

Dena P. Garner, Ph.D.

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Education and Professional Training

HERS Institute (Higher Education Leadership Development), University of Denver

Post-Doctoral Fellowship, Neurology, Medical University of South Carolina

Ph.D., Muscle Physiology, Oregon State University, Corvallis, OR

M.S., Exercise Physiology, University of South Carolina, Columbia, SC

B.A., Art History/Design, Furman University, Greenville, SC

Appointments

Assistant Provost for Research, The Citadel, Office of the Provost, **2018-2022**

Responsibilities: Develop and refine policies and procedures for internal and external research grants and college-wide policies, create an accessible web-based format for policies, streamline and coordinate grant-reporting systems, promote faculty opportunities via increasing external grants

Interim Department Head, The Citadel, Department of Health and Human Performance, Charleston, SC, **2018**

Responsibilities: Managing faculty and staff in HHP, hiring adjunct faculty and graduate students, college committees and advisory boards

Research and Grants Director, The Citadel, Office of the Provost, **2017-2018**

Responsibilities: Develop and refine policies and procedures for internal and external research grants, streamline and coordinate grant-reporting systems, promote faculty opportunities via increasing external grants

Director of Undergraduate Research Director, The Citadel, Office of the Provost, **2016-2022**

Responsibilities: Form the undergraduate research office with defining goals and a mission, administer funds for undergraduate research and travel associated with research, seek extramural funding, provide workshops/tutorials for undergraduate research topics, organize the annual Citadel research conference, promote faculty mentoring of students in undergraduate research

Professor, The Citadel, Department of Health and Human Performance, Charleston, SC, **2016-present**

Responsibilities: Teach undergraduate and graduate courses in department, College-wide and departmental committees, and student advisor

Associate Director of the Honors College, The Citadel, Charleston, SC, **2014-2016**

Responsibilities: Advise Honors College students, interview student candidates for Honors College acceptance, attend local and national conferences, prepare classes/materials for Honors College students

Graduate Director of Master of Science, The Citadel, Department of Health and Human Performance, Charleston, SC, **2012-2018**

Responsibilities: Advise all graduate students in both the exercise science and sport management programs, coordinate and administer comprehensive exams for all students, develop curricular changes to support student-learning outcomes

Interim Department Head, The Citadel, Department of Health and Human Performance, Charleston, SC, **2011-2012**

Responsibilities: Managing faculty and staff in HHP, hiring adjunct faculty and graduate students, college committees and advisory boards, manage departmental budgets

Associate Professor, The Citadel, Department of Health and Human Performance, Charleston, SC, **2010-2016**

Responsibilities: Teach undergraduate and graduate courses in department, college-wide and departmental committees, and student advisor

Assistant Professor, The Citadel, Department of Health and Human Performance, Charleston, SC, **2005-2010**

Responsibilities: Teach undergraduate and graduate courses in department, college-wide and departmental committees, and student advisor

Visiting Professor, The Citadel, Department of Health and Human Performance, Charleston, SC, **2004-2005**

Responsibilities: Teach undergraduate and graduate courses in department

Adjunct Professor, The Citadel, Department of Health and Human Performance, Charleston, SC, **2003-2004**

Responsibilities: Teach undergraduate and graduate courses in department

Post-doctoral fellow, Medical University of South Carolina, Department of Neurology, Charleston, SC, **2003-2004**

Responsibilities: Laboratory experiments involving cellular research of ganglion cells, learning and applying new laboratory techniques from different laboratories across the university, submitting research for presentation at conferences

Adjunct Faculty, Oregon State University, Department of Exercise and Sport Science (EXSS), Corvallis, OR, **2002-2003**

Responsibilities: Teach graduate and undergraduate course in department, university committees, national committee conference planner for NAFAPA, inter-collegiate teleconference organizer between Oregon State and the University of Utah

Graduate Assistant, Oregon State University, Department of Exercise and Sport Science (EXSS), Corvallis, OR, **1998-2002**

Responsibilities: Teach graduate and undergraduate course in department, multiple sclerosis exercise program volunteer, and adapted physical education program

Other Discipline-Related Positions

The M Center, Exercise Physiologist, Spartanburg, SC, **1998**

Responsibilities: Exercise physiologist assessing men's health in the area of physical fitness, health and weight loss

Site Coordinator for LifeSpan Project (Older Adult Fitness Test), Union, SC, **1998**

Responsibilities: Collected data on an elderly population in the Union, SC area to be used in the validation and reliability studies of the Older Adult Fitness Test by Rikli and Jones at California State University, Fullerton

Advanced Orthopedics, Exercise Physiologist, Union, SC, **1997-1998**

Responsibilities: Exercise physiologist assessing health and fitness in the area of physical therapy and rehabilitation

Michelin Tire Corporation, Graduate Assistantship, Wellness Director, Columbia, SC, **1996-1997**

Responsibilities: Developed wellness programming such as Back to Work (an injury rehabilitation program), fitness assessment, wellness fairs, and fitness promotions to improve physical activity participation for all employees

Coordinator of fitness programming for University of South Carolina, Graduate Assistantship, Columbia, SC, **1995-1996**

Responsibilities: Coordinated fitness programming and scheduled teachers for fitness classes as well as developed fitness promotions for students

Milliken & Company, Fitness Center Supervisor, Spartanburg, SC, **1994-1995**

Responsibilities: Oversaw wellness programming and fitness promotions to improve physical activity participation for all employees

IMB International High School Teacher, Rafaela, Argentina, South America, **1991-1993**
Responsibilities: Teach high school courses such as geometry, history, driver's education, and English

SCHOLARLY AND PROFESSIONAL ACTIVITIES

Scholarly Journal Publications (Peer reviewed)

Allen, C. and **Garner, D.P.** The effects of jaw clenching and oral appliance use on bat swing velocity in Division II Athletes. (In review). *Cogent Med*.

Garner, D.P., Sparks, P.D., Chizuk, H.M., Haider, M.N. (2023). Effect of exertion on blink reflex parameters in Division I football athletes. *Cogent Eng.* 10:1,2232166

Yengo-Kahn, A.M., Garner, D.P., Lessing, N., Blough, J., Zuckerman, S.L., Gifford, K. (2022). Normative data for the EyeStat device in high school and collegiate athletes. *Cogent Eng.* 9:1, 2024971

Haque, A., Drasites, K.P., Cox. A., Copone, M., Myatich, A.I., Shams, R., Matzelle, D., **Garner, D.P.**, Bredikhin, M., Shields, D.C., Vertegel, A., Banik, N.L. (2021). Protective effects of estrogen via nanoparticle delivery to attenuate myelin loss and neuronal death after spinal cord injury. *Neurochem Res* 46: 2979-2990.

*Shams, R., Drasites, K.P., Zaman, V., Matzelle, D., Shields, D.C., **Garner, D.P.**, Sole, C.J., Haque, A., Banik, N.L. (2021). The Pathophysiology of osteoporosis after spinal cord injury. *Int J Mol Sci* 22 (3057). doi.org/10.3390/ijms22063057

*Drasites, K.P., Shams, R., Zaman, V., Matzelle, D., Shields, D.C., **Garner, D.P.**, Sole, C.J., Haque, A., Banik, N.L. (2020). Pathophysiology, biomarkers, and therapeutic modalities associated with skeletal muscle loss following spinal cord injury. *Brain Sci* 10, 933; doi:10.3390/brainsci10120933

***Garner, D. P.** and Lamira, J. (2020). Respiratory outcomes with the use of a lower custom fit genioglossal-affecting oral appliance. *Clin Exper Dental Res* 6 (1) DOI: 10.1002/cre2.254

Garner, D.P. (2020). Research with novel technology: advances in concussion diagnosis and mouthpiece utilization during performance. *Journal of South Carolina Academy of Science* 18(1): 1-3.

Garner, D. P., Goodwin, J.S., Tsai, N.T., Kothera, R.T., Semler, M.E., and Wolf, B.J. (2018). Blink reflex parameters in baseline, active, and head-impact Division I athletes. *Cogent Eng* 5 DOI: 1429110

Tasi, N.T., Goodwin, J.S., Semler, M.E., Kothera, R.T., Van Horn, M., Wolf, B.J., **Garner, D.P.** (2017). Development of a non-invasive blink reflexometer. *IEEE J Transl Eng Health Med* 5 DOI: 10.1109/JTEHM.2017.2782669

*Dudgeon, W.D., Buchanan, L.A., Strickland, A.E., Scheett, T.P., and **Garner, D.P.** (2017). Mouthpiece use during heavy resistance exercise affects serum cortisol and lactate. *Cogent Med* 4 DOI: 1403728

Garner, D.P. (2016). A comparative study and review of research to oral appliances and athletic performance: Understanding the physiological impacts. *JJ Sports Med* 3(4): 025.

Dondzila, C. and **Garner, D.** (2016). Comparative accuracy of fitness tracking modalities in quantifying energy expenditure. *J Med Eng Technol* 40(6): 325-329.
<http://dx.doi.org/10.1080/03091902.2016.1197978>

*Marger, C.F., Hicklin, L.K., and **Garner, D.P.** (2016). Effects of yoga on body composition, blood pressure, and sleep patterns in adult practitioners. *J Basic Appl Sci* 12: 75-80.

Garner, D.P. (2015). Effects of various mouthpieces on respiratory physiology during steady state exercise in college-aged subjects. *Gen Dent* 63(6): 30-34.

Garner, D.P. and McDivitt, E. (2015). Effects of mouthpiece use on lactate and cortisol levels during and after 30 minutes of treadmill running. *O A J Sci Tech*, 3:1-6

Garner, D.P., Dudgeon, W.D., and McDivitt, E. (2011). The effects of mouthpiece use on cortisol levels during an intense bout of resistance exercise. *J Strength Cond*, 25(10):2866-2871

Garner, D.P., Dudgeon, W.D., Scheett, T.P., and McDivitt, E.J. (2011). The effects of mouthpiece use on gas exchange parameters during steady-state exercise in college-aged men and women. *JADA*. 142(9): 1041-1047

Garner, D.P. and McDivitt, E. (2009). Effects of mouthpiece use on airways openings and lactate levels in healthy college males. *Compend Contin Educ Dent*, 30(2): 9-13.

***Garner, D.P.** and Miskimin, J. (2009). Effects of mouthpiece use on auditory and visual reaction time in college males and females. *Compend Contin Educ Dent*, 30(2): 14-17.

*Erck, E. and **Garner, D.P.** (2008). Effects of aerobic exercise and resistance training on stage I and II breast cancer survivors-A pilot study. *Am J Public Health Educ* 39(4): 200-205.

Das, A., **Garner, D.P.**, Del Re, A.M., Woodward, J.J., Kumar, D.M., Agarwal, N., Banik, N.L., and Ray, S.K. (2006, Apr 21). Calpeptin provides functional neuroprotection to rat retinal ganglion cells following Ca(2+) influx. *Brain Res*, 1084(1):146-157.

Garner, D.P., Das, A., Imam, S.A., Wilford, G.G., Del Re, A.M., Kumar, D.M., Woodward, J.J., Banik, N.L., Agrawal, N., and Ray, S.K. (2004, Aug). Calpain prevented apoptosis in rat retinal ganglion cell line RGC-5 exposed to ionomycin and IFN- γ . *Journal of Neurochemistry*, 90(s1): AP5, 15-19.

Garner, D.P. and Widrick, J.J. (2003). Cross-bridge mechanisms of muscle weakness in multiple sclerosis. *Muscle Nerve*, 27(4): 456-464.

Widrick, J. J., Maddalozzo, G.F., Lewis, D., Valentine, B.A., **Garner, D.P.**, Stelzer, J.E., Shoepe, T.C., and Snow, C.M.. (2003). Morphological and functional characteristics of skeletal muscle fibers from hormone-replaced and non-replaced post menopausal women. *J Gerontol Biol Sci*, 58(1): 3-10.

Widrick, J. J., Stelzer, J.E., Shoepe, T.C. and **Garner, D.P.** (2002). Functional properties of human muscle fibers after short-term resistance exercise training. *Am J Physiol Regul Integr Comp Physiol*, 283: R408-R416.

*Denotes inclusion of student researchers

Book Chapter

Garner, D.P. 2018. Oral Appliances and Athletic Performance. In M. Roettger (Ed.), *Modern Sports Dentistry* (pp. 195-212). New York, New York: Springer Nature Publishing

Scholarly Abstracts and Presentations (Poster and ORAL)

Ghanat, S., Wittman, T., Shetty, N., Hefner, K., Le-Vasicek, T., **Garner, D.P.**, Laughton, S., Batouli, M. Investigating Undergraduate Researchers' Perception of Mentoring Relationship. 2023 American Society of Engineering Education Annual Conference and Exposition (Baltimore, MD).

Garner, D.P. and Haider, M.N. Stimulated corneal blink reflex response changes with age in healthy adults (April 2023). American Academy of Neurology Annual Conference (Boston, MA).

*Raab, C., *Knight, B., Yee, K., Emery, M., and **Garner, D.P.** (February 24, 2023) The Effects of Mouthpiece Use on Respiratory Outcomes during a Maximal Exercise Test. 2023 Southeast American College of Sports Medicine Annual Conference (Greenville, SC).

Ghanat, S., **Garner, D.P.**, Ragan, D., Wittman, T., Hefner, K., Le-Vasicek, T., Adair, B., Bierman, E., and Arslaner. (June 26-29, 2022) Assessing Students' Metacognitive Skills in a Summer Undergraduate Research Program. 2022 American Society of Engineering Education Annual Conference and Exposition (Minneapolis, MN).

Zanin, K., Gramling, A., **Garner, D.P.**, Zimmerman, D., and Weinstein, J. (April 2022). Harmonizing Undergraduate Biology Education with Best Practices. Association of Southeastern Biologists Annual Meeting (Little Rock, AR March 30-April 2).

Garner, D.P. (July 31, 2021). Pilot Study to Assess Changes in Blink Reflex Across Age, American Academy of Neurology Sport Concussion Conference (Virtual August 2021).

Garner, D.P. and *Faulkner, S.B. (July 31, 2020). A Follow-Up Study on the Effects of Football Scrimmages on Blink Reflex Parameters in Division I Athletes, American Academy of Neurology Sport Concussion Conference (Virtual July 31-August 1).

Garner, D.P. (July 27, 2019). Effects of football practice on blink reflex parameters in Division I football athletes, American Academy of Neurology Sport Concussion Conference (Indianapolis, In).

Ghanat, S.T., Zanin, M.K., **Garner, D.**, Ragan, D., Plumblee, J.M., Bornstein, D.B., Lewis, J.H. (June 16-19, 2019). Comparison of Mentors' and Mentees' Perceptions of Mentees' Research Skill Gains at The Citadel, proceeding of American Society of Engineering Education 126th Annual Conference and Exposition (Tampa, Fl).

Tasi, N. and **Garner, D.P.** (March 2019). Blink reflexometer (**ORAL**). Society of Women Engineers, Lowcountry Section. (Charleston, SC).

Garner, D.P. (February 2019). Resilience and Grit (**ORAL**). HERS Institute, Wellesley College. (Wellesley, MA).

*Churchill, S. **Garner, D.P.**, and Spradlin, B. (February, 2019). Differences in latency and predictive ability of horizontal saccade between two populations of college students. Southeast American College of Sports Medicine Annual Conference (Greenville, SC).

Garner, D.P. and Tsai, N.T. (August 2018). Blink Reflex Parameters in Baseline, Active, and Head-Impact Division I Athletes. The Department of Defense Military Health Systems Research Symposium (Orlando, FL).

Ghanat, S., **Garner, D.P.**, Howison, J., Hunter, R., Swart, B., Banik, S., Verdicchio, M. (2018). Students' Perception of a Summer Undergraduate Research Experience: Across the Disciplines. American Society for Engineering Education, 22093

Tsai, N.T. and **Garner, D.P.** (April 2018). Development of Noninvasive Blinkreflexometer. IEEE Southeast Southeast Conference (Tampa, FL).

*Lamira, J. and **Garner, D.P.** (April 2018). Genioglossus Stimulation via a Mouthpiece and Effect on Respiratory Rate during Steady State Exercise. SC EPSCoR/IDEA Conference (Columbia, SC).

*Lamira, J. and **Garner, D.P.** (March 2018). Genioglossus Stimulation via a Mouthpiece and Effect on Respiratory Rate during Steady State Exercise. Student Excellence Day Conference (The Citadel, Charleston, SC).

Tsai, N.T. and **Garner, D.P.** (February 2018). Blink Reflex: History, Physiology, Indicator of Neurological Dysfunction and Physiological Consideration. 4th Annual Federal Interagency Conference on Traumatic Brain Injury (Toronto Rehabilitation Institute, Toronto, Canada).

*Lamira, J. and **Garner, D.P.** (October 2017). Genioglossus Stimulation via a Mouthpiece and Effect on Respiratory Rate during Steady State Exercise. SURF: Southern Conference Undergraduate Research Forum (Wofford College, Spartanburg, SC).

Garner, D.P. (July 2017). Blink Reflex Parameters in Baseline, Active, and Head-Impact Division I Athletes. American Academy of Neurology's Sports Concussion Conference (Jacksonville, FL).

Garner, D.P. (June, 2017). Undergraduate Research in Exercise Science: Challenges at a Military Institution. Undergraduate Research Program Directors Conference (Northern Arizona University, AZ).

Garner, D.P. (May 2017). Concussion Assessment Using the Blink Reflexometer. Southern Conference Sports Medicine Conference (Greenville, SC).

Garner, D.P. (April 2016). Integrating Service Learning into Discipline Specific Courses: Models, Benefits, and Possibilities: PHED 203 Disabilities and Physical Activity. Presented via a student (Z. Ford) at The CASTLE Meeting (The Citadel, Charleston, SC).

***Garner, D.P.**, Shivers, T., Ford, Z., Gonzalez, F., and Mills, M. (April 2016). CHEEF: A Program Promoting Physical Activity in High Risk Children. Presented at the Gulf South Summit on Service Learning (Georgia Southern University, Statesboro, GA).

*Brantley, J. and **Garner, D.P.** (February, 2016). Outcomes of blink reflex parameters with and without mouthpiece before and after steady state exercise. Presented at the 2016 Southeast Regional Chapter of American College of Sports Medicine (Greenville, SC).

Garner, D.P. (June, 2015) New Designs of Mouthpieces and Effects on Oxygen and Carbon Dioxide Dynamics (**ORAL**). Presented at the 2015 Annual Meeting for the Academy of Sports Dentistry Annual Meeting Symposium (Chicago, IL).

*Branch, R., Cain, B., Jackson, L., Tryer, H, and **Garner, D.P.** (February, 2015). Mandibular Displacement in Boil and Bite, Custom-Fit Mouthpieces and No Mouthpiece. Presented at the 2015 Southeast Regional Chapter of American College of Sports Medicine (Jacksonville, FL).

***Garner, D.P.** and Hammett, A. (June, 2014). The Effect of Various Materials on the Transfer of Heat on the Soles of the Feet during Exercise. Presented at the 2014 Council of Undergraduate Research National Conference (Washington, D.C.).

Garner, D.P. and McDivitt, E. J. (May, 2014). Effects of Different Mouthpieces on Respiratory Rate, Oxygen and Carbon Dioxide during Running. Presented at the 2014 National American College of Sports Medicine Conference (Orlando, FL).

*Dudgeon, W.D., Buchanan, L.A., Strickland, A.E., **Garner, D.P.**, and Scheett, T. P. (May, 2014). Performance mouthpiece use during heavy resistance exercise influences serum cortisol and lactate. Presented at the 2014 National American College of Sports Medicine Conference (Orlando, FL).

***Garner, D.P.**, McLelland, A, and Hammett, A. (February 2014). Lactate levels and heart rate outcomes with mouthpiece use during and after 45 minutes of running. Presented at the 2014 Southeast Regional Chapter of American College of Sports Medicine (Greenville, SC).

*Dudgeon, W.D., Scheett, T.P., McDivitt, E.J., Hepner, B.E., and **Garner, D.P.** (July, 2013). Performance mouthpiece improves X-factor in collegiate and recreational golfers. Presented at the 2013 National Strength and Conditioning Association Conference (Las Vegas, NV).

*Reed, F., Darsey, E.M., and **Garner, D.P.** (2013). Identifying osteoporosis in children sustain low energy fracture. Presented at the 2013 American College of Sport Medicine Annual Conference (Indianapolis, IN).

Garner, D.P., McDivitt, E.J., Dudgeon, W.D., and Scheett, T.P., (February, 2013). Decreases in lactate and heart rate response with mouthpiece use during and post aerobic exercise. Presented at the 2013 Southeast Regional Chapter of American College of Sports Medicine (Greenville, FL).

*Tretera, J.C., **Garner, D.P.**, Scheett, T.P., McDivitt, E.J., and Dudgeon, W.D. (February, 2013). Mouthpiece use improved X-factor in collegiate golfers. Presented at the 2013 Southeast Regional Chapter of American College of Sports Medicine (Greenville, FL).

*Walls, R., Saylor, C. Proctor, C., Molizon, J., **Garner, D.** (2013). HealthyPlay! Wiffle Ball: Impact of a replicable summer program on Title I elementary school students. Accepted for presentation as a poster. National Service-Learning Conference. Denver, CO.

*Kirby, L. S. and **Garner, D.P.** Effects of After-School Programming on Body Mass Index, Body Composition, and Activity Levels In Kindergarten Through Fifth Grade. Presented at the 2012 South Carolina Public Health Association (Myrtle Beach, SC).

*Dudgeon, W.D., Scheett, T.P., Buchanan, L.A., Strickland, A.E., and **Garner, D.P.** (2012). Mouthpiece use reduces post exercise serum cortisol levels. Experimental Biology Scientific Meeting. *Experimental Biology Abstracts P397:3430*.

Garner, D.P. (March, 2012). Not your typical mouthguard. Presented at the 2012 Charleston Chamber of Commerce Conference (Trident Technical College, North Charleston, SC).

*Proctor, C., Molizon, J., Saylor, C., **Garner, D.**, & Coker-Bolt, P., & Brown, D. (2012, Feb). HealthyPlay! WIFFLE® Ball League (HWBL): Summer play addresses health, fitness, and social goals. Presented as both a poster and an educational session at the 2012 Value of Play Conference (Clemson, SC).

Garner, D.P., Scheett, T.P., McDivitt, E.J. and Dudgeon, W.D. (February, 2012). Testosterone cortisol ration improves in collegiate football players with use of performance mouthpiece. Presented at the 2012 Southeast Regional Chapter of American College of Sports Medicine (Jacksonville, FL).

Dudgeon, W.D., Scheett, T.P., McDivitt, E.J. and **Garner, D.P.** (February, 2012). Mouthpiece use decreases lactate during high-intensity resistance exercise. Presented at the 2012 Southeast Regional Chapter of American College of Sports Medicine (Jacksonville, FL).

Garner, D.P. (November, 2011). Use of mouthguards in athletics. Presented at the 2011 Southern District/South Carolina Alliance for HPERD Convention (Myrtle Beach, SC).

Garner, D.P. (November, 2011). Use of mouthpiece in golf to improve performance. Presented at the 2011 Southern District/South Carolina Alliance for HPERD Convention (Myrtle Beach, SC).

Garner, D.P. (June, 2011). The effects of mouthpiece use on gas exchange parameters during steady-state exercise in college-aged men and women. Presented at the 2011 American of Dental Sleep Medicine Conference (Minneapolis, MN).

***Garner, D.P.**, Scheett, T.P., Dudgeon, W.D., McDivitt, E.J., and Rodriguez, M.A. (February, 2011). Increases in VO_2/kg , VCO_2 , and VO_2 with mouthpiece during steady state runs. Presented at the 2011 Southeast Regional Chapter of American College of Sports Medicine (Greenville, SC).

Garner, D.P. (October, 2010). Effects of mouthpiece use on cortisol levels during an intense bout of resistance exercise. Presented at The Citadel's Sigma-Xi Chapter Meeting (Charleston, SC).

Garner, D.P. (June, 2010). Mouthpiece use during exercise: Cortisol discoveries (**ORAL**). Presented at the 2010 Annual Meeting for the Academy of Sports Dentistry Annual Meeting Symposium (Washington, D.C.).

Garner, D.P. (June, 2010). Mouthpiece use during exercise: Understanding the effects of its use on cortisol, lactate and airway openings (**ORAL**). Presented at the 2010 American of Dental Sleep Medicine Conference (San Antonio, TX).

*Fleming, C.T. and **Garner, D.P.** (May, 2010). The effects of an eight week dragon boat program and a walking program on body fat percentage in cancer survivors. Presented at the 2010 South Carolina Public Health Association (Myrtle Beach, SC).

Davakos, H. and **Garner, D.P.** (February, 2010). Dietary habits of Greek high school students. Presented at the 2010 Southern District/South Carolina Alliance for HPERD Convention (Myrtle Beach, SC).

*Barton, L. Campbell, J., Leek, W., Patt, J., Winkler, A. and **Garner, D.P.** (February, 2010). The effect of time-of-day on physical fitness test. Presented at the 2010 Southeast Regional Chapter of American College of Sports Medicine (Birmingham, AL).

Garner, D.P. and McDivitt, E. (May, 2009). The effects of mouthpiece use during endurance exercise on lactate and cortisol levels. *Medicine and Science in Sports and Exercise*, 41(5): S448.

***Garner, D.P.** and May, R. (May, 2009). The effects of an 8-week exercise and nutritional intervention on body composition in breast cancer survivors. Presented at the 2009 South Carolina Public Health Association (Myrtle Beach, SC).

Garner, D.P. (May, 2009). Mouthpiece use during exercise: Understanding the effects of its use on cortisol, lactate and airway openings (**ORAL**). Presented at the 2009 Annual Meeting for the Academy of Sports Dentistry Annual Meeting Symposium (Chicago, IL).

*Bowen, A., Caffey, C., Garnett, C., Greene, G., McRae, C., Morin, T., Nolan, B., Shealy, T., and **Garner, D.P.** (February, 2009). The effect of mouthpiece use on muscular endurance. Presented at the 2009 Southeast Regional Chapter of American College of Sports Medicine (Birmingham, AL).

***Garner, D.P.** Erck, L., and May, R. (September, 2008). The effects of an exercise and nutritional intervention on maximal oxygen consumption, body fat percentage and bone density in breast cancer survivors. Presented at the 2008 Breast Cancer Symposium (Washington, D.C.).

Garner, D.P. and McDivitt, E. (May, 2008). The effects of mouthpiece use on salivary cortisol levels during exercise. *Medicine and Science in Sports and Exercise*, 40(5): S468

Garner, D.P. and McDivitt, E. (May, 2008). Effects of mouthpiece use during endurance exercise on lactate and cortisol levels (Poster and **ORAL**). Presented at the 2008 Annual Meeting for the Academy of Sports Dentistry (St. Louis, MO).

***Garner, D.P.** and Erck, E. (May, 2007). Effects of aerobic exercise and resistance training on stage I and II breast cancer survivors. *Medicine and Science in Sports and Exercise*, 39(5): S335.

Garner, D.P. (October, 2007). The effects of aerobic exercise and resistance training on stage I and II breast cancer survivors. Presented at The Citadel Sigma Xi Chapter Meeting (Charleston, SC).

*Ruff, J. L. and **Garner, D.P.** (May, 2006). Changes in body composition of college females following 12 weeks of concurrent aerobic dance exercise and resistance training. *Medicine and Science in Sports and Exercise*, 38(5): S494.

Banik, N.L., Das, A., **Garner, D.P.**, Guyton, M.K., Del Re, A.M., Kumar, D.M., Woodward, J.J., Agrawal, N., and Ray, S.K. (May, 2005). Mechanism of apoptosis in rat retinal ganglion cell line RGC-5 involves calpain-mediated proteolysis: Calpain inhibition provides functional neuroprotection. Presented at The Association for Research in Vision and Ophthalmology Conference (Florida).

Shoepe, T.C., Stelzer, J.E., **Garner, D.P.**, and Widrick, J.J. (2003). Functional adaptability of muscle fibers to long-term resistance exercise. *Med Sci Sports and Exerc*, 35(6): 944-951.

*Denotes inclusion of student researchers

External Grants

Primary investigator: Kirk, S. (Williamette University). Sub-award from NSF ASCEND: Advancing STEM Careers by Empowering Network Development. \$999,899.00 Funding Period: 9/1/2020- 9/1/2025.

Primary investigator, **Garner, D.P.** Test and Evaluation of Physiologic Neuro-Assessment Devices, Years 1 & 2: \$746,476. The Henry M. Jackson Foundation for the Advancement of Military Medicine, Inc. Funding Period: 10/01/2016-12/31/2019.

Primary investigator, **Garner, D.P.** Blink Reflex Characteristics in Concussed and Non-Concussed Athletes. \$36,000. Funding period: 06/2016-05/2017.

Primary investigator, **Garner, D.P.** Test and Evaluation of Physiologic Neuro-Assessment Devices, Year 1. \$337,199. The Henry M. Jackson Foundation for the Advancement of Military Medicine, Inc. Funding Period: 11/01/2015-07/31/2016

Primary investigator, **Garner, D.P.** Blink Reflex Characteristics in Concussed and Non-Concussed Athletes. \$26,580. Funding period: 06/2015-03/2016.

Primary investigator, **Garner, D.P.** Effects of mouthpiece use during exercise performance. Colgate Palmolive Corporation. \$8,000 annually. Funding period: 2013-present.

Garner, D.P. Bite Tech Corporation Laboratory Building Grant. \$200,000. Funding period: 2010

Primary investigator, **Garner, D.P.** Effects of mouthpiece use during exercise on cortisol and lactate levels. Bite Tech Corporation. \$60,000. Funding period: 2008- 2012.

Primary investigator, **Garner, D.P.** Effects of mouthpiece use during exercise on cortisol and lactate levels. Bite Tech Corporation. \$10,000. Funding period: 2006-2008.

Co-investigator, **Garner, D.P.** (PI: Narin Banik, Department of Neurology, Medical University of South Carolina): Calpeptin prevented apoptosis in rat retinal ganglion cell line RGC-5 exposed to inonmyocin and IFN- γ . NCI and NINDS, and the State of SC. \$1,125,000 (NINDS). Funding period: 2000-2005.

Co-Principal investigator, **Garner, D.P.** (PI: Gianni Maddalozzo, Exercise and Sport Science, Oregon State Univ.): Bone mass, physical function and fear of falling in women with multiple sclerosis. National Multiple Sclerosis Society. \$25,000. Funding period:

8/1/02 - 8/1/03.

Co-Principal Investigator, **Garner, D.P.** (PI: Jeffrey Widrick, Exercise and Sport Science, Oregon State Univ.): Cellular mechanisms of muscle contraction in individuals with multiple sclerosis. John C. Erkkila, M.D. Endowment for Health and Human Performance. \$12,315. Funding period: 1/1/02 - 12/31/02.

Co-Principal investigator, **Garner, D.P.** (PI: Jeffrey Widrick, Exercise and Sport Science, Oregon State Univ.): Cellular mechanisms of muscle contraction in individuals with multiple sclerosis. Medical Research Foundation of Oregon. \$18,520. Funding period: 1/1/00 - 12/31/00.

Co-Principal investigator, **Garner, D.P.** (PI: Jeffrey Widrick, Exercise and Sport Science, Oregon State Univ.): Effect of multiple sclerosis on muscle cells and neuromuscular performance. John C. Erkkila, M.D. Endowment for Health and Human Performance. \$13,807. Funding period: 1/1/00 - 12/31/00.

The effect of The Edge product on shooting performance and reaction times in cadets at The Citadel. (PI: Hank Cross, Dena Garner, and Jenni Miskimin, Health, Exercise and Sport Science, The Citadel). 8/04-2005.

Separate and combined effect of estrogen and resistance training on the musculoskeletal system in early post-menopausal women. (PI: Gianni Maddalozzo, Exercise and Sport Science, Oregon State Univ.). John C. Erkkila, M.D. Endowment for Health and Human Performance. \$18,375. Funding period: 1/1/01 - 12/31/02. American Federation of Aging Research. \$50,000. Funding period: 1/1/01 - 12/31/02.

Cellular adaptations to resistance exercise training (PI: Jeffrey Widrick, Exercise and Sport Science, Oregon State Univ.). NIH. \$137,420. Funding period: 9/1/99 - 8/31/01.

The Citadel Foundation Research, Development, and Presentation
Grants

Research

Primary investigator, **Garner, D.P.** Design, manufacture, and testing of a lower custom fit mouthpiece on human performance parameters of lactate, cortisol, and airway dynamics. \$3000.00. Funding period 2015-2016

Primary investigator, **Garner, D.P.** Design, manufacture, and testing of a lower custom fit mouthpiece on human. \$1872.43. Funding period 2014-2015

Primary investigator, **Garner, D.P.** Design, manufacture, and testing of a lower custom fit mouthpiece on human performance parameters of lactate, cortisol, and airway dynamics. \$1872.43. Funding period 2014-2015.

Primary investigator, **Garner, D.P.** The effects of performance mouthpiece use on lactate and oxygen/carbon dioxide exchange parameters during exercise. \$3000.00. Funding period: 2013-2014.

Primary investigator, **Garner, D.P.** Effects of mouthpiece use on corticotrophin releasing factor (CRF), adrenocorticotrophic hormone (ACTH) and testosterone (TST) before, during, and post intense squat performance. \$2477.50. Funding period: 2012-2013.

Primary investigator, **Garner, D.P.** Effects of mouthpiece use during and after high intensity exercise on cortisol, lactate, gas exchange parameters, and heart rate. \$2614.75. Funding period: 2011-2012.

Primary investigator, **Garner, D.P.** Effects of mouthpiece use during resistance training exercise on cortisol levels. \$2100.00. Funding period: 2010-2011.

Primary investigator, **Garner, D.P.** Effects of exercise intervention on estrogen markers, 2-hydroxyestrone and 16alpha-hydroxyestrone, in women. \$1980.00. Funding period: 2009-2010.

Primary investigator, **Garner, D.P.** Effects of an exercise and nutrition program on body composition and attitudes toward physical education in K-grade 5 children involved in an afterschool program. \$2580.00. Funding period: 2008-2009.

Primary investigator, **Garner, D.P.** Effects of exercise and nutrition intervention on breast cancer survivors. The Citadel Foundation. \$2800.00. Funding period: 2007-2008.

Primary investigator, **Garner, D.P.** Effects of exercise interventions on stage I and II breast cancer survivors. The Citadel Foundation. \$3000.00. Funding period: 2005-2006.

Development

Garner, D.P. Development: 2013 American College of Sport Medicine, Indianapolis, IN. \$1536.69. Funding period: 2012-2013.

Garner, D.P. Development: 2010 American Dental Association Annual Conference, Orlando, FL. \$982.62. Funding period: 2010-2011.

Garner, D.P. Development: 2005 American College of Sports Medicine Health Summit, Orlando, FL. \$315.68. Funding period: 2005-2006.

Garner, D.P. Development: Interactive and explanatory DVD and CD for classroom instruction. \$735.00. Funding period: 2005-2006.

Presentation

Garner, D.P. (2015). Presentations: New Designs of Mouthpieces and Effects on Oxygen and Carbon Dioxide Dynamics (**ORAL**). 2015 Annual Meeting for the Academy of Sports Dentistry Annual Meeting Symposium, Chicago, IL. \$759.21. Funding period: 2015.

Garner, D.P. (2014). Presentations: Effects of different mouthpieces on respiratory rate, oxygen and carbon dioxide during running. American College of Sport Medicine, Orlando, FL. \$734.51. Funding period: 2014.

Garner, D.P. (2012). Presentations: Testosterone cortisol ratio improves in collegiate football players with use of performance mouthpiece. \$844.94. Funding period: 2012.

Garner, D.P. (2011). Presentations: 1) Use of mouth guards in athletes. 2) Using a mouthpiece in golf. \$407.99. Funding period: 2011.

Garner, D.P. and McDivitt, E. (2009). Presentation: The effect of mouthpiece use on lactate and cortisol levels after 30 minutes of running. \$1284.00. Funding period: 2009.

Garner, D.P., Erck, L., May, R. (2008). Presentation: The effects of an exercise and nutritional intervention on maximal oxygen consumption, body fat percentage and bone density in breast cancer survivors. \$697.06. Funding period: 2008.

Garner, D.P. Presentation: Effects of exercise and nutritional intervention on stage I and II breast cancer survivors; Effects of mouth piece use on cortisol levels during exercise. \$1484.00 Funding period: 2007-2008.

Garner, D.P. Presentation: Changes in Body Composition of College Women Following Twelve Weeks of Concurrent Aerobic Dance Exercise and Resistance Training. \$1308.00. Funding period: 2006-2007.

Professional Development and Presentations

2021 FITBIR's 3rd Stakeholders Meeting. July 19

2021 SERP-III Virtual Institute participant, NSF and PULSE programming. May 24-27

Garner, D.P. (February 2019). Resilience and Grit (**ORAL Presentation**). HERS Institute, Wellesley College. (Wellesley, MA).

2019 Council of Undergraduate Research Institute participant, Beginning a Research Program in the Natural Sciences at a Predominantly Undergraduate Institution Institute, Stetson University, Deland, FL, November 22-24

2019 AAC&U Conference, Raising Our Voices: Reclaiming the Narrative on the Value of Higher Education, Atlanta, GA, January 23

2017 National Science Foundation Training Professionals to Prepare STEM Undergraduates for Research, Selected for 1 of the 27 positions available, University of Central Florida, Orlando Florida, June 15-17

2016 Council on Undergraduate Research Conference for Undergraduate Directors of Research, Tampa, Florida, June 25-28

2016 Women Scholars Initiative Career Development Program, Medical University of South Carolina, Charleston, SC, March 17

2013 Council on Undergraduate Research Conference: Undergraduate Research and Change in Higher Education: A Scholarly Discussion, Raleigh, NC, October 2

SERVICE

Service to College

CPR3 Executive Board, The Citadel, Charleston, SC 2021-present

Responsibilities: *A committee appointed to manage The Citadel's Center for Performance, Readiness, Resiliency, and Recovery as it relates to supporting external grants processes*

Provost Search Committee, The Citadel, Charleston, SC 2018-2019

Responsibilities: *A committee appointed to interview and hire a new Provost for The Citadel*

Nursing Probationary Review/Tenure and Promotion Committee, The Citadel,

Charleston, SC **2018-2022** Responsibilities: *A committee appointed to review the tenure*

and promotion guidelines for all nursing faculty at The Citadel and make recommendations on reappointment

Dean of School of Science and Math Search Committee, The Citadel, Charleston, SC 2017

Responsibilities: A committee appointed to interview and hire a new Dean for the School of Science and Math

Faculty Senate, The Citadel, Charleston, SC 2018-2022

Responsibilities: Faculty governance committee

Advisor for the Student Research Club, The Citadel, Charleston, SC, 2016-2022

Responsibilities: Serve as an advisor to undergraduate students in the area of research by providing help and guidance for monthly meetings and extracurricular learning opportunities

Faculty Tenure and Promotion Committee, The Citadel, Charleston, SC 2016-present

Responsibilities: A committee appointed to guide, review current tenure and promotion procedures, and annually evaluate faculty applying for tenure and/or promotion

Faculty Excellence Committee (formerly Sabbatical Committee), The Citadel, Charleston, SC 2015-2018

Responsibilities: A committee appointed to review current faculty sabbatical applications and make recommendations to the Provost

Provost Ad Hoc Committee Faculty Governance, The Citadel, Charleston, SC 2014-2015

Responsibilities: A committee appointed to determine new faculty governance procedures at The Citadel

Provost Search Committee, The Citadel, Charleston, SC 2014-2015

Responsibilities: A committee appointed to interview and hire a new Provost for The Citadel in 2015

Faculty Research and Development Committee for the School of Science and Mathematics, The Citadel, Charleston, SC 2015-2016

Responsibilities: Manage all presentation and research grant applications for the academic year for faculty of the School of Science and Mathematics

Co-Chair of Faculty Research and Development Committee for the School of Science and Mathematics, The Citadel, Charleston, SC 2014-2015

Responsibilities: Manage all presentation and research grant applications for the academic year for faculty of the School of Science and Mathematics

Graduate Curriculum Committee (formerly, Graduate Council), The Citadel, Charleston, SC 2012-2015

Responsibilities: *Discuss and address graduate student curricular issues at The Citadel*

Chair Faculty Research Committee, The Citadel, Charleston, SC 2012-2014

Responsibilities: *Manage all presentation and research grant applications for the academic year for all faculty*

Pre-Allied Health Committee, The Citadel, Charleston, SC, 2012-2022

Responsibilities: *A committee consisting of two biology faculty members, one chemistry faculty member and one HHP faculty member to assess Citadel students and provide recommendations to medical/dental programs concerning the student's ability*

Faculty Research Committee Chair, The Citadel, Charleston, SC 2012-2014

Responsibilities: *Oversee the research committee in decisions for appropriating monies designated for faculty research and presentations*

Service Learning Site Coordinator, The Citadel, Charleston SC 2011-2021

Responsibilities: *Work with Krause Center and undergraduate students to provide and supervise service-learning projects*

Faculty Research Committee, The Citadel, Charleston, SC 2010-2014

Responsibilities: *A committee to determine appropriate monies for research conducted by all faculty at The Citadel*

Co-chair for The Citadel Undergraduate Research Conference, The Citadel, Charleston, SC, 2009-2015

Responsibilities: *A committee that manages the Undergraduate Research Conference at The Citadel open to all undergraduate students*

Internal Review Board Member, The Citadel, Charleston, SC 2009 – present

Responsibilities: *A committee that reviews all the research IRBs at The Citadel*

Co-advisor for Women in Science and Engineering (WISE) Club, The Citadel, Charleston, SC, 2008-2015

Responsibilities: *Serve as an advisor to women in the fields of engineering and science by providing monthly meetings and extracurricular service learning opportunities*

Faculty Development Committee, The Citadel, Charleston, SC, 2006-2012

Responsibilities: *A committee to determine appropriate faculty development opportunities for all faculty at The Citadel*

Curriculum Committee, The Citadel, Charleston, SC, 2006-2010

Responsibilities: A committee to determine appropriate curriculum changes and additions for all courses at The Citadel

University Advisory Committee for Persons with Disabilities, Oregon State University, Corvallis, OR, 2000-2002

Responsibilities: A committee to determine accessibility issues at Oregon State University

Committee for Planning the National Federation of Adapted Physical Activity Conference held at Oregon State University, Corvallis, OR, 2002

Responsibilities: Involved with the organization and implementation of the NAFAPA conference such as scheduling and organizing research presentations, arranging local accommodations and meals, and serving as the liaison between Oregon State and all universities attending that conference

Coordinator of the Special Physical and Motor Fitness Clinic for Children with Disabilities, Oregon State University, Corvallis, OR, 1998-2000

Responsibilities: Oversee undergraduate and graduate volunteers in working with approximately 80 children with disabilities in a physical activity setting on a weekly basis

Service to School/Department

Chair of departmental search committee for department head in Health and Human Performance, The Citadel, Department of Health and Human Performance, Charleston, SC, 2016

Departmental search committee for faculty position in exercise science and pedagogy, The Citadel, Department of Health and Human Performance, Charleston, SC, 2014-2015

Chair of departmental search committee for faculty position in exercise science, The Citadel, Department of Health and Human Performance, Charleston, SC, 2012

Chair of departmental search committee for faculty position in exercise science, The Citadel, Department of Health and Human Performance, Charleston, SC, 2007-2008

Chair of departmental search committee for faculty position in exercise science, The Citadel, Department of Health and Human Performance, Charleston, SC, 2006-2007

Director of Assessment Services for Health and Human Performance, The Citadel, Department of Health and Human Performance, Charleston, SC, 2005-2018

Program Director of Master of Science Program, The Citadel, Department of Health and Human Performance, Charleston, SC, 2005-2018

Coordinator of Exercise and Sport Science Teleconference Classes between Oregon State University and the University of Utah, Oregon State University, Corvallis, OR, 2002

Service to Students

Advisor for Student Research Club, The Citadel, Charleston, SC, 2016-2022

Chair of the Student Excellence Day Conference, The Citadel, Charleston, SC, 2020-2022

Co-Chair of the Student Excellence Day Conference, The Citadel, Charleston, SC, 2016-2019

Co-chair for The Citadel Student Research Conference, The Citadel, Charleston, SC, 2009-2015

Co-advisor for Women in Science and Engineering (WISE) club, The Citadel, Charleston, SC, 2008-2015

Advisor to exercise science advisees, The Citadel, Department of Health and Human Performance, Charleston, SC, 2007-present

Thesis and Project Director for Graduate Students, The Citadel, Department of Health and Human Performance, Charleston, SC, 2004-2018

Service to Community

South Carolina Preparatory Academy Board Member, Columbia, SC 2020-present
Support and provide guidance in academic programming for quality charter schools within the state of South Carolina, K-12

PCA School Board Member, Mt. Pleasant, SC, 2018-2020

Support and provide guidance in academic programming for a preschool to high school program

Wounded Warrior Amputee Softball Team Committee Member, Charleston, SC, 2014-2016

Involved with the planning and implementation of the Wounded Warrior Softball Tournaments

Charleston Chamber of Commerce Academy Partner, Regional Health Professions Advisory Board, Charleston, SC 2012-2016

Involved in working with locate high school programs interested in areas of health professions via shadowing and mentoring

City of Charleston Mayoral Steering Committee of “Lighten Up Charleston”, Charleston, SC, 2011-2016

Involved with planning and implementing city-wide weight loss, healthy eating and exercise program

Charleston Marathon Board Member, Charleston, SC, 2010-2016

Involved with planning and convening of the race

Chair of Wheelchair Subcommittee of Cooper River Bridge Run, Charleston, SC, 2008-2010

Involved with planning and convening of the wheelchair race

Wheelchair Subcommittee of the Cooper River Bridge Run, Charleston, SC, 2007-present

Involved with the inclusion and promotion of wheelchair athletes in the race

Grants Subcommittee of the Cooper River Bridge Run, Charleston, SC, 2006-2010

Involved with determining which community organizations receive grant money for physical activity programming

The Cooper River Bridge Run Executive Committee, Charleston, SC, 2004-2010

A committee overseeing the Cooper River Bridge Run on an annual basis (a top five 10 K race in the country)

Service to Discipline

South Carolina Governor's Award for Excellence in Science Committee. 2023-present. *Evaluate and select higher education researchers for excellence in scientific achievements within the state.*

Panel Member, 2021 Congressionally Directed Medical Research Programs (CDMRP), Traumatic Brain Injury and Psychological Health Research Program (TBIPHRP). 2022

SC Space Grant Consortium Campus Director. 2019-2020

Southern Conference Undergraduate Research Forum (SURF) Committee. 2016-2022

Journal of Oral Healthcare Reviewer. 2016-present

SM Dentistry Journal Editorial Board. 2015-present

Human Movement Sciences Journal Reviewer. 2015. *Acute effects of jaw clenching using a customized mouthguard on anaerobic ability and ventilator flows.*

External Reviewer for Faculty Position at Montana State University. 2015

Research Abstract Reviewer for Southeast Chapter of American College of Sport Medicine. 2013-2014
Evaluate and rate undergraduate research projects serving all undergraduate students in the southeast ACSM chapter; submissions for 2014 annual conference.

Conrad Challenge Judge, Spirit of Innovation Awards. 2013

Reviewer for Dove Medical Press LTD. 2013. *Drug Abuse in Athletes* Substance Abuse and Rehabilitation Journal.

Reviewer for McGraw Hill Publications chapter in health book. 2012. Lynch, Elmore, and Kotecki. Health: Making Life Choices.

Research Reviewer for South Carolina Public Health Association Annual Meeting. 2011-2012

Reviewer for Adapted Physical Activity Quarterly Journal. 2011. *Locomotor capacity tests relevant to the everyday mobility of youth with cerebral palsy: It's not just about level ground walking.*

Reviewer for Applied Physiology, Nutrition, and Metabolism Journal. 2010. *Individual exercise sessions alter circulating hormones and cytokines in HIV-infected men.*

Reviewer for Comparative Exercise Physiology Journal. 2010. *Effects of neuromuscular- dentistry designed mouthguard on muscular endurance and anaerobic power.*

Reviewer for McGraw Hill Publications health book. 2009-2010.
Sparling and Redican. Personal Health: A Concise Guide.

Reviewer for Doody's Book Reviews. 2008.
Sherk and Bucholz. Getting It Straight: A History of American Orthopaedics.

Awards

Honor Society of Phi Kappa Phi, 2020

South Carolina Governor's Award for Scientific Excellence at a Predominantly Undergraduate Institution, 2019

School of Science and Mathematics Faculty Excellence Award, 2016

Cooper River Bridge Run Hall of Fame Inductee, 2017

The Citadel Women's History Month Honoree, 2015

SC Campus Compact Servicer Learning Honoree, 2015

The Citadel Faculty Fellow in Service Learning and Civic Engagement recognition, 2013