

Dr. Angela Ridgel, Ph.D

Associate Professor

HS

aridgel@kent.edu

Education

Ph.D., Biomedical Sciences Marshall University	2000
M.S., Biology Villanova University	1995
B.S., Biology The College of William and Mary	1992

Higher Education Work Experience

Graduate Faculty Kent State University <i>School of Biomedical Sciences</i>	7/2010 - present
Assistant Professor Kent State University <i>Dept. of Exercise Physiology</i>	08/2008 - present
Post-doctoral Fellow Cleveland Clinic <i>Dept. of Biomedical Engineering</i>	03/2006 - 03/2008
Research Associate Case Western Reserve University <i>Dept. of Biology</i>	04/2004 - 03/2006
Post-doctoral Fellow Case Western Reserve University <i>Dept. of Biology</i>	01/2001 - 03/2004

Other Professional Experience

Multisport Editor

2/2008 - 12/2011

Ohio Sports and Fitness Magazine

Editor and writer of multisport section of local sports magazine

Publications

Ridgel, A.L., Peacock, C, Fickes-Ryan, E.J., Wilson, K.A., Glickman, E.J., Gunstad, J. (In revision). Multidimensional exercise intervention improves cognitive function in older adults and individuals with Parkinson's disease. 2014

Publication: *Journal Articles, Refereed*

Ridgel, A. L., Fickes-Ryan, E. J., & Wilson, K. A. (2013). Effects of active-assisted cycling on motor function and balance in Parkinson's disease. *Journal of the Neurological Sciences*, 333, Supplement 1(0), e91. 2013

Publication: *Conference Proceedings, Refereed*

Peacock, CA, Wilson, KA, Sanders, GJ, Corbett, DB, Fickes EJ, Glickman EL, Ridgel, AL. 2013 Parkinson's disease patients tolerate multifaceted exercise intervention while improving health-related physical fitness. *Medicine and science in sports*. 2013

Publication: *Conference Proceedings, Refereed*

Wilson, KA, Phillips, RS, Abdar, HM, Discenzo, FM., Loparo, KA, Ridgel, AL. 2013 Dynamic Cycling Promotes Upper Extremity Motor Improvements in Parkinson's disease. *Medicine and science in sports*. 2013

Publication: *Conference Proceedings, Refereed*

Phillips, RS, Wilson, KA, Ridgel, AL. 2013 Individuals with Parkinson's disease Show Improved Timed Up and Go and 6-min Walk Test Scores After Dynamic Cycling. *American Medicine and science in sports*. 2013

Publication: *Conference Proceedings, Refereed*

Pollock, BS, Burns, KJ, Ridgel, AL, McDaniel, J. 2013. Vascular Function in Parkinson's disease Patients. *Medicine and science in sports*. 2013

Publication: *Conference Proceedings, Refereed*

Burns KJ, Pollock, BS, Ridgel, AL, McDaniel, J. Hemodynamic And Vascular Responses To Handgrip Exercise In Parkinson's Disease. *Medicine and science in sports*. 2013

Publication: *Conference Proceedings, Refereed*

Peroutky, K, Pollock, BS, Burns KJ, McDaniel, J., Ridgel, AL. 2013. Validity of Handgrip Exercise to Study Vascular Function in Parkinson's disease. *Medicine and science in sports*. 2013

Publication: *Conference Proceedings, Refereed*

- Ridgel, A.L., Narducci, E., Corbett, D.B (2013). Effects of repeated bouts of segmental vibration therapy on balance in Parkinson's disease.*International Journal of Physical Medicine & Rehabilitation*.1(1): Open Access. 2013
Publication: *Journal Articles, Refereed*
- Peacock,C.A., Sanders,G.J., Wilson, K.A., Fickes-Ryan, E.J., Corbett D.B., Ridgel, A.L. (2013). Introducing a multifaceted exercise intervention particular to older adults diagnosed with Parkinson's disease: A preliminary study.*Aging and Clinical Experimental Research*. Dec 18. [Epub ahead of print] 2013
Publication: *Journal Articles, Refereed*
- Ridgel, A.L., Abdar, H.M., Alberts, J.L., Discenzo, F.M., Loparo, K.A. (2013) Correlation of motor skill changes with variability in cadence during forced and voluntary cycling in individuals with Parkinson's disease.*IEEE Transactions on Neural Systems and Rehabilitation Engineering*, 1(3): 481 - 489 2013
Publication: *Journal Articles, Refereed*
- Corbett, D.B, Peer, K.S., Ridgel, A.L. (2013). Biomechanical muscle stimulation and active-assisted cycling improves active range of motion in individuals with Parkinson's disease,*Neurorehabilitation Neurorehabilitation*33(2):313-22. doi: 10.3233/NRE-130961. 2013
Publication: *Journal Articles, Refereed*
- Ridgel, A.L., Peacock, C.A.,Fickes, E.J. Kim, C-H. (2012) Active-assisted cycling improves tremor and bradykinesia in Parkinson's disease. *Archives of Physical Medicine and Rehabilitation*. 93: 2049-2054. 2012
Publication: *Journal Articles, Refereed*
- Ridgel, A.L., Kim, C-H, Fickes, E.J., Muller, M.D. & Alberts, J.L. (2011) Changes in executive function after acute bouts of passive cycling in Parkinson's patients. *Journal of Aging and Physical Activity*. 19:87-98. 2011
Publication: *Journal Articles, Refereed*
- Ridgel, AL; Muller, MD, Kim, C-H, Fickes, EJ; Mera, TO. (2011). Acute effects of passive leg cycling on upper extremity tremor and bradykinesia in Parkinson's disease. *The Physician and Sports Medicine*. 39(3). 83-93. 2011
Publication: *Journal Articles, Refereed*
- Ridgel, A.L., Thota, A., Vitek, J.L. and J.L. Alberts. (2009). Forced, not voluntary, exercise improves motor function in Parkinson's disease patients". *Neurorehabilitation and Neural Repair*.23(6), 600-608 23(6), 600-608 2009
Publication: *Journal Articles, Refereed*
- Rosenstein, L., Ridgel, A.L., Thota, A., Samame, B., and J.L. Alberts. (2008). The effects of combined robotic therapy and repetitive task practice on upper extremity function of a chronic stroke patient. *American Journal of Occupational Therapy*. 62(1):28-35 2008
Publication: *Journal Articles, Refereed*
- Ritzmann, R.E., A.L. Ridgel and A.J. Pollack (2008). Multi-unit recording of antennal sensitive units in the central body complex of the cockroach, *Blaberus discoidalis*. *Journal of Comparative Physiology A*. 194(4):341-360 2008
Publication: *Journal Articles, Refereed*

- Ridgel, A.L. , B.E. Alexander and R.E. Ritzmann. (2007). Descending control of turning behavior in the cockroach, *Blaberus discoidalis*. *Journal of Comparative Physiology A* 193:385-402 2007
Publication: *Journal Articles, Refereed*
- Ridgel, A.L. and R.E. Ritzmann (2005). Effects of neck and circumoesophageal connective lesions on posture and locomotion in the cockroach. *Journal of Comparative Physiology A* 191(6):559-573 2005
Publication: *Journal Articles, Refereed*
- Ritzmann, R.E., A.J. Pollack, J. Archinal, A.L. Ridgel and R.D. Quinn. (2005). Descending control of body attitude in the cockroach, *Blaberus discoidalis*, and its role in inclined climbing. *Journal of Comparative Physiology A* 191(3):253-264 2005
Publication: *Journal Articles, Refereed*
- Ridgel, A.L. and R.E. Ritzmann. (2005) Insights into age-related locomotor declines from studies of insects. *Ageing Research Reviews* 4(1): 23-39. 2005
Publication: *Reviews*
- Ridgel, A.L., R.E. Ritzmann and P.L. Schaefer. (2003). Effects of aging on behavior and leg kinematics during locomotion in two species of cockroach. *Journal of Experimental Biology* 206(24):4453-4465. 2003
Publication: *Journal Articles, Refereed*
- Ridgel, A.L., S.F. Frazier and S.N. Zill. (2003). Post-embryonic development of cuticular caps of campaniform sensilla of the cockroach leg: potential implications in scaling force detection. *Arthropod Structure and Development* 32(2/3):167-173. 2003
Publication: *Journal Articles, Refereed*
- Ridgel, A.L., S.F. Frazier and S.N. Zill. (2001). Dynamic responses of tibial campaniform sensilla studied by substrate displacements in freely moving animals. *Journal of Comparative Physiology A* 187(5): 405-420. 2001
Publication: *Journal Articles, Refereed*
- Ridgel, A.L., S.F. Frazier, R.A. DiCaprio and S.N. Zill. (2000). Encoding of forces by cockroach tibial campaniform sensilla: implications in dynamic control of posture and locomotion. *Journal of Comparative Physiology A* 186 (4): 359-374. 2000
Publication: *Journal Articles, Refereed*
- Ridgel, A.L., S.F. Frazier, R.A. DiCaprio and S.N. Zill. (1999). Active signaling of leg loading and unloading in the cockroach. *Journal of Neurophysiology* 81(3): 1432-1437. 1999
Publication: *Journal Articles, Refereed*
- Zill, S.N., A.L. Ridgel, R.A. DiCaprio and S.F. Frazier. (1999). Load signalling by cockroach trochanteral campaniform sensilla. *Brain Research* 822: 271-275. 1999
Publication: *Journal Articles, Refereed*

Presentations

- Ridgel, AL, Phillips, RS, Wilson, KA, Walter, B., Discenzo, FM., Loparo, KA. Development of an intelligent bicycle for rehabilitation in Parkinson's disease. 3rd World Parkinson Congress-October 2013. Selected as top 25% of submissions for Poster Tour. 2013
Type: *International Refereed*
- Phillips, RS, Wilson, KA, Ridgel, AL. Bradykinesia and timed up and go are improved after dynamic cycling in Parkinson's disease, 3rd World Parkinson Congress- October 2013 2013
Type: *International Refereed*
- Ridgel, A. L., Fickes-Ryan, E. J., & Wilson, K. A. (2013). Effects of active-assisted cycling on motor function and balance in Parkinson's disease. Journal of the Neurological Sciences, 333, Supplement 1(0), e91. 2013
Type: *International Refereed*
- Peacock, CA, Wilson, KA, Sanders, GJ, Corbett, DB, Fickes EJ, Glickman EL, Ridgel, AL. Parkinson's disease patients tolerate multifaceted exercise intervention while improving health-related physical fitness. American College of Sports Medicine Meeting- May 2013 2013
Type: *National Refereed*
- Wilson, KA, Phillips, RS, Abdar, HM, Discenzo, FM., Loparo, KA, Ridgel, AL. Dynamic Cycling Promotes Upper Extremity Motor Improvements in Parkinson's disease. American College of Sports Medicine Meeting- May 2013 2013
Type: *National Refereed*
- Ridgel, AL. Wilson, KA, Phillips, RS, Walter, B., Bradykinesia and Reaching Motor Skills Are Improved after Dynamic Cycling in Parkinson's disease. American College of Sports Medicine Meeting- May 2013 2013
Type: *National Refereed*
- Phillips, RS, Wilson, KA, Ridgel, AL. Individuals with Parkinson's disease Show Improved Timed Up and Go and 6-min Walk Test Scores After Dynamic Cycling. American College of Sports Medicine Meeting- May 2013 2013
Type: *International Refereed*
- Pollock, BS, Burns, KJ, Ridgel, AL, McDaniel, J. Vascular Function in Parkinson's disease Patients. American College of Sports Medicine Meeting- May 2013 2013
Type: *National Refereed*
- Burns KJ, Pollock, BS, Ridgel, AL, McDaniel, J. Hemodynamic And Vascular Responses To Handgrip Exercise In Parkinson's Disease. American College of Sports Medicine Meeting- May 2013 2013
Type: *National Refereed*
- Peroutky, K, Pollock, BS, Burns KJ, McDaniel, J., Ridgel, AL. Validity of Handgrip Exercise to Study Vascular Function in Parkinson's disease. American College of Sports Medicine Meeting- May 2013 2013
Type: *International Refereed*
- Research Seminar Speaker for Kent State University Biology Seminar. Title: Effectiveness of exercise in improving motor and cognitive function in Parkinson's disease 2012
Type: *Local Invited*

- K. Knecht, M. Alosco, CA Peacock, DB Corbett, G Sanders, EJ Fickes, Y Seo, EL Glickman, J. Gunstad, **AL Ridgel**. Effects of exercise on memory and frontal processing in individuals with Parkinson's disease. American College of Sports Medicine Meeting- May 2012 2012
Type: *National Refereed*
- Ridgel, A.L., Fickes E. J., Peacock, C, Wilson, K, , Williamson, M.L., Interval Active Assisted Cycling Improves Balance in Individuals with Parkinson's disease. American College of Sports Medicine Meeting- May 2012 2012
Type: *National Refereed*
- Wilson, K, Fickes, E. J., Peacock, C., Williamson, M.L., **Ridgel, A.L.** Interval Active Assisted Cycling Improves Motor Function in Individuals with Parkinson's disease. American College of Sports Medicine Meeting- May 2012 2012
Type: *International Refereed*
- Keynote Speaker for Parkinson's disease Boot Camp organized by University Hospital, Cleveland 2011
Type: *Local Invited*
- Ridgel, A.L.**, Peacock C., Gunstad J., Glickman, E. Benefits of upper versus lower extremity cycling on cognitive function in individuals with Parkinson's disease. Society for Neuroscience Annual Meeting- Nov. 2011. 2011
Type: *International Refereed*
- Corbett, D., Peacock, C, Sanders, G, & **Ridgel, AL**. 2011. Acute effects of biomechanical muscle stimulation and active-assisted cycling on mobility in Parkinson's disease. American College of Sports Medicine Meeting- May 2011 2011
Type: *International Refereed*
- Ridgel, AL.**, Peacock, C, Corbett, D., Sanders, G., Peer, K.S. 2011. Acute effects of local biomechanical muscle stimulation and active-assisted cycling on range of motion in Parkinson's disease. American College of Sports Medicine Meeting- May 2011 2011
Type: *International Refereed*
- Effects of active-assisted cycling on upper extremity motor and executive function in Parkinson's disease. Society for Neuroscience Meeting 2010
Type: *International Refereed*
- Keynote Speaker at Marshall University Biomedical Sciences Retreat. "A circuitous path from insects to Parkinson's disease: How the brain controls movement". 2010
Type: *National Invited*
- The Effects of Passive Cycling on Tremor and Motor Function in Individuals with Parkinson's disease. American College of Sports Medicine Meeting 2010
Type: *International Refereed*
- Acute Bouts of Passive Leg Cycling Can Improve Cognitive Function in Parkinson's Patients. American College of Sports Medicine Meeting 2010
Type: *International Refereed*

Improved motor function and cortical activation in Parkinson's disease patients following acute forced-exercise. American College of Sports Medicine Annual Meeting Type: <i>International Refereed</i>	2009
Comparison of Motor Function and Cortical Activation in Parkinson's Disease Patients Following Acute Forced-Exercise and Levodopa Therapy. International Society for Magnetic Resonance in Medicine Meeting Type: <i>International Refereed</i>	2009
Effects of pedaling rate on upper extremity motor improvements during passive leg cycling in Parkinson's disease. Society for Neuroscience Meeting Type: <i>International Refereed</i>	2009
Improved motor function and cortical activation in Parkinson's disease patients following acute forced-exercise. Society for Neuroscience Meeting Type: <i>International Refereed</i>	2008
Dept. of Health Sciences, Cleveland State University, Title: "Forced-exercise improves motor function in Parkinson's disease" Type: <i>Local Invited</i>	2008
Forced-exercise improves motor function in human Parkinson's disease patients. American College of Sports Medicine Annual Meeting. Type: <i>International Refereed</i>	2008
Forced-exercise improves motor function in human Parkinson's disease patients. Society for Neuroscience Meeting Type: <i>International Refereed</i>	2007

Service

Member, Educational Policies Committee- Graduate Type: <i>University</i>	2012 - 2014
Committee, Advising Search Committee <i>Served on Advising Search committee for 4 new hires in the VAACA office.</i> Type: <i>College</i>	2012 - 2012
Advisory Board, Institutional Review Board Type: <i>University</i>	2011 - present
Representative, Admitted student day Type: <i>Campus</i>	2011 - present
Editorial Board, Asian Journal of Exercise and Sports Science (AJESS) <i>Section Reviewer for Measurement and Evaluation</i>	2011 - present

Type: *International*

Speaker, Portage County Parkinson's disease support group 2011 - 2011

Type: *Community*

Speaker, Solon Parkinson's disease support group 2011 - present

Type: *Community*

Speaker, 13th Annual Parkinson Symposium, 2011 - present

Type: *Community*

Member, Institutional Review Board 2010 - present

Type: *Campus*

Speaker, Summit County Parkinson's Support Group 2010 - 2010

Type: *Community*

Speaker, Parma Parkinson's Support Group 2010 - 2010

Type: *Community*

Recruiting, 12th Annual Parkinson Symposium 2010 - 2010

Type: *Community*

Member, Search Committee for new faculty hire 2010 - 2010

Type: *Department*

Speaker, Exploratory Community Engaged in Learning (EXCEL) Program 2010 - 2010

Type: *Campus*

Recruiting, ACSM Midwest Meeting 2010 - 2010

recruit for graduate program

Type: *University*

Member, CAAHEP application for Exercise Specialist Program 2010 - 2011

Assisted Dr. Glickmann with accreditation application and site visit

Type: *Department*

Speaker, Stark County Parkinson's disease support group 2010 - 2010

Type: *Community*

Speaker, Solon Parkinson's disease support group 2010 - 2010

Speaker for monthly meeting of support group

Type: *Community*

Member, Faculty Advisory Committee

2009 - present

Type: *College*

Member, College Curriculum Committee

2009 - 2012

Type: *College*

Member, PEP Advisory Committee

2009 - present

Type: *College*

Reviewer, ACSM's Health & Fitness Journal

2009 - present

Type: *National*

Speaker, Portage County Parkinson's Support Group

2009 - 2010

Type: *Community*

Speaker, Stark County Parkinson's Support Group

2009 - 2009

Type: *Community*

Speaker, Parkinson Education Program of Greater Cleveland

2009 - 2009

Type: *Community*

Recruiting, 11th Annual Parkinson Symposium

2009 - 2009

Type: *Community*

Recruiting, KSU Tour Days

2009 - present

Type: *Campus*

Member, Faculty Recruitment Team

2008 - 2010

EHHS Dean's Faculty Recruitment

Type: *College*

Reviewer, Medicine and Science in Sports and Exercise

2008 - present

Type: *National*

Reviewer, Journal of Applied Biomechanics

2007 - present

Type: *National*

Grants

PI, Adaptive sensory and motor rehabilitation in individuals with Parkinson's disease **2015 - present**

plan to resubmit in November 2014

Submitted: \$3,198,420.00

Status: Not Funded

National Institutes of Health - Applied Research

Co PI, Self-gUided exerCise plus PD-foCusEd psychoEDucation (SUCCEED) **2015 - present**

Collaboration with: M. Sajatovic- Case Western Reserve University

Submitted: \$613,000.00

Status: Pending

NIH - Applied Research

Co-Investigator, Community based active-assisted exercise for the treatment of Parkinson's disease **2013 - 2017**

Collaboration with: Dustin Heldman, PhD. GreatLakes Neurotechnologies

Submitted: unknown

Status: Not Funded

Awarded: in review (0 0)

Patient Centered Outcomes Research Institute (PCORI) - Applied Research

PI, Effects of localized vibration using the Swisswing on delayed onset muscle soreness (DOMS) and physiological measures of muscle damage following intense eccentric cycling exercise in runners **2013 - 2013**

Submitted: \$175,000.00

Status: Awarded

Awarded: \$17,500.00 (1 2013)

Private contract - Applied Research

Consultant, Automated Portable Therapy System for PD Motor Symptom Management **2012 - 2014**

I am a co-investigator on this grant. It has been resubmitted in Jan 2012.

Collaboration with: Tom Mera, Cleveland Medical Devices

NIH - Basic Research

PI, Development of an intelligent bicycle for rehabilitation in Parkinson's disease **2012 - 2014**

2 year R21 grant with collaborators from Case Western Reserve University and Rockwell Automation.

Collaboration with: Angela Ridgel

Submitted: \$390,000.00

Status: Awarded

Awarded: \$375,595.00 (1 2012)

National Institutes of Health - Applied Research

Consultant, Pilot Study of EXCEED (EnhancedEXerCisETHerapyfor Patients with PD) **2012 - 2012**

I am serving as a consultant on this grant.

Collaboration with: Benjamin Walter MD and Martha Sajatovic MD, Case Western Reserve University

Submitted: \$50,000.00

Status: Awarded

Awarded: \$50,000.00 (1 2012)

Case Brain Health Collaborative/ Spitz Scholar Award - Applied Research

<p>PI, Effects of repeated bouts of biomechanical muscle stimulation on gait, balance and motor function in Parkinson's disease</p> <p>Submitted: \$28,200.00</p> <p>Awarded: \$28,200.00 (4 2011)</p> <p>Private Contract - Applied Research</p>	<p>2011 - 2011</p> <p>Status: Awarded</p>
<p>PI, Benefits of aerobic exercise on cognitive function in older adults and individuals with Parkinson's disease</p> <p>Submitted: \$5,000.00</p> <p>Awarded: \$5,000.00 (0 0)</p> <p>EHHS - Applied Research</p>	<p>2011 - 2013</p> <p>Status: Awarded</p>
<p>PI, Benefits of aerobic exercise on cognitive function in older adults and individuals with Parkinson's disease</p> <p>Collaboration with: Co-Investigators: John Gunstad, PhD (Psychology); Ellen Glickman, PhD (Exercise Physiology)</p> <p>Submitted: \$5,930.00</p> <p>Awarded: \$5,930.00 (4 2010)</p> <p>The Borgenicht Program for Aging Studies and Exercise Science - Applied Research</p>	<p>2010 - 2011</p> <p>Status: Awarded</p>
<p>PI, The effects of biomechanical muscle stimulation and assisted cycling on gait, bradykinesia and reflex activity in Parkinson's disease</p> <p>Collaboration with: Angela Ridgel, PhD, Kimberly Peer, EdD Athletic Training (Co-investigator)</p> <p>Submitted: \$44,000.00</p> <p>Awarded: \$44,000.00 (1 2010)</p> <p>Private Contract - Applied Research</p>	<p>2010 - 2011</p> <p>Status: Awarded</p>
<p>PI, The effects of acute exercise rate on motor improvements in Parkinson's disease</p> <p><i>Internal funding from department for research project</i></p> <p>Collaboration with: Angela Ridgel</p> <p>Submitted: \$500.00</p> <p>Awarded: \$500.00 (9 2008)</p> <p>School of Exercise, Sport and Leisure - Basic Research</p>	<p>2008 - 2009</p> <p>Status: Awarded</p>
<p>PI, Neural control of walking in absence of higher centers</p> <p>Collaboration with: Angela Ridgel</p> <p>Submitted: \$65,398.00</p> <p>Awarded: \$65,398.00 (9 2002)</p> <p>NIH - Basic Research</p>	<p>2002 - 2004</p> <p>Status: Awarded</p>
<p>Co PI, Racial differences related to cardiac output, cerebral blood flow, and fine motor dexterity during exercise in extreme heat and cold.</p> <p>Collaboration with: Ellen Glickman, PhD (Exercise Physiology)</p> <p>Awarded: not funded (0 0)</p> <p>NFL Charities - Applied Research</p>	<p>0 - present</p>

