# **♦** Sang Ouk Wee, Ph.D. **♦**

# **Academic Affiliations**



California State University San Bernardino (2017-)
Assistant Professor Department of Kinesiology
Human Performance Laboratory
sangouk.wee@csusb.edu



### **Education & Training**

# University of Illinois at Chicago, Chicago, IL

2012 - 2017

Doctor of Philosophy, Rehabilitation Science

Dissertation: Effects of Aerobic Exercise on Cerebral Blood Flow and Cognitive Function in Individuals with Down Syndrome

# California State University Northridge, Northridge, CA

2010 - 2012

Master of Science, Applied Physical Activity.

Thesis: Cardiorespiratory Response to Continuous Passive Exercise in People with Spinal Cord Injury

# Auburn University, Auburn, AL

2001 - 2004

Master of Education, Exercise Science

Emphasis: Health Promotion and Lipid Metabolism

#### Korea University, Seoul, South Korea

1992 - 2000

Bachelor of Science, Sports and Leisure Studies

### **Teaching**

Assistant Professor Current

Exercise Physiology

Exercise Science Software

Pedagogy Swimming (Professional preparation)

California State University San Bernardino

#### **Laboratory Instructor**

2013 - 2017

Advanced Exercise Assessment (Graduate level)

Electrocardiograph (Undergraduate level)

Exercise Physiology (Undergraduate level)

University of Illinois at Chicago

Land-based and Aquatic-based Therapy Supervising Instructor Physical fitness Assessment & Exercise Prescription Aquatic group exercise therapy (elderly population based classes) California State University Northridge	2010 - 2012
Physical Activity Class Instructor Tennis, Swimming, Weight Training California State University Northridge	2010 - 2011
Laboratory Instructor Skills Acquired: Graded Exercise Testing with Respiratory Analysis, ECG, Body Composition Assessment, Blood Analysis Fitness Assessment & Programming, Auburn University	2002 - 2006

Professional Experiences		
Disability Festival Organizing Committee California State University San Bernardino	Current	
Fitness assessment program Trust fund committee California State University San Bernardino	Current	
Research Assistant Skills Acquired: Ultrasound Vascular & Cardiac measurements, Phlebotomy, Graded Exercise Testing with Respiratory Analysis, ECG interpretation, Hemodynamic measurements, Autonomic function analysis Integrative Physiology Laboratory University of Illinois at Chicago	2012 - 2017	
Laboratory Technician/Phlebotomist Exercise Technology Laboratory Auburn University	2004 - 2007	
Internship: Diabetes Care Center, Cardiac Rehab East Alabama Medical Center Cardiac Rehabilitation Center	2004	
Teaching Assistant Korea University	2000 - 2001	
Military service Republic of Korea Air Force White House Military Band	1994 - 1996	

Honors/Awards		
Outstanding Research Award Western Society of Kinesiology and Wellness	2017	
Young Investigator Award: Korea United States Applied Physiology Society	2016	
Conference Presenter Awards Graduate College Presenter Award Graduate Student Council Presenter Award Health Professional Student Council Travel Grant University of Illinois at Chicago	2013 - 2016	

Certifications	
Arthritis Foundation Land Exercise Instructor	2011
Phlebotomist from Auburn University Nursing school	2006
Korea Ski Association Certified Ski Instructor	1999
Red Cross Lifeguard	1998
Korea Scuba Diving Advanced License	1993
Korea Recreation Association Certified Instructor	1993

#### **Publications**

- **Wee SO**, Yan H, Lane-Cordova D. A., Ranadive M.S., Rosenberg J. A., White W. D. & Fernhall B. Sex Differences in Synthesized Aortic Hemodynamics Using Wave Separation Analysis Following Acute Exercise. *International Journal of Sports Medicine*. **In press.**
- **Wee SO,** Pitetti KH, Goulopoulou S, Collier SR, Guerra M, Baynard T. Impact of obesity and Down syndrome on peak heart rate and aerobic capacity in youth and adults. *Research in developmental disabilities*. Oct 24 2014;36C:198-206.
- Lee YH, Park SH, Yoon ES, Lee CD, **Wee S.O.**, Fernhall B, & Jae SY. Effects of Combined Aerobic and Resistance Exercise on Central Arterial Stiffness and Gait Velocity in Patients with Chronic Poststroke Hemiparesis. *Am J Phys Med Rehabil*. 2014

- Mestek, M.L. Plaisance P. E., Ratcliff L. A., Taylor J.K., **Wee S.O.** and Grandjean W. P. Aerobic exercise and postprandial lipemia: Issues on volume and frequency of exercise response. *Medicine and Science in Sports and Exercise*. 2009. 41:966.
- Moncada-Jimenez, J., Plaisance P. E., Araya-Ramirez F., **Wee T**., Mestek L. M., Grandjean W. P. and L. AragonVargas. Initial metabolic state and exercise-induced endotoxaemia are unrelated to gastrointestinal symptoms during exercise. *Journal of Sports Science and Medicine*. 2009. 8:252-258.
- Moncada-Jimenez, J., Plaisance E.P., Mestek M.L., **Wee T.**, Araya-Ramirez F., Grandjean P.W. and Aragon Vargas L. Duathlon performance unaltered by short-term changes in dietary fat and carbohydrates. Int J Sport Nutr Exer Metabolism. 2009. 19:47-60.
- Mestek, M.L., Plaisance P. E., Ratcliff L., Taylor J.K., **Wee S.O.**, & Grandjean W. P. Aerobic exercise and postprandial lipemia in men with metabolic syndrome. *Medicine & Science in Sports & Exercise.*, 40 (12): 2105 -2111, 2008.
- Mestek, M.L., Garner, J.C., Plaisance, E.P., Hilson, B.D., Alhassan, S., Taylor, J.K., **Wee, S.O.**, & Grandjean, W. P. Blood lipid responses after continuous & accumulated aerobic exercise. *International Journal of Sport Nutrition & Exercise Metabolism*, 16 (3): 245-254.2006.
- Alhasson, S., Reese, K.A., Mahurin, A.J., Plaisance, E.P., Hilson, B.D., Garner, J.C., **Wee, S.O.**, and P.W. Grandjean. Blood lipid responses to plantstanol ester supplementation and aerobic exercise training. *Metabolism* Vol. 55:541 549, 2006.

#### Oral Presentation

- Western Society of Kinesiology and Wellness: Hemodynamic and Peripheral Vascular Conductance in Individuals with Down Syndrome Following Hypovolemic Pressure Challenge. Reno, NV, 2017
- North American Federation of Adapted Physical Activity: Effect of Acute Aerobic Exercise on Cerebral Blood Flow and Cognitive function in Individuals with Down Syndrome. Edmonton, Canada, 2016
- Research Award Presentation at American College of Sports Medicine Annual meeting:

  Hemodynamic and Peripheral Vascular Conductance in Individuals with Down

  Syndrome Following Hypovolemic Pressure Challenge. Boston, MA, 2016

- Midwest American College of Sports Medicine Annual meeting: Sex Differences in Hemodynamic Responses Following 8 Weeks of Aerobic Exercise Training: Wave Separation Analysis. Merriville, IN, 2013
- 27th Annual International Technology and Persons with Disabilities Conference:

  Cardiorespiratory Response to Continuous Passive Exercise in People with Spinal Cord
  Injury. San Diego, CA, 2012
- **Invited Presentation:** Adapted Physical Activity for Children with Disability. Korean Educators and Parents Seminar, California State University Northridge, CA. 2011
- **International Congress Presentation:** Effect of Smoking in Blood Clotting Elements: XIII Simposio Internacional en Ciencias del Deporte, el Ejercicio y la Salud, Universidad de Costa Rica, San José, Costa Rica. 2006.

#### **Published Abstracts**

- Wee SO, Rosenberg AJ, Bunsawat K, Griffith GJ, Baynard T, Fernhall B. Responses in Arterial Distensibility and Compliance Following Lower Body Negative Pressure Challenge in Individuals with and without Down Syndrome. American College of Sports Medicine Annual meeting, Denver, CO, Abstracted: 2017
- Bunsawat K, Grigoriadis G, **Wee SO**, Griffith G, Brown MD, Phillips SA, Fadel PJ, Clifford PS, Fernhall B, Baynard T. *No Evidence of Impaired Functional Sympatholysis in Young Obese Adults. FASEB J.* April 2017; 31: 836.24.
- Rosenberg AJ, **Wee SO**, Schroeder EC, Grigoriadis G, Bunsawat K, Hilgenkamp TIM, Griffith GJ, Baynard T..The Effects of Acute Exercise on Cerebral Blood Flow and Cognition in Persons with Multiple Sclerosis. *FASEB J.* April 2017; 31: 842.4.
- **Wee SO**, Rosenberg AJ, Bunsawat K, Griffith GJ, Baynard T, Fernhall B. Carotid Vascular Blood Flow in Individuals with Down Syndrome Following Lower Body Negative Pressure Challenge. *FASEB J.* April 2017; 31: 840.21.
- Wee S. O., Rosenberg A., Bunsawat K., Griffith G., Baynard T., Fernhall B. *Higher Carotid Strain in Individuals with Down Syndrome at rest and during Hypovolemic Pressure Challenge*. Artery. 2016. Annual Meeting, Copenhagen, Denmark. Abstracted: 2016.
- Wee S. O., Rosenberg A., Bunsawat K., Griffith G., Baynard T., Fernhall B. *Vascular Function in individuals with Down Syndrome*. North American Artery. 6<sup>th</sup> Annual Meeting, Chicago, IL. Abstracted: 2016.
- **Wee S. O.,** Rosenberg A., Bunsawat K., Griffith G., Baynard T., Fernhall B., FACSM. *Hemodynamic and Peripheral Vascular Conductance in Individuals with Down*

- Syndrome Following Hypovolemic Pressure Challenge: American College of Sports Medicine Annual meeting, Boston, MA, Abstracted: 2016
- Wee S. O., Rosenberg A., Bunsawat K., Griffith G., Baynard T., Fernhall B., FACSM, Vascular Responses to Hypovolemic Pressure Challenge in Individuals with Down Syndrome: Experimental Biology, San Diego, CA, Abstracted 2016
- Wee S. O., Rosenberg A., Bunsawat K., Griffith G., Baynard T., Fernhall B., FACSM. *Vascular Responses to Hypovolemic Pressure Challenge in Individuals with Down Syndrome:*Midwest American College of Sports Medicine Annual meeting, Ft Wayne, IN. Oct, Abstracted: 2015
- Wee S. O., Griffith G., Klaren E. R., Motl W. R., Baynard T., Fernhall B., FACSM. Hemodynamic Responses Following 12 Weeks of Home-Based Exercise in Individuals with Multiple Sclerosis: Wave Separation Analysis. North American Artery. 5<sup>th</sup> Annual Meeting, Chicago, IL. Abstracted: 2015.
- Bunsawat K., Kappus M. R, Rosenberg J. A., Shafer B., **Wee S. O.**, Baynard T., FACSM Brown D. M., FACSM, Haus M. J, Phillips A. S., Fernhall B., FACSM. *Autonomic Function during Exercise in Older Adults: The Influence of Antioxidant Supplementation*. American College of Sports Medicine Annual Meeting, San Diego, CA. Abstracted: 2015.
- Rosenberg J. A., Bunsawat K., Kappus M. R, Shafer B., **Wee S. O.**, Baynard T., FACSM Brown D. M., FACSM, Haus M. J, Phillips A. S., Fernhall B., FACSM. *Racial Differences in HRV in Response to AN Acute Bout of Forearm Exercise*. American College of Sports Medicine Annual Meeting, San Diego, CA. Abstracted: 2015.
- Griffith G., **Wee S. O.,** Klaren E. R., Thur L., Kappus M. R., Shafer B., Bunsawat K., Motl R., Baynard T., Fernhall B., FACSM. *HOME-BASED EXERCISE IN PERSONS WITH MULTIPLE SCLEROSIS: FITNESS AND WALKING MOBILITY PRELIMINARY RESULTS*. American College of Sports Medicine Annual Meeting, San Diego, CA. Abstracted: 2015.
- Wee S. O., Ranadive M. S., Kappus M. R., Cook M., Yan H., Lane D. A., Fernhall B., FACSM, Hemodynamic Responses Following Acute Inflammation in Older adults: Wave Separation Analysis. American College of Sports Medicine Annual Meeting, San Diego, CA. Abstracted: 2015.
- Kappus M. R, Shafer B, **Wee S. O.**, Baynard T, Haus M. J, Phillips A. S, Brown D. M., Fernhall B. *Racial Differences in Macrovascular and Microvascular Function Following Acute Antioxidant Supplementation*. Experimental Biology, San Diego, CA, Abstracted 2015.
- **Wee S. O.**, Lane A, Bunsawat K, Rosenberg A, Fernhall B. *Sex Differences in Hemodynamic Responses Following acute inflammation: Wave Separation Analysis.* North American Artery. 4<sup>th</sup> Annual Meeting, Chicago, IL. Abstracted: 2014.

- Wee S. O., Rosenberg, A.J., Lane, A., Kappus, R.M., Yan H., Ranadive, S., & Fernhall, B. Sex Differences in Hemodynamic Responses Following 8 Weeks of Aerobic Exercise Training: Wave Separation Analysis. American College of Sports Medicine Annual Meeting, Orlando, FL. Abstracted: 2014.
- Wee S. O., Rosenberg, AJ, Ranadive, S, Lane A, Kappus RM, Fernhall, B. Sex Differences in Post Exercise Hypotension. North American Artery. 3<sup>rd</sup> Annual Meeting, Chicago, IL. Abstracted: 2013.
- Wee S. O., Rosenberg, AJ, Ranadive, S, Lane A, Kappus RM, Fernhall, B. Sex Differences in Hemodynamic Responses Following 8 Weeks of Aerobic Exercise Training: Wave Separation Analysis: Midwest American College of Sports Medicine Annual meeting, Merriville, IN. Abstracted: 2013
- Wee S. O., Pitett K, Guerra, I M, Baynard, T & Fernhall, B. *Impact of Obesity and Down Syndrome on Maximal Heart Rate and Work Capacity in Youth and Adults with Intellectual Disability*. American College of Sports Medicine Annual Meeting, Indianapolis, IN. Abstracted: 2013.
- Wee S. O., Konstantinos K. D., Jung T., & Stacyk S. Cardiorespiratory Response to Continuous Passive Motion Exercise in People with Spinal Cord Injury. American College of Sports Medicine Annual Meeting, San Francisco, CA. Abstracted: 2012.
- Mestek M.L., E.P. Plaisance, L. Ratcliff, J.K. Taylor, **Wee S. O.**, & P.W. Grandjean (FACSM). *Investigating aerobic exercise characteristics on postprandial lipemia in men with metabolic syndrome*. American College of Sports Medicine Annual Meeting, Indianapolis, IN. Abstracted: *Medicine and Science in Sports and Exercise*. Vol.40 (5) No. 1748, 2008.
- Wee S-O., A. Reisi, E.P. Plaisance, M.L. Mestek, J.K. Taylor, F. Araya- Ramírez and P.W. Grandjean. Immediate cardiovascular changes after cigarette smoking and moderate-intensity aerobic exercise. American College of Sports Medicine Annual Meeting, New Orleans, LA. Abstracted: Medicine and Science in Sports and Exercise. Vol. 39 (5) No. 1555, 2007.
- Araya- Ramírez F., **Wee S-O.**, A.J. Mahurin, E.P. Plaisance, M.L. Mestek, D. Dean and P.W. Grandjean. *Aerobic fitness, waist girth and markers of metabolic syndrome in women.*American College of Sports Medicine Annual Meeting, New Orleans, LA. Abstracted: *Medicine and Science in Sports and Exercise*.Vol.39 (5) No. 1547, 2007.
- Alhassan S., Reese.A. K, Plaisance P. E., Hilson.D. B, Garner C. J., Wee S-O. and Grandjean W.
  P. Effects of dietary plant stanol ester margarine and aerobic exercise training on blood lipid concentrations. American College of Sports Medicine Annual Meeting, Nashville, TN. Abstracted: Medicine and Science in Sports and Exercise. Vol.37 (5), No. 1973, 2005

- Garner J.C., Mestek L. M., Plaisance P. E, Hilson.D. B, Alhassan S., Taylor K. J, **Wee S-O.** and P.W. Grandjean. *Blood lipid responses after continuous and accumulated aerobic exercise:* American College of Sports Medicine Annual Meeting, Nashville, TN. Abstracted: *Medicine and Science in Sports and Exercise*. Vol.37 (5), No. 1969, 2005.
- Grandjean P.W., A.B. Grandjean, S. Alhasson, E.P. Plaisance, K.A. Reese, B.D. Hilson, J.C. Garner & **Wee S-O.** The influence of fitness status on cardiorespiratory responses to continuously graded & ramped treadmill protocols. American College of Sports Medicine Annual Meeting, St. Louis, Missouri. Medicine and Science in Sports and Exercise. 36: S114, 05/2004.

# **Professional Memberships**

American College of Sports Medicine (ACSM) American Heart Association (AHA)