyocyte atrophy. *J Neurotrauma*. doi:10.1089/neu.2017.4984

Harman KA, DeVeau KM, Squair JW, West CR, Magnuson DSK, Krassioukov AV (2016). Autonomic dysreflexia persists following acutely rehabilitation in rats with incomplete contusive spinal cord injury. *The FASEB Journal*, 30(1 Supplement), 731.738.

West CR, DeVeau KM, **Harman KA**, Squair JW, Magnuson DSK, Krassioukov AV (2016). Left-ventricular pressure and volume responses to active- and passive-exercise training following experimental spinal cord injury. *The FASEB Journal*, 30(1 Supplement), 1239.1236.

Harman KA, Stepp CA, States GJ, Shum-Sui A, Aslan SC, Magnuson DSK (2013). Temporal changes in the “silent” cardiovascular dysfunction that ensues post spinal cord injury. Abstracts from The 31st Annual National Neurotrauma Symposium. August 4-7, 2013 Nashville, TN (2013). *J Neurotrauma* 30(15), A-1-183. doi:10.1089/neu.2013.9938.

RESEARCH FUNDING

Co-Investigator: Stretching after Spinal Cord Injury: Preparing for Translation (2018–2021). Funding Source: Department of Defense SCIRP IIRA (funded: \$763,000).

Principle Investigator: Effects of RNA Editing on the Recovery of Function following Spinal Cord Injury (2018). Funding Source: Helmsley Restorative Medicine Center (not funded).

Co-Principle Investigator: Effects of Passive vs. Active Exercise Training on Cardiovascular Structure and Function following Experimental Spinal Cord Injury (2015) Funding Source: *International Collaboration for Repair Discoveries* (iCORD) International Trainee Scholarship (funded: \$10,000).

PROFESSIONAL MEMBERSHIPS & COMMUNITY OUTREACH

American Physiological Society	2018
Instructor at Floyd Knobbs Elementary during <i>Understanding Physiology Week</i>	
Society for Neuroscience, Member	2011 – Present
National Neurotrauma Society, Member	2011 – Present
Conference Abstract Reviewer; Journal Article Reviewer	
Society for Women in Neurotrauma Research, Member	2011 – Present
Louisville Chapter of the Society for Neuroscience	2015 – Present
Instructor & Organizer for <i>Brain Awareness Week</i> at the Kentucky Science Center;	
Instructor & Organizer for <i>Nanodays</i> at the Kentucky Science Center	

AWARDS AND HONORS

Top 5 Faculty Favorite Award	2018
University of Louisville, Louisville, KY	
Faculty Favorite Nominee	2017
University of Louisville, Louisville, KY	
ICORD Scholarship for International Trainees	2015
University of British Columbia, Vancouver, Canada	
Friends for Michael Foundation Scholar	2014 - 2015
University of Louisville, Louisville, KY	

RECENT PRESENTATIONS

National Neurotrauma Society Research Symposium Toronto, CAD (August 11-16) Title: <i>Cardiac Fibrosis after SCI: Effects of injury level, severity, and restricted activity (poster)</i>	2018
National Neurotrauma Society Research Symposium Lexington, KY (June 26-29) Title: <i>Autonomic dysreflexia persists following acute rehabilitation in rats with incomplete SCI (poster)</i>	2016
Experimental Biology Research Symposium San Diego, CA (April 2-7) Title: <i>Left-ventricular pressure and volume responses to active- and passive-exercise training following experimental spinal cord injury (poster)</i>	2016
Experimental Biology Research Symposium San Diego, CA (April 2-7) Title: <i>Autonomic dysreflexia persists following acute rehabilitation in rats with incomplete SCI (poster)</i>	2016
Kentucky Spinal Cord Injury Research Center Seminar Series University of Louisville, Department of Neurosurgery Title: <i>Effects of exercise & exercise training on cardiovascular function following incomplete SCI in adult rats</i>	2016
International Collaboration for Repair Discoveries Trainee Symposium Vancouver, CAD (June 12) Title: <i>Cardiovascular collapse following T10 spinal cord contusion (poster)</i>	2015
Kentucky Spinal Cord and Head Injury Research Trust Symposium Louisville, KY (May 21) Title: <i>Cardiovascular responses to an active exercise challenge following acute spinal cord injury (poster)</i>	2015
ISCoS and ASIA Joint Scientific Meeting Montreal, CAD (May 14-17) Title: <i>Cardiovascular responses to an active exercise challenge following acute spinal cord injury (poster)</i>	2015
26th Annual Neuroscience Day Symposium Louisville, KY (Feb 23) Title: <i>A novel continuous pool for investigating cardiovascular dysfunction in spinal cord injured rodents (poster)</i>	2015
Kentucky Spinal Cord Injury Research Center Journal Club Series University of Louisville, Department of Neurosurgery Title: <i>Topological data analysis for discovery in preclinical spinal cord injury and traumatic brain injury</i>	2015
Kentucky Spinal Cord Injury Research Center Seminar Series University of Louisville, Department of Neurosurgery Title: <i>Cardiovascular dysfunction following T10 contusion injury</i>	2015
Research! Louisville Symposium Louisville, KY (Oct 27-30) Title: <i>Using high resolution ultrasound to assess cardiovascular function post spinal cord injury (poster)</i>	2015

- Kentucky Spinal Cord Injury Research Center Seminar Series** **2014**
University of Louisville, Department of Neurosurgery
Title: *Assessing cardiovascular function using exercise: Challenges & triumphs*
- International Symposium on Neural Regeneration** **2013**
Pacific Grove, CA
Title: *Exposing latent cardiovascular dysfunction using exercise challenge*
- National Neurotrauma Society Symposium** **2013**
Nashville, TN
Title: *Temporal changes in the "silent" cardiovascular dysfunction that ensues post spinal cord injury*