

Tracy Baynard, Ph.D., FACSM, FTOS
Curriculum Vitae

Address: University of Illinois at Chicago
Integrative Physiology Laboratory
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1. EDUCATION:

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| Ph.D. | Syracuse University— Exercise Physiology/Science Education | June 2007 |
| | Advisor—Jill A. Kanaley | |
| M.S. | The George Washington University— Exercise Science | Aug 2001 |
| | Specialization Track: Clinical Exercise Physiology | |
| B.A. | Western Maryland College (now—McDaniel College) | May 1993 |
| | Major: Physical Education | |
| | Minors: Exercise Science, Athletic Training | |

2. PROFESSIONAL EXPERIENCE:

1. University of Illinois at Chicago (8/11-present)

1. Associate Professor—July 2017-present
2. Director, Integrative Physiology Laboratory—June 2017-present
3. Assistant Professor— (Aug/2011-Aug/2017)
4. University of Illinois Cancer Center—member (Feb 2012-present)
5. Honors College—Faculty Fellow (Sept 2011-present)
6. Division of Cardiology, Department of Medicine—Courtesy Appointment—Assistant Professor (4/16-present)

2. University of Illinois at Urbana-Champaign (8/08-present)

1. Courtesy Appointment, Associate Professor (8/17-present)
2. Courtesy Appointment, Assistant Professor (8/11-8/17)
3. Assistant Professor (8/08-8/11)
4. Division of Nutritional Sciences Faculty Member (6/09-8/11)
5. Director, Lifetime Fitness Program (8/10-8/11)

B. University of Illinois at Urbana-Champaign (7/07-8/08)

1. Post-doctorate Research Associate; Mentor: Jeffrey A. Woods, Ph.D.

C. Syracuse University (8/2001-08/06)

1. *Project Coordinator/Research Assistant: (NY State Diabetes Bridge Grant, NIH 1R21DK063179-01A), 2003-06.*
2. *Research Assistant: (National Institute of Disability and Rehabilitation Research Grant) 2004-06.*
3. *Research Assistant (American Heart Association Grant-In-Aid), 2001-04*
4. *Graduate Assistant Exercise Science Department: 2001-03*

D. The George Washington University Medical Center (1999-2001)

1. *Graduate Assistant Exercise Science Program, 8/2000-8/2001*
2. *Research Project Assistant, 8/1999-8/2001*
3. *Research Intern, Summer 2000*
4. *Graduate Assistant-Athletic Department, 11/99-5/2000*

3. SCHOLARLY ACTIVITY

A. Refereed Manuscripts:

1. BM Sandroff, RE Bollaert, LA Pilutti, ML Peterson, **T Baynard**, B Fernhall, E McAuley, RW Motl. Multimodal exercise training in multiple sclerosis: a randomized controlled trial in persons in the second stage of the disease. In Press: *Contemporary Clinical Trials*, 2017.
2. EC Schroeder, AJ Rosenberg, TIM Hilgenkamp, DW White, **T Baynard**, B Fernhall. Effect of upper body position on arterial stiffness: Influence of hydrostatic pressure and autonomic function. In Press: *J Hypertension*, 2017.
3. RM Kappus, K Bunsawat, MD Brown, S Phillips, JM Haus, **T Baynard**, B Fernhall. Effect of oxidative stress on racial differences in vascular function at rest and during hand grip exercise. *J Hypertension*. Jun 7. doi: 10.1097/HJH.0000000000001433. [Epub ahead of print], 2017.
4. K Bunsawat, S Ranadive, AD Lane-Cordova, H Yan, RM Kappus, B Fernhall, **T Baynard**. The effect of acute maximal exercise on post-exercise hemodynamics and central arterial stiffness in obese and normal-weight individuals. *Physiologic Reports*. Apr;5(7). pii: e13226. doi: 10.14814/phy2.13226, 2017.
5. B Shafer, S Ranadive, **T Baynard**, R Motl, B Fernhall. The implications of poor sleep quality on arterial health in persons with multiple sclerosis. *Artery Research*. In Press, 2017.
6. H Yan, SM Ranadive, AD Lane-Cordova, RM Kappus, MA Behun, MD Cook, JA Woods, KR Wilund, **T Baynard**, JR Halliwill, B Fernhall. The effect of acute aerobic exercise and histamine receptor blockade on arterial stiffness in African-Americans and Caucasians. *J Applied Physiology*. 122:386-95, 2017.
7. Motl RW, Sandroff BM, Pilutti LA, Klaren RE, **Baynard T**, Fernhall B. Physical activity, sedentary behavior, and aerobic capacity in persons with multiple sclerosis. *Journal of the Neurological Sciences*. 372:342-346, 2017.
8. AD Lane-Cordova, SM Ranadive, RM Kappus, MD Cook, SA Phillips, JA Woods, KR Wilund, **T Baynard**, B Fernhall. Aging, not age-associated inflammation, determines blood pressure and endothelial responses to acute inflammation. *Journal of Hypertension*. 34:2402-2409, 2016.
9. **T. Baynard**, R Arena, J Myers, LA Kaminsky. The role of body habitus in predicting cardiorespiratory fitness: The FRIEND Registry. *International J Sports Medicine*. 37:863-9, 2016.
10. K. Bunsawat, **T. Baynard**. Cardiac autonomic modulation and blood pressure responses to isometric handgrip and submaximal cycling exercise in individuals with Down syndrome. *Clinical Autonomic Research*, 26:253-260, 2016.

T. Baynard

Last updated 7-17-17

11. H Yan, MA Behun, MD Cook, SM Ranadive, AD Lane, RM Kappus, JA Woods, KR Wilund, **T Baynard**, JR Halliwill, B Fernhall. Differential post-exercise blood pressure responses between blacks and caucasians. *PLoS One*, 11(4):e0153445. doi: 10.1371/2016/journal.pone.0153445, 2016
12. AD Lane-Cordova, SA Phillips, **T Baynard**, JA Woods, RW Motl, B Fernhall. Effects of aging and physical activity on blood pressure and endothelial function during acute inflammation. *Experimental Physiology*. 101:962-71, 2016.
13. P Sun, H Yan, S Ranadive, A Lane-Cordova, RM Kappus, K Bunsawat, **T Baynard**, M Hu, L Shichang, B Fernhall. Autonomic recovery is delayed in Chinese compared with Caucasian following treadmill exercise. *PLoS One*. 11(1):e147104 (doi: 10.1371/journal.pone.0147104), 2016.
14. Bunsawat K, DW White, RM Kappus, **T Baynard**. Caffeine delays autonomic recovery following acute exercise. *Eur J Prev Cardiol*. 22:1473-9, 2015.
15. G. Griffith, RE Klaren, RW Motl, **T Baynard**, B Fernhall. Experimental protocol of a randomized controlled trial investigating exercise, subclinical atherosclerosis, and walking mobility in persons with multiple sclerosis. *Contemporary Clinical Trials*. 41:280-6, 2015.
16. Bunsawat, K, S Goulopoulou, SR Collier, A Figueroa, KH Pitetti, B Fernhall, **T. Baynard**. Normal HR with tilt, yet autonomic dysfunction in persons with Down syndrome. *Medicine Science Sports & Exercise*. 47:250-56, 2015.
17. Y. Pincu, M. Linden, K Zou, **T Baynard**, M Boppart. The effects of high fat diet and moderate exercise on TFG β 1 and collagen deposition in mouse skeletal muscle. *Cytokine*. 73:23-9, 2015.
18. S. Wee, KH. Pitetti, M. Guerra, **T. Baynard**. Impact of obesity and Down syndrome on maximal heart rate and aerobic capacity in youth and adults with intellectual disabilities. *Research in Developmental Disabilities*. 36:198-206, 2014.
19. Sun P, Yan H, Ranadive S, Lane A, Kappus R, Bunsawat K, **Baynard T**, Li S, Fernhall B. Blood pressure changes following aerobic exercise in Caucasian and Chinese decent individuals. *International Journal of Sports Medicine*, 36:189-96, 2015.
20. GR Oviedo, M Guerra-Balic, **T. Baynard**, C Javierre. Effects of aerobic, resistance and balance training in adults with intellectual disabilities. *Research in Developmental Disabilities*. 35:2624-34, 2014.
21. Lane AD, RM Kappus, K Bunsawat, SM Ranadive, H Yan, S Phillips, **T. Baynard**, JA Woods, R Motl, B Fernhall. Age-related ventricular-vascular coupling during acute inflammation in humans: effect of physical activity. *European J Prev Cardiol*. 22:904-11, 2015.
22. M. Linden, Y. Pincu, SA Martin, JA Woods, **T. Baynard**. The progression of white adipose tissue inflammatory gene expression during concomitant high-fat diet feeding and exercise. *Physiological Reports*. 2:e12071, (July) 2014. Included in the Special Issue (Dec 2014): New Insights in Energy Homeostasis, Fat and Obesity
23. **T. Baynard**, S Goulopoulou, RF Sosnoff, B Fernhall, JA Kanaley. Cardiovagal modulation and efficacy of aerobic exercise training in obese individuals. *Medicine Science Sports & Exercise*. 46:369-75, 2014.
24. CA Fahs, LM Rossow, H Yan, SM Ranadive, S Agiovlasis, KR Wilund, **T Baynard**, B Fernhall. Resting and post-exercise arterial-ventricular coupling in endurance trained men and women. *Journal of Human Hypertension*. 27:552-6, 2013.
25. **T. Baynard**, V.J. Vieira, RJ Valentine, JA Woods. Exercise training reduces inflammatory gene expression in white adipose tissue of young mice. *Mediators of Inflammation*. 2012:article #767953, 2012.

26. York, J.M., Blevins, N.A., **Baynard, T.**, Freund, G.G. Mouse Testing Methods in Psychoneuroimmunology: An Overview of How to Measure Sickness, Depressive/Anxietal, Cognitive, and Physical Activity Behaviors. *Methods in Mol Biol.* 934:243-76, 2012.
27. JA Kanaley, S Goulopoulou, RF Sosnoff, **T. Baynard**, R Carhart, Jr., RS Weinstock, B Fernhall. Exercise training improves hemodynamic recovery to isometric exercise in obese men with type 2 diabetes but not in obese women. *Metabolism.* 61:1739-46, 2012.
28. AD Lane, S Ranadive, L Rossow, H Yan, **T. Baynard**, K. Wilund, B Fernhall. Aortic reservoir function is attenuated following steady state or interval exercise. *Clinical Physiology & Functional Imaging.* 32:353-60, 2012.
29. Ranadive S., H Yan, M Weikert, AD Lane, MA Linden, **T Baynard**, RW Motl, B Fernhall. Vascular dysfunction and physical activity in multiple sclerosis. *Medicine Science Sports Medicine.* 44:238-42, 2012.
30. Agiovlasis S, **T. Baynard**, KH Pitetti, B Fernhall. Heart rate complexity in response to upright tilt in persons with Down syndrome. *Research in Developmental Disabilities.* 32:2102-7, 2011.
31. Cowley PM, Ploutz-Snyder LL, **Baynard T**, Heffernan KS, Jae SY, Lee M, Pitetti KH, Reiman MP, Fernhall B. The effect of progressive resistance training on leg strength, aerobic capacity, and functional tasks of daily living in persons with Down syndrome. *Disability and Rehabilitation.* 33:2229-36 , 2011.
32. Tomas, T., Santa-Clara, H, Monteiro, E, **Baynard, T**, Freire, A, Carnero, E., Bruno PM, Barroso, E, Sardinha LB, and Fernhall, B. Body Composition, Muscle Strength and Physical Disability Risk in Liver Transplanted Familial Amyloidotic Polyneuropathy Patients. *Clinical Transplantation.* 25:E406-14, 2011.
33. Agiovlasis S, SR Collier, **T Baynard**, GH Echols, S Goulopoulou, A Figueroa, MW Beets, KH Pitetti, B Fernhall. Autonomic response to upright tilt in people with and without Down syndrome. *Research in Developmental Disabilities.* 31:857-63, 2010.
34. Rossow L, H Yan, CA Fahs, SM Ranadive, S Agiovlasis, KR Wilund, **T Baynard**, B Fernhall. Post-exercise hypotension in an endurance-trained population of men and women following high-intensity interval and steady-state cycling. *American Journal of Hypertension.* 23:358-67, 2010.
35. Goulopoulou S, **T Baynard**, RM Franklin, B Fernhall, R Carhart Jr, R Weinstock, JA Kanaley. Exercise training improves cardiovascular autonomic modulation in response to glucose ingestion in obese adults with and without type 2 diabetes mellitus. *Metabolism.* 59:901-10, 2010.
36. Cowley PM, LL Ploutz-Snyder, **T Baynard**, K Heffernan, SY Jae, S Hsu, M Lee, KH Pitetti, MP Reiman, B Fernhall. Physical fitness predicts functional tasks in individuals with Down syndrome. *Medicine Science Sports & Exercise.* 42:388-93, 2010
37. Weil, B.R., S. Byrne, **T. Baynard**, J.A. Kanaley. Vascular function is impaired early after the initiation of chronic cigarette smoking. *Artery Research.* 3:111-14, 2009.
38. Kanaley JA, S Goulopoulou, RM Franklin, **T Baynard**, ME Holmstrup, R Carhart, Jr, RS Weinstock, B Fernhall. Plasticity of heart rate signaling and complexity with exercise training in obese individuals with and without type 2 diabetes. *Int J Obesity.* 33:1198-1206, 2009.
39. **T. Baynard**, R. Carhart Jr., R.S. Weinstock, L.L. Ploutz-Snyder, J.A. Kanaley. Acute hyperglycemia attenuates arterial function, with no change following short-term exercise training in obese persons, with and without the metabolic syndrome. *European Journal of Applied Physiology.* 107:299-308, 2009.

40. Vieira VJ, RJ Valentine, K Wilund, N Antao, **T Baynard**, JA Woods. Effects of exercise and low-fat diet on adipose tissue inflammation and metabolic complications in obese mice. *American Journal of Physiology; Endocrinology & Metabolism*. 296:E1164-1171, 2009.
41. Vieira VJ, L Hu, RJ Valentine, E McAuley, EM Evans, **T Baynard**, JA Woods. Reductions in trunk fat and perceived stress predict cardiovascular exercise training-related reductions in C-Reactive Protein in female, but not male, previously sedentary older adults. *Brain, Behavior & Immunity*. 23:485-491, 2009.
42. Heffernan, KS, JJ Sosnoff, E Ofori, SY Jae, **T Baynard**, SR Collier, S Goulopoulou, A Figueroa, JA Woods, KH Pitetti, B Fernhall. Complexity of force output during static exercise in individuals with Down syndrome. *Journal of Applied Physiology*. 106:1227-33, 2009.
43. Valentine, RJ, EM Evans, VJ Vieira, **T Baynard**, L Hu, E McAuley, JA Woods. Sex differences in the relationship between obesity, C-Reactive protein, physical activity, sleep quality and fatigue in older adults. *Brain, Behavior, & Immunity*. 23:643-8, 2009.
44. Fernhall, B., **T. Baynard**, S.R. Collier, A. Figueroa, S. Goulopoulou, G.H. Kamimori, K.H. Pitetti. Reduced catecholamine response to maximal exercise in persons with Down syndrome. *Am J Cardiology*. 103:724-726, 2009.
45. **T. Baynard**, K. Pitetti, M. Guerra, B. Fernhall. Age-related changes in aerobic capacity in persons with mental retardation: A 20-year review. *Medicine Science Sports & Exercise*. 40:1984-89, 2008.
46. Franklin, R.M., **T Baynard**, R.S. Weinstock, S. Goulopoulou, R. Carhart, Jr., R. Ploutz-Snyder, A. Figueroa, B. Fernhall, JA Kanaley. Autonomic responses to physiological stressor in women with type 2 diabetes. *Clinical Autonomic Research*. 18:66-73, 2008.
47. **T. Baynard**, R. Carhart Jr., L.L. Ploutz-Snyder, R.S. Weinstock, J.A. Kanaley. Short-term training effects on diastolic function in obese individuals, with and without the metabolic syndrome. *Obesity*. 16:1277-83, 2008.
48. **T. Baynard**, H.M. Jacobs, C.M. Kessler, J.A. Kanaley, B. Fernhall. Vasodilatory capacity and fibrinolytic potential in endurance and resistance-trained men. *European J of Applied Physiology*. 101:595-602, 2007.
49. Unnithan, V.B., **T. Baynard**, C.R. Potter, P. Barker, K.S. Heffernan, E. Kelly, G. Yates, B. Fernhall. An exploratory study of cardiac function and oxygen uptake during cycle ergometry in overweight children. *Obesity*. 15:2673-82, 2007.
50. Kanaley, J.A., **T. Baynard**, R.M. Franklin, R.S. Weinstock, S. Goulpoulou, R. Carhart, Jr., A. Figueroa, B. Fernhall. The effects of a glucose load and sympathetic challenge on autonomic function in obese women with and without type 2 diabetes. *Metabolism*. 56:778-85, 2007.
51. Figueroa, A., **T. Baynard**, B. Fernhall, R. Carhart, J.A. Kanaley. Endurance training improves post-exercise cardiac autonomic modulation in obese women with and without type 2 diabetes. *European J of Applied Physiology*. 100:434-444, 2007.
52. Figueroa, A., **T. Baynard**, B. Fernhall, R. Carhart, J.A. Kanaley. Cardiovascular autonomic modulation after brisk walking in middle-aged women with type 2 diabetes and obesity. *European J of Cardiovascular Prevention and Rehabilitation*. 14:237-243, 2007.
53. Goulopoulou, S., **T. Baynard**, S. Collier, I. Giannopoulou, A. Figueroa, B. Fernhall. Cardiac autonomic control in individuals with Down syndrome. *American J Mental Retardation*. 111:27-34, 2006.

54. Fernhall, B., A. Figueroa, S. Collier, S. Goulopoulou, I. Giannopoulou, **T. Baynard**. Resting metabolic rate is not reduced in adult obese individuals with Down syndrome. *Mental Retardation*. 43:391-400, 2005.
55. Heffernan, K.S, **T. Baynard**, S. Goulopoulou, I. Giannopoulou, S.R. Collier, A. Figueroa, B. Fernhall. Baroreflex sensitivity during static exercise in individuals with Down syndrome. *Medicine Science Sports and Exercise*. 37:2026-31, 2005.
56. **Baynard, T.**, R.M. Franklin, S. Goulopoulou, R. Carhart, J.A. Kanaley. Effect of a single vs. multiple bouts of exercise on glucose control in women with type 2 diabetes. *Metabolism*. 54:989-994, 2005.
57. Giannopoulou, I., B. Fernhall, R. Carhart, R.S. Weinstock, **T. Baynard**, A. Figueroa, J.A. Kanaley. Effects of diet and/or exercise on the adipocytokine and inflammatory cytokine levels of postmenopausal women with type 2 diabetes. *Metabolism*. 54:866-875, 2005.
58. Figueroa, A., S. Collier, **T. Baynard**, I. Giannopoulou, S. Goulopoulou, B. Fernhall. Impaired vagal modulation of heart rate in individuals with Down syndrome. *Clinical Autonomic Research*. 15:45-50, 2005.
59. Fernhall, B., A. Figueroa, S. Collier, **T. Baynard**, I. Giannopoulou, S. Goulopoulou. Blunted heart rate response to upright tilt in individuals with Down syndrome. *Archives Physical Medicine and Rehabilitation*. 86:813-818, 2005.
60. **Baynard, T.**, V.B. Unnithan, K.H. Pitetti, B. Fernhall. Determination of ventilatory threshold in individuals with mental retardation, with and without Down syndrome. *Pediatric Exercise Science*. 16:126-137, 2004.
61. **Baynard, T.**, W.C. Miller, B. Fernhall. Effects of exercise on vasodilatory capacity in endurance and resistance trained individuals. *European Journal of Applied Physiology*. 89:69-73, 2003.
62. Rowland, T.W., V.B. Unnithan, B. Fernhall, **T. Baynard**, C. Lange. Left ventricular response to dynamic exercise in young cyclists. *Medicine Science Sports & Exercise*. 34:637-642, 2002.

B. Invited Reviews:

1. B. Fernhall, **T. Baynard**, G. Mendonca. Reduced work capacity in individuals with Down syndrome: A consequence of autonomic dysfunction? *Exerc Sport Sci Rev*. 41:138-47, 2013.
2. K. Pitetti, **T. Baynard**, S. Agiovlasitis. Down syndrome, physical activity and exercise. *Journal of Health and Sport Science*. 2:47-57, 2013.
3. S. Phillips, LP Cahalin, K. Vukovic, **T. Baynard**. "It takes a village: defining the system-contributors to exercise limitations in heart failure". Part of: Exercise & Rehabilitation in Heart Failure: A Physiologic and Clinical Perspective. *Heart Failure Clinics*. 11:1-16, 2015.

C. Book Chapters:

1. Fernhall and **T. Baynard**. Down Syndrome and Exercise Testing/Training. *Clinical Exercise Physiology*. 3rd Edition. Editors- Ehrman, Gordon, Visich, Keteyian. Human Kinetics, Champaign, IL. pp 617-31, 2013.
2. K. Pitetti, **T. Baynard**, S. Agiovlasitis. ACSM Guidelines for Exercise Testing and Prescription. 10th ed. Chapter 11—Exercise Testing and Prescription for Populations with Other Chronic Diseases and Health Conditions: *Intellectual Disability and Down Syndrome*. Wolters Kluwer, Philadelphia, PA. pp 328-334, 2017.

3. B. Fernhall and **T. Baynard**. “Down Syndrome & Intellectual Disabilities” in *Cardiopulmonary Exercise Testing in Children and Adolescents*. Editor- Thomas W. Rowland. Human Kinetics, Champaign, IL. In Press, 2017.
4. B Fernhall and **T. Baynard**. Down Syndrome and Exercise Testing/Training. *Clinical Exercise Physiology*. 4th Edition. Editors- Ehrman, Gordon, Visich, Keteyian. Human Kinetics, Champaign, IL. In Press, 2017.

D. Manuscripts In Review:

TIM Hilgenkamp, **T Baynard**. Do individuals with intellectual disability have a lower peak heart rate and maximal oxygen uptake? *Journal of Applied Research in Intellectual Disabilities*. 2017.

M Wouters, TIM Hilgenkamp, **T Baynard**. Children with intellectual disability, with or without Down syndrome, have lower peak heart and oxygen uptake than typically developing children. *Med Sci Sports Exerc*, 2016.

AJ Rosenberg, AD Lane-Cordova, SO Wee, DW White, TIM Hilgenkamp, B Fernhall, **T Baynard**. Healthy aging and carotid performance: strain measures may be superior to beta-stiffness index. Submitted to *Hypertension Research* 2017.

K Bunsawat, G Grigoriadis, PJ Fadel, PS Clifford, B Fernhall, **T Baynard**. Preserved ability to blunt sympathetically-mediated vasoconstriction in exercising skeletal muscle of young obese humans. Submitted to *Am J Physiology*, 2017.

E. Manuscripts/Chapters In Preparation:

T. Baynard, TIM Hilgenkamp, R. Motl, B. Fernhall. Inflammatory markers, body habitus and multiple sclerosis. AJ Rosenberg, **T Baynard**. Effect of acute resistance exercise on systemic arterial hemodynamics and cerebral blood flow dynamics.

G Grigoriadis, **T Baynard**. Correlation between leg strength and arterial stiffness—differential sex responses.

K Bunsawat, **T Baynard**. Obesity and post-exercise hypotension.

K Bunsawat, **T Baynard**. Obesity, PEH and HRV.

SO Wee, **T Baynard**, B Fernhall. Down syndrome and lower body negative pressure.

F. Refereed Scientific Abstracts:

1. **Waddell, T.B.**, M. Renaud, K. Pitetti, M. Guerra, B. Fernhall. Heart rate variability at rest and exercise in persons with Down syndrome. *Science & Sports*. Presented in Paris, FRANCE. 15:316 (100), 2000.
2. **Waddell, T. B.**, M. Giglio, W. Johnston, W.C. Miller, B. Fernhall. Immediate VO₂ and heart rate response to leg extension using super slow and circuit weight lifting techniques. *Med. Sci. Sports Exerc*. 33:S331 (1858), 2001.
3. Ardavani, S., **T.B. Waddell**, B. Fernhall. Physical fitness and quality of life of patients with myasthenia gravis (MG). *Med. Sci. Sports Exerc*. 33:S49 (276), 2001.
4. Giglio, M., **T.B. Waddell**, W. Johnston, W.C. Miller, B. Fernhall. Acute physiologic effects of a super slow weight lifting session in untrained healthy individuals. *Med. Sci. Sports Exerc*. 33:S25 (140), 2001.
5. Jenkins, A., **T.B. Waddell**, M. Moreland, B. Fernhall. Effect of oxygenized water on percent oxygen saturation and performance during exercise. *Med. Sci. Sports Exerc*. 33:S167 (945), 2001.

(Note: *T.B. Waddell was former name of T. Baynard*)

T. Baynard

Last updated 7-17-17

6. **Baynard, T.**, W.C. Miller, B. Fernhall. Effects of acute exercise on endothelial function in endurance and resistance trained individuals. *Med. Sci. Sports Exerc.* 34:S132 (739), 2002.
7. Fernhall, B., A. Figueroa, I. Giannopoulou, S. Collier, **T. Baynard**, M. Otterstetter. Chronotropic incompetence and autonomic dysfunction in individuals with Down syndrome. *Med. Sci. Sports Exerc.* 34:S47 (254), 2002.
8. **Baynard, T.**, C. Miller, V. Unnithan, J.A. Kanaley, K. Pitetti, B. Fernhall. Determination of ventilatory threshold in adolescents with mental retardation, with and without Down syndrome. *Ped. Exerc. Sci.* 15:99-100, 2003.
9. **Baynard, T.**, L. Szymanski, H. Santa Clara, B. Fernhall. Racial differences in regional weight loss after exercise training does not alter cardiovascular risk. *Med. Sci. Sports Exerc.* 35:S374 (2079), 2003.
10. S. Collier, **T. Baynard**, A. Figueroa, F. Giannopoulou, B. Fernhall. The effect of handgrip exercise on heart rate variability in Down syndrome. *Med. Sci. Sports Exerc.* 35:S319 (1767), 2003.
11. Figueroa, S. Collier, **T. Baynard**, I. Giannopoulou, B. Fernhall. Heart rate variability during cold pressor test in Down syndrome. *Med. Sci. Sports Exerc.* 35:S406 (2264), 2003.
12. Fernhall, A. Figueroa, S. Collier, I. Giannopoulou, S. Goulopoulou, **T. Baynard**. Resting metabolic rate is not reduced in obese individuals with Down syndrome. *Med. Sci. Sports Exerc.* 35:S181 (1007), 2003.
13. **Baynard, T.**, R. Franklin, S. Goulopoulou, J.A. Kanaley. No difference in glycemic response following single or multiple bouts of acute exercise. *Med. Sci. Sports Exerc.* 36:S21(0160), 2004.
14. Franklin, R., **T. Baynard**, S. Goulopoulou, J.A. Kanaley. Single vs. multiple bout training on glycemic control and lipidemia in obese women. *Med. Sci. Sports Exerc.* 36:S189 (1344), 2004.
15. Figueroa, A., **T. Baynard**, J.A. Kanaley. Hemodynamic comparisons of post-dynamic submaximal exercise in obese women with and without type 2 diabetes. *Med. Sci. Sports Exerc.* 36:S211 (1459), 2004.
16. Goulopoulou, S. **T. Baynard**, I. Giannopoulou, S. Collier, A. Figueroa, B. Fernhall. Factors contributing to heart rate variability in individuals with mental retardation with or without Down syndrome. *Med. Sci. Sports Exerc.* 36:S129 (0894), 2004.
17. Heffernan, K., **T. Baynard**, S. Goulopoulou, I. Giannopoulou, S. Collier, A. Figueroa, B. Fernhall. Alterations in baroreflex sensitivity do not explain attenuated responses to sympathoexcitation in Down syndrome. *Med. Sci. Sports Exerc.* 36:S157 (1091), 2004.
18. Fernhall, B., **T. Baynard**, S. Goulopoulou, S. Collier, A. Figueroa. Reduced Sympathetic Modulation on the SA-node in response to upright tilt is related to blunted maximal heart rate in individuals with Down syndrome. *Med. Sci. Sports Exerc.* 36:S129 (0895), 2004.
19. **Baynard, T.**, S. Collier, A. Figueroa, S. Goulopoulou, K. Pitetti, M. Beets, B. Fernhall. Hemodynamic comparisons between adolescents and middle-aged adults with Down syndrome during isometric and aerobic exercise. *Pediatric Exercise Science*, 2005.
20. Fernhall, B., K. Pitetti, M. Guerra, **T. Baynard**. Decreases in VO_{2peak} and maximal heart rate from adolescence to adulthood in individuals with mental retardation, including Down syndrome: a cross-sectional study. *Pediatric Exercise Medicine*, 2005.
21. Kanaley, J.A., **T. Baynard**, R.M. Franklin, S. Goulopoulou, R. Carhart, R.S. Weinstock. Glucose ingestion does not affect heart rate variability in non-obese and obese women. Presented at North American Association for the Study of Obesity, Las Vegas, NV, 2004.
22. **Baynard, T.**, H.M. Jacobs, C.M. Kessler, J.A. Kanaley, B. Fernhall. Fibrinolytic potential and vasodilatory capacity following acute exercise in men. *Med Sci Sports Exerc.* 37: S65 (376), 2005.

23. Kanaley, J.A., **T. Baynard**, R. Franklin, R. Carhart, Jr., A. Figueroa, S. Goulopoulou, B. Fernhall. Single vs. multiple bouts of exercise similarly affect heart rate variability. *Med Sci Sports Exerc.* 37: S5 (64), 2005.
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145. Griffith G, SO Wee, RE Klaren, RW Motl, **T Baynard**, B Fernhall. Multiple sclerosis patients do not show changes in wave intensity analysis following home-based exercise. *Experimental Biology*, 2017.
146. Schroeder EC, TIM Hilgenkamp, AJ Rosenberg, DW White, **T Baynard**, B Fernhall. Hydrostatic pressure alone, not autonomic activation, increases arterial stiffness with torso inclination. *Experimental Biology*, 2017.
147. Thessa Hilgenkamp, Elizabeth C. Schroeder, Daniel W. White, **Tracy Baynard**, Bo Fernhall. Blunted autonomic response to head up tilt in individuals with intellectual disabilities. *Experimental Biology*, 2017.
148. Sang Ouk Wee, Alexander J. Rosenberg, Kanokwan Bunsawat, Garrett J. Griffith, **Tracy Baynard**, Bo Fernhall. Carotid Vascular Blood Flow in Individuals with Down Syndrome Following Low Body Negative Pressure Challenge. *Experimental Biology*, 2017.
149. Saed B, G Garrett, SO Wee, REK Bollaert, RW Motl, **T Baynard**, B Fernhall. The effect of home-based aerobic exercise on perceived quality of life in multiple sclerosis patients. *Experimental Biology*, 2017.
150. *G Griffith, RE Klaren, SO Wee, RW Motl, **T Baynard**, B Fernhall. Home-based aerobic exercise improves resistance artery function in multiple sclerosis patients. *North American Artery*, 2017. (*competitive selection for 1 of 10 oral presentation slots)

151. *EC Schroeder, AD Lane-Cordova, SM Ranadive, **T Baynard**, B Fernhall. Influence of sex and fitness on the vascular response to acute inflammation. *North American Artery*, 2017. (*competitive selection for 1 of 10 oral presentation slots)
152. *G Grigoriadis, AJ Rosenberg, SO Wee, EC Schroeder, K Bunsawat, **T Baynard**. Sex differences in carotid strain following resistance exercise. *North American Artery*, 2017. (*competitive selection for 1 of 10 oral presentation slots)
153. AJ Rosenberg, SO Wee, EC Schroeder, G Grigoriadis, K Bunsawat, GG Griffith, **T Baynard**. Effects of age on carotid artery circumferential strain following acute maximal resistance exercise. *North American Artery*, 2017.
154. K Bunsawat, G Grigoriadis, G Griffith, SO Wee, EC Schroeder, B Fernhall, **T Baynard**. Muscle blood flow responses to dynamic handgrip exercise in young obese adults. *American College of Sports Medicine*, 2017.
155. Rosenberg AJ, SO Wee, EC Schroeder, K Bunsawat, G Grigoriadis, BM Saed, B Fernhall, **T Baynard**. Effect of sex on systemic arterial hemodynamics following acute isokinetic resistance exercise. *American College of Sports Medicine*, 2017.
156. G Grigoriadis, AJ Rosenberg, SO Wee, EC Schroeder, K Bunsawat, B Fernhall, **T Baynard**. Influence of sex on the relationship between leg strength and arterial stiffness. *American College of Sports Medicine*, 2017.
157. G Griffith, TIM Hilgenkamp, AJ Rosenberg, G Grigoriadis, K Bunsawat, B Saed, **T Baynard**. Treadmill vs. cycle ergometry graded exercise test responses in multiple sclerosis patients. *American College of Sports Medicine*, 2017.
158. Schroeder EC, AD Lane-Cordova, SM Ranadive, **T Baynard**, B Fernhall. High fit older adults maintain a similar endothelial-response to acute inflammation as younger adults. *American College of Sports Medicine*, 2017.
159. Fuller KNZ, G Griffith, RE Klaren, JM Haus, **T Baynard**, RW Motl, B Fernhall. Effect of exercise training on cellular inflammation and fitness in individuals with multiple sclerosis. *American College of Sports Medicine*, 2017.
160. Hilgenkamp TIM, EC Schroeder, DW White, **T Baynard**, B Fernhall. Blunted autonomic response to orthostasis in individuals with intellectual disabilities. *American College of Sports Medicine*, 2017.
161. Wee SO, AJ Rosenberg, K Bunsawat, G Griffith, **T Baynard**, B Fernhall. Arterial distensibility and compliance following lower body negative pressure in individuals with Down syndrome. *American College of Sports Medicine*, 2017.

G. Abstracts Submitted:

1. AJ Rosenberg, SO Wee, EC Schroeder, G Grigoriadis, K Bunsawat, GG Griffith, **T Baynard**. Effect of age on cerebral blood flow dynamics following acute resistance exercise. Submitted to APS conference—Cardiovascular Aging, New Frontiers and Old Friends, Westminster, CO, 2017.
2. AJ Rosenberg, SO Wee, EC Schroeder, G Grigoriadis, GJ Griffith, B Fernhall, **T Baynard**. *Artery* (Pisa, Italy), 2017.
3. *EC Schroeder Artery*, 2017
4. TIM Hilgenkamp, G Griffith, RW Motl, **T Baynard**, B Fernhall. Impact of obesity on vascular structure and function in individuals with multiple sclerosis. Submitted to *Artery* (Pisa, Italy), 2017.

H. Invited Presentations:

T. Baynard

Last updated 7-17-17

1. Joslin Diabetes Center, SUNY Upstate Medical University, 2004; *"VCAM, ICAM, WhoCam?"*
2. Joslin Diabetes Center, SUNY Upstate Medical University, 2005; *"Short-term exercise effects on arterial function and type 2 diabetes"*
3. Skidmore College, April 2006; *"Short-term training effects on myocardial and vascular function in type 2 diabetes"*
4. MARC-ACSM, Harrisburg, PA, Nov. 2007; *"Diabetes—Is it a metabolic disease or an arterial disease? A closer look at cardiovascular implications with diabetes"*
5. European College Sports Sciences Satellite Course—Inflammation & Cardiovascular disease—July 2008, Lisbon, PORTUGAL--*"Obesity, Diabetes, and Cardiovascular Disease"*
6. Seminar speaker—Integrative Immunology & Behavior Group, UIUC; Feb 2008.
7. Seminar speaker—Division of Nutritional Sciences, UIUC; Jan 2009; *"Dangerous Times?—The postprandial period and cardiovascular function in obesity"*
8. Seminar speaker—Department of Bioengineering, UIUC, Sept. 2011 *"Hot Fat"*
9. Seminar speaker—Department of Kinesiology & Nutrition; UIC, Oct 2011 *"Hot Fat"*
10. Grand Rounds—Neurology, UIC, Sept 2012 *"Therapeutic effects of exercise in demyelinating disease"*
11. Seminar speaker—Integrative Immunology & Behavior Program, UIUC, Nov 2012, *"Transitioning to the Real World: What to do When Your Clone Doesn't Arrive"*
12. U of I Cancer Center Diet & Behavior Shared Resource Training Symposium, UIC, May 2013, *"Physical Activity & Physical Fitness Measurements"* (Baynard & Marquez).
13. Seminar Speaker—Physical Therapy Dept, UIC, Aug 2013, *"Down Syndrome, Obesity, & Autonomic Function"*
14. Seminar Speaker—Dept. of Kinesiology, University of Kentucky, Apr 2014. *"Autonomic Dysfunction and Heart Rate Variability in Special Populations"*
15. Seminar Speaker—Division of Endocrinology, Diabetes and Metabolism, UIC, Oct 2014. *"Dangerous Times? The postprandial period and cardiovascular function in obesity and diabetes"*
16. Seminar Speaker—Dept. of Nutrition & Exercise Physiology, University of Missouri, Nov 2014. *"Down Syndrome & Autonomic Function—Is Obesity a Problem Here?"*
17. Seminar Speaker—Pulmonary, Critical Care, Sleep & Allergy Research Conference Series, UIC Apr 2015. *"Hot fat—obesity, inflammation and exercise training"*
18. Symposium speaker—American College of Sports Medicine National Meeting (San Diego, CA), May 2015. *"Heart Rate Variability, Exercise, and Special Populations"*.
19. Symposium speaker—European College Sports Sciences (Malmo, Sweden)-Polar Sponsored Symposium, June 2015—*"Heart Rate Variability and Exercise Training: A Possible Way to Improve Fitness in Clinical Populations"*.
20. Seminar Speaker—Dept. of Physiology & Biophysics, UIC, Nov 2015. *"Autonomic Dysfunction in Individuals with Down Syndrome"*.
21. Symposium speaker—International Assoc. Scientific Study Individuals with Intellectual Disabilities. Session: Challenging implicit assumptions of intervention to improve physical activity and fitness levels in people with ID: the impact of physiology. **Baynard's talk:** *Autonomic Regulation in Individuals with Down Syndrome: What Do We Know and Where to Go.* Melbourne, Australia, Aug 2016.

22. Seminar Speaker—University of Western Australia, School of Sport Science, Exercise, and Health (Perth, Australia), Aug 2016. *Exercise and autonomic function in obesity and diabetes.*
23. Seminar Speaker—Murdoch University, School of Psychology and Exercise Science (Perth, Australia), Aug 2016. *Limitations to physical work capacity in Down syndrome—a case of autonomic dysfunction.*
24. Seminar speaker—UIC Department of Medicine, Division of Endocrinology, Diabetes & Metabolism Journal and Research Club, June 2017. *A Novel Exercise Training Paradigm for Individuals with Type 2 Diabetes.*

I. Miscellaneous Presentations

- Graduate Seminar Series—Syracuse University: Syracuse, NY
Sept. 2001, Feb. 2004, Dec. 2004, Nov. 2006
- Graduate Seminar Series—University of Illinois at Urbana-Champaign: Urbana, IL
Oct. 2007
- Mid-Atlantic Regional ACSM (free communications): 2001-2005
- New York Exercise Science Consortium (free communication): Ithaca, NY, 2002
- Onondaga County Employees “Exercise & Your Health—Tips for Moving”, 2003
- Poster Presentation—UIC Diabetes & Obesity Research Day Oct 14, 2014; Sae Young Jae and **T. Baynard**. “Metabolically healthy obesity and carotid atherosclerosis: effects of cardiorespiratory fitness”

J. Symposium Proposals: Symposium Organizer/Speaker

- **Symposium Organizer** --ACSM May 2015. Symposium “Nervous about Exercise? Exercise, Autonomic Function, and Vascular Control”. (Peter Raven, Ph.D. (chair), speakers: Paul Fadel, Ph.D., *Tracy Baynard* Ph.D., Danny White Ph.D., John Halliwill, Ph.D.)
- **Featured Topic Organizer & Chair**—Experimental Biology April 2016. “Recovery from exercise and translating post-exercise hypotension”. (John Halliwill, Ph.D. (U of Oregon) and Claudia Forja, Ph.D. (U of São Paulo, Brazil)—invited speakers)
- **Featured Topic Organizer & Chair**—Experimental Biology, April 2017. “Vascular-mediated mechanisms of cognition and the role of exercise”. (Gary F. Mitchell (Cardiovascular Engineering Inc.)—invited speaker).

4. RESEARCH GRANTS

A. External Awarded:

1. American Diabetes Association Junior Faculty Development Award—Heart rate variability-guided exercise training in type 2 diabetes. **Baynard-PI** (15%). 1-1-2017 to 12-31-2020. \$552,000 total. (#1-17-JDF-073)
2. NIH NICHD R01. The pro-inflammatory effects of acute exercise in children with sickle cell anemia. PI-R. Liem; **Role—Site-PI** (10%), 4-1-17 to 3-31-21. (1R01HL136480)
3. American Heart Association (Mid-West Affiliate) Pre-doctoral Fellowship, Kanokwan Bunsawat Ph.D. candidate—Role of Obesity on Neurovascular Responses to Exercise. **Baynard-Sponsor**. 1-1-16 to 12-31-17; \$52,000 total. (16PRE26430096)

4. Department of Veterans Affairs, VA Merit Award. “Exercise Therapy to Reduce Heart Failure Symptoms: Sorting Mechanisms of Benefit” (10-1-15 to 9-30-17). Total \$1,100,00 (UIC portion \$124,009) PI-Dan Forman (VA Pittsburgh Medical Systems); **Baynard-Site PI** (5%). (F0834-R)
5. National Multiple Sclerosis Society, January 2013. “Exercise, Subclinical Atherosclerosis, and Mobility in Multiple Sclerosis” (12-1-12 to 9-30-16). Total-\$652,590. PI-Fernhall; **Baynard-Co-I** (5%).
6. 2012-National Multiple Sclerosis Society: **Baynard-Site PI** (30%), Rob Motl—PI (UIUC). “Project METS in MS—Multimodal exercise training stimulus in multiple sclerosis”. 4-1-12 to 3-31-13, UIC portion-\$149,417
7. 2009-NIH S10 Grant (Shared Instruments Grant): **Baynard--minor user** (PIs-William O’Brien & Stephen Boppart @ UIUC) “High-Resolution In Vivo Ultrasound Imaging Using VisualSonics VEVO 2100 System”, \$499,098

B. External Not Funded/Selected:

1. National Multiple Sclerosis Society. Effect of exercise intensity on fitness, mobility, subclinical atherosclerosis and cognitive function using home based exercise training in MS. PI-B Fernhall. **Role—Co-I** (10%). Submitted Feb 2017.
2. American Heart Association Strategically Focused Research Network—OBESITY. “Obesity-related cardiovascular disease in ethnic minorities”. PI-D. Darbar. **Role—Co-I** (5%). Submitted Nov 2016.
3. American Diabetes Association—Pathway Accelerator Award. Investigating Multi-System Effects of Islet Cell Transplantation to Accelerate the Study of Premature Aging and Complications in Type 1 Diabetes. PI—K. Danielson; **Role—Co-I** (4%), Submitted July 2016.
4. NIH NIDDK DP3 (RFA-DK-15-028—Impact of the Use of Glucose monitoring and control technologies on e-health outcomes and quality of life in older adults with T1D) Type 1 Diabetes Targeted Research Award—PI-L. Quinn; **Role—Co-I** (5 %), Submitted Mar 2016.
5. NIH NICHD R03-Parent Grant, Limb blood flow in Down syndrome. PI-Fernhall. **Role—Co-I** (5%). Submitted Feb 2016.
6. NIH NCMRR R21-Parent Grant--OUTCOMES in MS Trial: Exercise training effects on cerebrovascular and cognitive OUTCOMES IN MS. **PI-Baynard** (10%). Submitted Feb 2016.
7. Dept. of Defense, Pilot Clinical Trial Award, Multiple Sclerosis Research Program—**Baynard-PI** (15%). Submitted Pre-application May 2016.
8. Merck/EMD Serono Grant for Multiple Sclerosis Innovation—Letter of Intent, **PI-Baynard**. Submitted Feb 2016.
9. National Multiple Sclerosis Society Career Transition Postdoctoral Fellowship LOI—PI-TIM Hilgenkamp. **Role-Co-Mentor**, Submitted May 2016.
10. American Heart Association Grant-in-Aid—Heart rate variability-guided exercise training in type 2 diabetes. **PI—Baynard** (10%). Submitted Jan 2016.
11. NIH NIDDK R01-Parent Grant, Nov 2015 (7-16 to 6-21) The NEAT 2D Study: Novel Exercise Approach in Type 2 Diabetes (resubmission). Total 3.86 million. **Role—PI** (25%). *Scored 25%ile.*
12. American Heart Association-Strategically Focused Research Network (7-16 to 6-20) “Obesity-related cardiovascular disease in minority women”. Basic Science Project (PI- D Darbar) “Obesity, Redox State and Arrhythmias”. Total 3.7 million. **Role—Co-I** (5%).

13. American Diabetes Association Junior Faculty Development Award—Heart rate variability-guided exercise training in type 2 diabetes. **Baynard-PI**. Submitted April 2015. *Scored in top 25% (made 1st cut)*.
14. American Heart Association Grant-in-Aid—Heart rate variability-guided exercise training in type 2 diabetes. **PI—Baynard**. Submitted Jan 2015.
15. NIH NIDDK R01-Parent Grant, Oct 2014 (7-15 to 6-20) “The NEAT 2D Study: Novel Exercise Approach in Type 2 Diabetes”. UIC Total 3.7 million. **Baynard—PI** (25%).
16. NIH NHLBI Clinical Trial Pilot Study (R34), Oct 2014 (7-15 to 6-18) “Aerobic exercise training in children and adolescents with sickle cell anemia”. UIC Total-\$91,716. PI-Robert Liem (Lurie Children’s). **Baynard—Site PI** (5%).
17. FCT, Portugal (Foundation of Science and Technology—main research funding agency in Portugal): Resistance training in chronic heart failure: a potential adjunctive rehabilitation option for patients following cardiac resynchronization therapy. PI—H. Santa Clara; Role **Baynard- Co-I** Submitted Jan 2015
18. 2015 Environmental & Exercise Physiology New Investigator Award—The American Physiological Society
19. Diabetes Action Research Education Foundation, May 2014. 1-1-15 to 12-31-15. “A novel approach for exercise prescription—using heart rate variability to optimize fitness among individuals with type 2 diabetes”. **Role-PI** \$40,000.
20. National Multiple Sclerosis Society, Mar 2014. 10-1-14 to 9-30-15. “Understanding associations among inflammation, mobility, adiposity, and physical activity in MS”. **Role-PI**. \$110,000.
21. NSF, June 2013. “Gait analysis using phone apps to monitor chronic health.” PI-Schatz (UIUC); **Role-Co-PI** (no salary support), other Co-PIs (J. Krishnan). \$500,000.
22. Department of Homeland Security, Dec 2012. “Cardiovascular response to and recovery from firefighting—age, fitness and obesity.” PI-G. Horn (UIUC); **role—Co-I** (5%). Total-\$930,954; UIC portion-\$382,170
23. National Multiple Sclerosis Society, March 2013, 10-1-13 to 9-30-14. “Aerobic Exercise and Cognition in Multiple Sclerosis: Is Exercise Key?”. **Role-PI**. \$100,000.
24. National Multiple Sclerosis Society, May 2012. 10-1-12 to 9-30-13. “Aerobic Exercise and Cognition in Multiple Sclerosis: Is Exercise Key?”. **Role-PI**. \$100,000.
25. Department of Homeland Security, April 2012. “Cardiovascular response to and recovery from firefighting—age, fitness and obesity.” PI-G. Horn (UIUC); **role—Co-I** (5%). Total-\$930,954; UIC portion-\$382,170.
26. 2011-American College of Sports Medicine Research Endowment Grant—“Exercise mediates behavior via immune pathways in a model of youth obesity.” (\$10,000)
27. 2011-NIH NIDDK K01—Abrogating the biobehavioral complications of youth obesity with exercise. **Role—PI**. (\$571,360)

C. Internal Awarded:

1. 2012-UIC—Chancellor’s Discovery Fund—**Baynard—PI** (Co-I: SC Dudley). “Sex specific differences in ventricular-arterial coupling during hyperglycemia in heart failure.” 0%, 6-1-2012 to 5-30-2013. \$60,000

2. 2009-UIUC Mary Jane Neer Grant—**Baynard--PI** (Co-I: Paul Gold, Bo Fernhall), \$15,000. “Can administration of activity-dependent neuroprotective protein ameliorate common decrements in brain and autonomic function in a mouse model of Down syndrome?”.
3. 2009-UIUC Research Board. **Baynard-PI**. (Co-I: Jeffrey A Woods), \$13,953. “Temporal development and the effects of exercise training on adipose tissue hypoxia and inflammation in mice fed a high-fat diet”.

D. Internal Not Funded:

1. UIC CCTS Pilot Grant Program, Feb 2013. The miPACE Study: *mobile interventions for Physical Activity in COPD at home*. PI-JA Krishnan; **role-Co-I** (5%, no salary). \$30,000.
2. 2012-UIC NIH Building Interdisciplinary Research Careers in Women’s Health (BIRCWH) K-12 finalist. (75% protected research time + 20k research support/yr).
3. 2011-UIUC Center on Health, Aging & Disability Pilot Grant Program—Abrogating biobehavioral complications with exercise in a model of youth obesity. **Baynard-PI**. (\$15,000)
4. 2011-UIUC Research Board—“Abrogating the biobehavioral complications of youth obesity with exercise in young mice.” **Baynard-- PI**. (\$28,620)
5. 2010-UIUC Health & Wellness Initiative Seed Grant— (PI: K.B.H. Clancy; **Co-I: T. Baynard** and G. Freund). \$42,000. “Women’s reproductive function: understanding variability in sickness and health.”

E. Pending

- NIH R65/33. Improving blood pressure using a technology-assisted behavioral sleep extension intervention. PI-K Baron (Rush Medical). **Role—consultant**. Submitted June 2017.
- NIH K99/R00. Central and peripheral regulation of blood flow during exercise in individuals with Down syndrome. PI-TIM Hilgenkamp. **Role—Co-Mentor** (0%). Submitted Sept 2016. *Priority score 16*.
- VA Merit Award. Sodium-like glucose transporter-2 inhibitors, African-Americans, and blood pressure. PI-B Layden. **Role—Co-I (XX%)**. LOI-submitting Nov 2017.
- National Multiple Sclerosis Society. Effect of exercise intensity on fitness, mobility, subclinical atherosclerosis and cognitive function using home based exercise training in MS. PI-B Fernhall. **Role—Co-I** (10%). Submitting Aug 2017.

F. Pre-doctoral Student awards

External Awarded

- Sigma Delta Epsilon Fellowship: Graduate Women in Science: ‘Short-term training effects on myocardial and vascular function in type 2 diabetes during acute hyperglycemia’; \$3000, 2005
- American College of Sports Medicine Mid-Atlantic Region: ‘Short-term training effects on vascular function in persons with metabolic syndrome, during acute hyperglycemia’; \$500, 2005
- Life Fitness Academy: Michael L. Pollock Memorial Research Grant: ‘Effect of aerobic exercise training on autonomic function in type 2 diabetic women’; \$2500, 2003
- American College of Sports Medicine Foundation Research Grant: ‘Effect of Exercise on Fibrinolysis and Vasodilatory Capacity’; \$5000, 2002

Internal Awarded

- Syracuse University Graduate School Travel Grants, total of \$2400 2001-2006
- Sidney Young Award, Exercise Science Department, Syracuse University: 2003, 2004
- Graduate School Research & Creative Grant Competition, Syracuse University: 2003, 2004

5. PROFESSIONAL SERVICE, AWARDS, HONORS

A. Departmental Service:

- UIC-Developed Pilot Undergraduate Mentoring for Success Program-SP 2016
- UIUC Director of the Lifetime Fitness Program, 2010-2011
- UIUC Visiting Instructor Search Committee, 2010-2011
- UIUC Travel Awards Committee, FA 2008

B. College Service

- UIC Honors College—Interviewer for incoming students, SP 2013, 2014, 2015, 2016
- UIC—Search Committee, 1 Research Specialist Spring 2015
- UIC—Search Committee Chair, 2 Research Specialists Spring 2014
- UIC Honors College—Tuition waiver committee, Fall 2013
- UIC—Search Committee Chair, 2 Research Specialists Fall 2012

C. University Service

- UIC—Chancellor’s Graduate Research Award Program-Reviewer (2015, 2016)
- UIC—Senate member (2012-2015)
- UIC Student Success Plan-Targeted First-Year Curriculum Task Force member (2013)

D. Professional Organization Memberships:

- American College of Sports Medicine: 2000-present
- American College of Sports Medicine Mid-Atlantic Region: 2000-2008
- American College of Sports Medicine Mid-West Region: 2009-present
- American Diabetes Association: 2004-2009, 2016-present
- American Heart Association: 2005-present
- American Physiological Society: 2003-present
- North American Artery: 2013-present
- North American Society for Pediatric Exercise Medicine: 2000-2009
- Obesity Society: 2009-present
- Sigma Delta Epsilon-Graduate Women in Science: 2004-2005
- The Physiological Society (UK) 2017-present

E. Editorialships:

- Reviewing Editor: *Experimental Physiology* (2017-present)

F. Ad Hoc Reviewer:

- Adapted Physical Activity Quarterly 2014
- American Journal of Cardiology-2013

T. Baynard

Last updated 7-17-17

- American Journal of Physiology—Regulatory, Integrative & Comparative Physiology—2012-present
- American Journal of Physiology—Heart & Circulation—2015-present
- Annals of the American Thoracic Society--2013
- Annals of Behavioral Medicine—2011-2012
- Applied Physiology, Nutrition, & Metabolism—2012, 2016
- Autonomic Neuroscience—Basic & Clinical—2012
- BioMed Central--2010
- Brain, Behavior & Immunity: 2008, 2012
- Developmental Neurorehabilitation 2015-present
- Diabetes & Metabolism: 2008
- Diabetes, Obesity & Metabolism—2009, 2015-present
- Diabetologia—2010
- Disability & Rehabilitation—2015-present
- Hypertension—2016
- Hypertension Research—2011
- International Journal of Sports Medicine-2009-present
- Journal of Applied Physiology—2011-present
- Journal of Diabetes and Its Complications-2014-present
- Journal of Intellectual Disabilities Research—2011, 2015-present
- Journal of Physical Activity & Health: 2007-2009, 2012-13
- Journal of Visualized Experiments: 2012
- Mediators of Inflammation—2012
- Medicine Science Sports & Exercise: 2007-present
- Nutrition & Metabolism: 2007
- Obesity: 2009-present
- Pediatric Exercise Science—2015
- Pediatrics—2010, 2012-present
- Vascular Medicine Journal--2014

G. Grant Reviewer

- *NIH Clinical & Integrative Cardiovascular Sciences (CICS) Study Section*-NIH Early Career Reviewer Program, June 2016
- *American Heart Association:*
 1. Behavioral Sciences Panel, standing member: 2011-2015
 2. Innovative Research Grant Panel: 2012
 3. *Ad hoc*: 2008-2010
- *Icelandic Research Fund: ad hoc*, 2011.
- *Diabetes United Kingdom-Research Grant: ad hoc*, 2005

H. Abstract Reviewer

- American Heart Association Scientific Session Abstract Reviewer—June 2016

I. Scientific Judge

- UIC Faculty Judge: Student Research Forum, 2012, 2013, 2016.
- American Society of Nutrition—Experimental Biology abstract competition 2011.
- UIUC--Nutrition Symposium Poster Judge, April 2008 & 2009

J. Chair of Scientific Oral Presentation session(s):

- Experimental Biology (American Physiological Society)—2017 (Organized, Proposed, Chaired)
- Experimental Biology (American Physiological Society)—2016 (Organized, Proposed, Chaired)
- European College Sports Science—assigned session, 2008

K. Meeting Organizer

- Lead organizer “Pre-Experimental Biology Meeting” between UIC and University of Wisconsin, 2017.
- Lead organizer “Illinois Brain, Behavior & Immunity”, Chicago, IL 2012
- Co-organizer “Illinois Brain Behavior & Immunity”, Chicago, IL 2011

L. Academic/Professional Honors:

- Fellow, The Obesity Society, 2015
- Fellow, American College of Sports Medicine, 2013
- Doctoral Prize—School of Education, Syracuse University, 2008
- Recipient of the “Michael L. Pollock Scholarship Award”—American College of Sports Medicine, 2007
- Recipient of ‘President’s Award’—American College of Sports Medicine Mid-Atlantic Region, 2004
- Recipient of ‘Outstanding Teaching Assistant Award’: Syracuse University, 2004
- Honorable Mention: MARC-ACSM student research award, 2003
- Graduated Magnus Cum Laude: McDaniel College, 1993
- Phi Beta Kappa—Liberal Arts Honor Society, 1993
- Dean’s List: 1989-1993 (Western Maryland College); 2000, 2001 (The George Washington University)
- Recipient of ‘Outstanding Physical Education Major of the Year’: 1993 American Alliance for Health, Physical Education, Recreation and Dance (Western Maryland College)

M. Mentoring

- Mentored 2 trainees as part of “Mentoring on the Go” program through the American Physiological Society at the 2017 annual Experimental Biology meeting.
- Faculty advisor through the UIC Graduate College’s *Summer Research Opportunity Program*, Summer 2016, Mr. Hernán Mendez (Puerto Rico).
- UIC Dept. of Kinesiology & Nutrition Helen Barton Scholarship Awardees—
 - a) Cory Silver-Summer 2012
 - b) Jeremy Shoup-Summer 2013
 - c) Paul Marqui-Summer 2014

d) Elliot Weiss-Summer 2015

- American Physiological Society ‘meeting mentor’ to a graduate fellow—part of their “Minority Travel Fellow” program. Inflammation, Immunity, CVD APS meeting, Westminster, CO, 2010.

N. Baynard’s Trainee Awards/Honors/Fellowships

- **Georgios Grigoriadis:** Recipient of the Best Abstract Award at the North American Artery Annual Meeting (May 2017), Chicago, IL.
- **Kanokwan Bunsawat:**
 1. Recipient--Pre-Doctoral Fellowship, American Heart Association (1-1-16 to 12-31-17).
 2. Recipient—American Physiological Society Caroline tum Suden/Frances Hellebrandt Professional Opportunity Award (\$500), Feb 2017.
 3. Recipient—American College of Sports Medicine-Gatorade Sports Science Institute Young Scholar Travel Award (\$1000), May 2017.
- **AJ Rosenberg:**
 1. Recipient--Early Investigator Award at the North American Artery Annual Meeting (Sept 2016), Chicago, IL.
 2. Recipient--Bursar’s Award (competitive travel award--500 euro) for his abstract submission to Artery (Association for Research into Arterial Structure and Physiology; International meeting held in Copenhagen, Denmark Oct, 2016).
- **Thessa Hilgenkamp** (Baynard-Co-Mentor): Recipient of the Best Abstract Award at the North American Artery Annual Meeting (Sept 2016), Chicago, IL.
- **Hernán Mendez:** Full travel award for his abstract “Sex differences in cardiovascular function following acute lower body resistance exercise.” Presented at the Annual Biomedical Research Conference for Minority Students, Tampa, FL 2016.

6. STUDENTS-- THESIS/DISSERTATIONS:

Ph.D. Committee Member—Current

- Sang Ouk Wee, MS, UIC, advisor Bo Fernhall, anticipated graduation Aug 2017
- AJ Rosenberg, MS, UIC, **Baynard-Chair**, anticipated graduation May 2018
The Effects of Sex and Aging on Cerebral Blood Flow in Response to Acute Resistance Exercise

Graduated MS Advisees

- *Kari Hultgren, M.S.*—UIC (Project), May 2014
- *Keith Kowalski, M.S.*—UIC (Project), May 2015
- *Yiyu (David) Wang, M.S.*—UIC (Project), May 2016
- *Kristina Jackson, M.S.*—UIC (Project), May 2017

Graduated PhD Advisees/Committee Chair

- Kanokwan Bunsawat, Ph.D., UIC, Aug 2017
The role of obesity on neurovascular responses to exercise

Committee Member—M.S. Theses Completed

T. Baynard

Last updated 7-17-17

- *Lindy Rossow*, M.S., UIUC, advisor Bo Fernhall, 2008
- *Melissa Goslawski*, M.S., UIC, advisor Shane Phillips, 2012
- *Megan Sullivan*, M.S., UIC, advisor Giamila Fantuzzi, 2012
- *Edwin Miranda*, M.S., UIC, advisor Jacob Haus, Aug 2016

Committee Member—Ph.D. Dissertations completed

- *Abbi Lane-Cordova*, Ph.D., UIC, advisor Bo Fernhall, Aug 2013
- *Huimin Yan*, Ph.D., UIUC, , advisor Bo Fernhall, May 2014
- *Jan Kretzschmar*, Ph.D., UIC, advisor Michael Brown, Aug 2014
- *Rebecca Kappus*, Ph.D., UIC, advisor Bo Fernhall, May 2015
- *John Trepanowski*, Ph.D., UIC, advisor Krista Varady, May 2015
- *Chenyi Ling*, Ph.D., UIC, advisor Michael Brown, Dec 2015
- *Austin Robinson*, Ph.D., UIC, advisor Shane Phillips, Aug 2016

Current Advisees

Ph.D.

- *Alexander Rosenberg*—UIC Ph.D. candidate, 2012-present
- *Georgios Grigoriadis*—UIC, Ph.D. student, 2015-present

MS

- *Eric Guthrie*—UIC, MS student, 2015-present
- *Kelsey Mix*—UIC, MS student, 2016-present
- *Rose Capone*—UIC, MS student, 2017-present
- *Aditi Gupta*—UIC, MS student, 2017-present

7. TEACHING EXPERIENCE

University of Illinois at Chicago:

A. Undergraduate

1. KN 194—Intro to Exercise Science & Health (SP 13; 27 students)
2. KN 152—Intro to Exercise Science & Health
 - a) SP 14; 198 students
 - b) FA 14; 75 students
 - c) SP 15; 150 students
 - d) FA 15; 157 students
 - e) SP 16; 122 students
 - f) FA 16; 164 students
 - g) SP 17; 144 students
 - h) FA 17; 178 students
4. KN 396—Research Experience
 - a) SP 14; 1 student
 - b) FA 14; 1 student
 - c) SP 15; 3 students
 - d) FA 15; 3 students

- e) SP 16; 3 students
- f) FA 16; 2 students
- g) SP 17; 6 students
- h) FA 17; ## students
- 4. KN 398/399: Undergraduate Research Project
 - a) SP 15/FA 15—1 student each semester

**Have had ~40 students volunteer in the laboratory since 2012, with some taking course credit (captured in KN 396, 398, or 399), and many purely volunteering.

- 5. KN 493—Undergraduate teaching assistant practicum
 - a) FA 15—8 students
 - b) SP 16—9 students
 - c) FA 16—13 students
 - d) SP 17—15 students
 - e) FA 17-- 8 students

B. Graduate

- 1. KN 594—Special Topics: Cardiovascular Exercise Physiology (SP 12; 17 students)
- 2. KN 501—Journal Club (every FA/SP semester 2012-present)
- 3. KN 596—Independent Study (SP 12, SU 12, FA 12, SP 13, FA 13, SP14, FA14, SP15, FA15, SP16; FA 16, SP 17)
- 4. KN 545—Advanced Exercise Assessment
 - a. FA 13 (team taught); 11 students
 - b. FA 15 (team taught); 10 students

University of Illinois at Urbana-Champaign:

A. Undergraduate

- 1. KIN 150—Bioscience of Human Movement
 - a) FA 08; 170 students
 - b) SP 10; 135 students
 - c) SP 11; 130 students
- 2. KIN 385—Undergraduate Research Experience
 - a) Summer 09; 1 student
 - b) FA 09; 4 students
 - c) SP 10; 4 students
 - d) FA 10; 8 students
 - e) SP 11; 8 students
- 3. KIN 386—Exercise Training in Elderly Populations—Experience Credit
 - a) FA 10; 3 students
 - b) SP 11; 11 students
 - c) SU 11; 1 student
- 4. KIN 485—Undergraduate Independent Study
 - a) FA 10; 4 students

b) SP 2011; 1 student

B. Graduate

1. KIN 551—Scientific Basis for Human Movement
 - a. FA 09; 17 students
 - b. FA 10; 8 students
2. KIN 553—Circulorespiratory Physiology (FA 08)—team taught; 12 students
3. KIN 590—Independent Study (FA/SP 2009-10, 2010-11)-2 students each semester
4. KIN 594—Special Topics in Cardiovascular Physiology & Metabolism (SP 09)—team taught; 4 students
5. KIN 594—Special Topics in Exercise Physiology Laboratory Techniques (SP 10)—course coordinator; 7 students

Invited Instructor: 2006, 2008, 2009, 2011, 2013, 2014

European Master's Course in Physiotherapy: *Exercise Testing and Evaluation*; taught in Lisbon, PORTUGAL at Lisbon Technical University Faculty of Human Movement. Course taught to students from PORTUGAL, NETHERLANDS, and SWITZERLAND