Robert H. Coker

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3460 Fox Den Drive, Fairbanks, AK 99709
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Marital Status, Spouse's Name: Melynda Sheri; PhD student in School of Management at UAF
Children: Kiplin (27 y) Graduate Student, University of MT; Quint (26 y) US Army SOCOM

Date and Place of Birth
July 28, 1964
Atlanta, Georgia
American Citizenship

Professional Memberships
American College of Sports Medicine – Fellow
American Physiological Society
The Obesity Society
Wilderness Medical Society

Professional Education

2018	Certificate – Hacking for Defense, Purdue University, West Lafayette, IN
2018	Certificate – Lean LaunchPad, BMNT and UAF, Fairbanks, AK
1998-1999	Visiting Fellow in Physiology, Bispebjerg Hospital, Copenhagen, Denmark
1995-1998	Postdoctoral Fellow in Physiology, Vanderbilt University, Nashville, TN
1991-1995	Ph.D. in Exercise Science, University of Mississippi, University, MS
1988-1989	M.Ed. in Physical Education, North Georgia College, Dahlonega, GA
1982-1986	B.S. in Physical Education, North Georgia College, Dahlonega, GA

Professional Experience

2018-present **Chair*,*** Steering Committee, University of Washington Northwest Participant and Clinical Interactions Network, Seattle, WA
2017-present ***Ambassador***, Office of Intellectual Property and Commercialization, UAF
2015-present ***Associated Faculty***, Department of Chemistry and Biochemistry, UAF
2015-present ***Member,*** Steering Committee, University of Washington, Institute of Translational Health Sciences, Seattle, WA
2014-present ***Consultant***, United States Air Force, Department of Defense, USA
2014-present ***Owner***, Last Frontier Physiology, LLC, Fairbanks, AK
2013-present ***Associate Professor (Tenured)****,* Department of Biology and Wildlife, Institute of Arctic Biology, UAF, Fairbanks, AK
2013-present ***Co-Owner and Managing Partner***, Essential Blends, LLC, Fairbanks, AK

2013-present	***Adjunct Associate Professor***, Department of Geriatrics, College of Medicine, University of Arkansas for Medical Sciences, Little Rock, AR
2013-2015	***Director***, Experimental Design, Biostatistics, and Data Services Core, Center for Alaska Native Health Research, UAF, Fairbanks, AK
2007-2013	***Associate Professor (Tenured)***, Department of Geriatrics, College of Medicine, University of Arkansas for Medical Sciences, Little Rock, AR.
2008-2009	***Consultant***, Healthspan Solutions, LLC, Little Rock, AR.
2008-2010	***Research Health Scientist***, Veterans Healthcare System, Little Rock, AR.
2004-2013	***Consultant***, Pfizer Global Research and Development, New London, CT.
2001-2007	***Assistant Professor***, Department of Geriatrics, University of Arkansas for Medical Sciences, Little Rock, AR.
1999-2001	***Assistant Professor***, Department of Exercise Science, University of Mississippi, University, MS.
1999	***Visiting Fellow***, Sports Medicine Research Unit and Department of Clinical Physiology, Bispebjerg Hospital, Copenhagen, Denmark.
1995-1999	***Postdoctoral Fellow***, Department of Molecular Physiology and Biophysics, Vanderbilt University School of Medicine, Nashville, TN.
1995-1999	***Exercise Physiologist*****,** Methodist Hospitals of Memphis, Memphis, TN

Awards

2018	Distinguished Scholar Award, University of Montana, Missoula, MT
2016	Invent Alaska Award for Innovation in Research, UAF, Fairbanks, AK
2005	Clinical Research Success Award, UAMS, Little Rock, AR
2000	Faculty Research Award, University of Mississippi, University, MS
1999	Fellow of the American College of Sports Medicine, Indianapolis, IN
1998	Travel Award, American Diabetes Association, Arlington, VA
1999	Visiting Fellow Award, Bispebjerg Hospital, Copenhagen, Denmark
1997	Juvenile Diabetes Foundation Fellowship Award, New York, NY
1995	Graduate Honors Fellowship, University of Mississippi, University, MS
1994	Graduate Honors Award, University of Mississippi, University, MS

Service

2018-present	Reviewer, Ad Hoc, National Institutes of Health, Aging Systems and Geriatric Study Section
2018-present	Reviewer, Invent Alaska, Office of Intellectual Property and Commercialization, UAF
2017-present	Representative Assembly, United Academics
2017	Internal Advisory Committee, Ad Hoc, University of Nevada Las Vegas Clinical Translational Research Infrastructure Network
2017-present	Reviewer, Institute of Translational Health Sciences-Research Scholars Program, University of Washington School of Medicine
2017-present	Reviewer, Ad Hoc, National Institutes of Health, Diabetes, Endocrinology and Metabolic Diseases
2017-present	Executive Committee Member, American College of Sports Medicine
2017-present	Reviewer, Journal of Cachexia, Sarcopenia and Muscle
2016-2018	Representative, Program Review Faculty Committee, UAF
2016-present	Reviewer, University of Utah-Washington University at Saint Louis Diabetes Research and Training Center; Collaborative Pilot and Feasibility Program
2016-present	Reviewer, Ad Hoc, National Institutes of Health, Integrative Nutrition and Metabolic Processes Study Section
2016-present	Member, United Academics AAUP/AFT Joint Health Care Committee

2016-2017 Chair, Graduate Admission Committee in Biomedical/Physiology, UAF
2016-present Reviewer, NIH: Clinical and Translational Science Awards
2016 Reviewer, Center for the Advancement of Science in Space, “Organs on Chips”
2016 Chair of Organizing Committee, Northwest and Alaska ACSM annual meeting
2016-present Reviewer, PLoS One, Diabetologia
2016 Moderator and Chair, Alaska High School Science Symposium
2015-2016 President, American College of Sports Medicine, Alaska Chapter
2015-present Reviewer, Limited Submissions Committee, UAF
2015 Organizer, SBIR/STTR Inventors Forum and Workshop, TREND, UAF
2014-present Member, Steering Committee, Institute of Translational Health Sciences, University of Washington School of Medicine, Seattle, WA
2014 Search Committee, Department of Veterinary Medicine, UAF
2014-2015 Session Judge, Alaska High School Science Symposium
2013-2014 President Elect, American College of Sports Medicine, Alaska Chapter
2013-2015 Director, Life Science Seminar Series, Institute of Arctic Biology, UAF
2013-present Reviewer, Clinical Nutrition; Nutrition, Metabolism and Cardiovascular Diseases; Diabetes Research and Clinical Practice; Experimental Gerontology; Neuroscience Letters
2012-present Reviewer, Veterans Administration Merit Review Program
2011-present Reviewer, American Journal of Physiology- Regulatory, Integrative and Comparative Physiology; Journal of Gerontology: Medical and Biological Sciences; Journal of Nutrition, Health and Aging
2009-2012 Scientific Advisory Committee, TRI, UAMS, Little Rock, AR
2009-present Reviewer, NIH-NIDDK, Bethesda, MD
2009-present Reviewer, Diabetes Care; Journal of Physical Activity and Health
2009-present Reviewer, American Heart Association, National and Affiliate
2009-present Reviewer, Physician and Sportsmedicine, Am J Physiology
2007-2009 Voting Member, Veterans Administration Institutional Review Board
2007-2016 Editorial Board, Journal of Applied Physiology
2005 Clinical Research Success Award, UAMS, Little Rock, AR
2003-2005 Voting Member, Institutional Review Board, UAMS, Little Rock, AR
2002-2007 Voting Member, VA Research and Development Committee, Little Rock, AR
2004-present Reviewer, Can J Physiology. Medicine and Science in Sports and Exercise
1999-present Reviewer, Metabolism; American J Physiology; Journal of Applied Physiology

Provisional Patents

1. Nutritional formulation to ameliorate the metabolic consequences of excessive alcohol consumption, Inventors: Robert Harold Coker III, PhD, Robert Reese Wolfe, PhD, October, 2018.

2. Weight management for ideal body composition and functional capacity, Inventors: Robert Harold Coker III, PhD, Robert Reese Wolfe, PhD, September, 2018.

Book Chapters

1. **Coker RH**, Miller S, Schutzler SE, Deutz NEP, Wolfe RR, Clinical Nutrition and Aging: Part II: Protein and Exercise, CRC Press: Boca Raton, FL, USA, Apple Academic Press: Oakville, ON, Canada, 2016.

Manuscripts
In preparation

1. Leonard K, Campbell, C, Flora L, Keshel T, **Coker RH**, SkiKu program: impact on physical activity and sleep quality in Alaska Native children. Med Sci Sports Exerc, 2018.

2. Campbell C, Bogren L, Drew K, **Coker RH**, Determination of metabolic pathways in response to cycling versus vinyasa yoga, Int J Circumpolar Health. 2018.

In Review

1. **Coker RH**, Shin K, Scholten K, Johannsen MM, Kim I-Y, Schutzler SE, Tsigonis J, Wolfe RR. Meal replacement with unique essential amino acid profile promotes superior net protein balance. Clinical Nutrition, 2018.

2. Coker RH, Johannsen MM, Galvin G, Murphy CJ, Ruby BC. Seasonal wildland firefighting leads to detrimental alterations in adipose tissue and blood lipids. J Occup Environ Med, 2018.

3. **Coker RH**, Coker MS, Barlett L, Murphy CJ, Priebe K, Shriver TJ, Schoeller DA, Ruby BC. The caloric costs and metabolic benefits of wilderness hunting in Alaska. J Appl Physiol, 2018.

4. Schalt A, Johannsen, MM, Kim J, Chen R, Coker MS, Gunga H-C, **Coker RH**, Steinach M. Negative energy balance does not alter fat free mass during the Yukon Arctic Ultra – the longest and the coldest ultramarathon, Front Physiol, 2018.

Published

1. Johannsen MM, Shin K, Priebe K, **Coker RH**, Alaska Mountain Wilderness Ski Classic: alterations in energy expenditure and body composition, Wilderness Environ Med, 29(2): 221-225, 2018. doi: 10.1016/j.wem.2018 02 005.

2. Rundfeldt LC, Maggioni MA, **Coker RH**, Gunga H-C, Riveros-Rivera A, Schalt A, Steinach M. Cardiac autonomic modulations and psychological correlates in the Yukon Arctic Ultra: the longest and coldest ultramarathon. Front Physiol 2018 Feb 12. doi: 10.3389/fphys.2018.00035

3. **Coker RH**, Wolfe RR, Weight loss strategies in the elderly: a clinical conundrum, Obesity (Silver Spring), Editor's Choice, 2018 Jan; 26(1): 22-28. doi: 10.1002/oby.21961

4. Gnaiger E (Corresponding Author), **Coker RH** (Supporting Co-Author), The protonmotive force and respiratory control: building blocks of mitochondrial physiology, MitoEAGLE network, preprint, http://www.mitoeagle.org/index.php/MitoEAGLE_preprint_2018-02-08.

5. **Coker RH**, Robinette L, Kern PA, Minimal alteration in muscle lipid genes following stabilized weight loss, Appl Physiol Nutr Metab, 2017 Aug 4: 1-6. doi: 10.1139/apnm-2017-0098.

6. Kim I-Y, Wolfe RR, Azhar G, Ferrando, AA, **Coker RH**, Short term elevation in dietary protein intake does not worsen insulin resistance in older adults with metabolic syndrome, BMC Nutrition, 2017; 3. pii 33. doi. 0.1186/s40795-017-0152-4.

7. Baldwin L-M, Laukes C, Doyle MM, Reedy A, Mollis BL, Albritton SA, **Coker RH**, Ramsey B, The Regional Clinical Research Centers Network: Increasing patient access to clinical and health services research across the northwestern US, J Clin Trans Sci, 2017 Apr; 1(2): 94-100. doi: 10.1017/cs2016.18.

8. George, M, Azhar G, Pangle A, Peeler E, Dawson A, **Coker RH**, Coleman KS, Schraeder A, Wei J, Feasibility of conducting a 6-months long home-based exercise program with protein supplementation in elderly community-dwelling individuals with heart failure, J Physiother Phys Rehabil, 2017; 2(2): pii: 137. Doi 10.4172/2573-0312.

9. **Coker RH**, Weaver A, Coker MS, Murphy C, Gunga HC, Steinach M, Metabolic responses to the Yukon Arctic Ultra: longest and coldest ultramarathon in the world, Med Sci Sports Exerc, 2017 Feb; 49(2):357-362, doi 10.1249/MSS.1095.

10. **Coker RH**, Schutzler S, Deutz NE, Wei J, Miller S, Wolfe RR, Nutritional supplementation with essential amino acids and phytosterols reduces the risk for metabolic syndrome and cardiovascular disease in overweight individuals with mild hyperlipidemia, J. Endocrinol. Diabetes and Obes, 2015;3(2). pii: 1069. Epub 2015 Apr 15.

11. Keshel TE, **Coker RH**, Exercise training and insulin resistance: a current review, J. Obes. Weight Loss Ther., 2015 Jul;5(Suppl 5). pii: S5-003.

12. **Coker RH**, Hays NP, Williams RH, Wolfe RR, Evans WJ, Bed rest promoted reductions in walking speed, functional parameters, and aerobic fitness in older, healthy adults, J. Gerontol. Series A: Bio. Med. Sci. 2015 70(1): 91-96.

13. Kim, IL, Williams RH, Schutzler SE, Lasley CL, Bodenner DL, Wolfe RR, **Coker RH**, Acute lysine supplementation does not improve hepatic or peripheral insulin sensitivity in older, overweight individuals, J. Nutr Metab (Lond). 2014 Oct 8(11): 49.

14. **Coker RH**, Williams RH, Xu, L, Schutzler S, Wolfe RR, Evans WJ, Bed rest promotes hepatic and peripheral insulin resistance through elevated lipolysis in the eldery, J Gerontol Series A: Bio Med Sci 2014 Mar;69(3):363-70. doi: 10.1093/gerona/glt100.

15. **Coker RH**, Miller S, Schutzler, S, Deutz N, Wolfe RR, Whey protein and essential amino acids promote the reduction of adipose tissue and increased muscle protein synthesis during caloric restriction-induced weight loss in elderly, obese individuals, *Highly Accessed*. Nutr J 2012 Dec 11;11:105. doi: 10.1186/1475-2891-11-105.

16. **Coker RH**, Wolfe RR, Bedrest and sarcopenia, Curr Opinion Clin Met Care, 15(1):7-11, 2012. doi: 10.1097/MCO.0b013e32834da629.

17. Yao-Borengasser, A, Varma V, **Coker RH**, Ranganathan G, Phanavanh B, Rasouli N, Kern PA, Adipose triglyceride lipase (ATGL) expression in human adipose tissue and muscle. Role in insulin resistance and response to training and pioglitazone, Metabolism*,* 60: 1012-1020 2011.

18. **Coker RH**, Williams RH, Yeo SE, Kortebein PM, Bodenner DL, Kern PA, Evans WJ, The impact of exercise training compared to caloric restriction on hepatic and peripheral insulin resistance in obesity, J Clin Endocrinol. Metab, Nov; 94(11):4258-66, 2009.

19. **Coker RH**, Invited Commentary: Caffeine, cycling performance & exogenous CHO oxidation, Med Sci Sports Exer*,* Sept; 41(9):1743, 2009.

20. **Coker RH**, Williams RH, Kortebein PM, Sullivan DH, Evans WJ, Influence of exercise intensity on regional fat distribution and adiponectin in elderly adults, Metab Syn Relat Disorders, Aug;7(4):363-8, 2009.

21. **Coker, RH**, Williams, RH, Yeo, SE, Kortebein, PM, Bodenner, DL, Kern, PA, Evans WJ, Visceral fat and adiponectin: associations with insulin resistance are tissue-specific in obese, post-menopausal women, Metab Syn Relat Disorders, 7(1) 61-67, 2009.

22. Hays, NP, Galassetti, PR, **Coker, RH**, Invited Review: Prevention and treatment of type 2 diabetes: current role of lifestyle and pharmacological and natural product interventions, Pharmacology and Therapeutics, 118(2): 181-191, 2008.

23. Yeo, S, **Coker RH**, Aerobic exercise training versus the etiology of insulin resistance, Eur J Sci Sport, 8(1): 3-14, 2008.

24. Yeo, S, Hays, NP, Dennis, RA, Kortebein PM, Sullivan, DH, Evans, WJ, **Coker RH**, Abdominal fat and glucose metabolism in elderly, obese men and women, J Gerontol Series A: Bio Med Sci, Dec;62(12):1393-401, 2007.

25. Carrithers, JA, Carroll, CC, **Coker, RH**, Sullivan, DH, Trappe TA, Concurrent exercise and muscle protein synthesis: implications for exercise countermeasures in space, Aviation, Space and Environ Med., 78(5): 457-462, 2007.

26. Hays NP, Starling RD, Sullivan DH, Fluckey JD, **Coker RH**, Williams RH, Evans WJ, Effects of an ad libitum high carbohydrate diet and aerobic exercise training on insulin action and muscle metabolism in older men and women. J Gerontol Series A: Bio. Med. Sci., 61(3): 299-304. 2006.

27. **Coker RH**, Williams RH, Freeling SA, Brown AD, Kortebein PM, Sullivan DH, Evans WJ. Exercise-induced changes in insulin action are reliant on glycogen metabolism in elderly adults, Med Sci Sports Exer, 38(3): 525-532, 2006.

28. Hays NP, Starling RD, Sullivan DH, Trappe TA, Fluckey JD, **Coker RH**, Evans WJ. Lack of agreement of insulin sensitivity indices with euglycemic-hyperinsulinemic clamp data following dietary and exercise intervention in older adults. Metabolism, 55(4): 525-532, 2006.

29. **Coker RH**, Kjaer M, Glucoregulation during exercise, Sports Med, 35(7): 575-583, 2005.

30. Camacho R, Lacy DB, **Coker RH**, Wasserman DH, Hepatic glucose autoregulation: responses to small non-insulin-induced changes in arterial glucose, Am J Physiol Aug; 287(2):E269-74, 2004.

31. Simonsen, L, **Coker RH**, Mulla AL, Kjaer M, Bulow J, The effect of insulin and glucagon on splanchnic oxygen consumption, Liver, 22(6): 459-468, 2002.

32. Koyama Y, Galassetti P, **Coker RH**, Pencek R, Lacy DB, Davis SN, Wasserman DH, Prior exercise and the response to insulin-induced hypoglycemia in the dog, Am J Physiol, 282: E1128-E1138, 2002.

33. **Coker RH**, Koyama Y, Denny JC, Lacy DB, Wasserman DH, Prevention of overt hypoglycemia during exercise: stimulation of endogenous glucose production, independent of hepatic catecholamine action and changes in pancreatic hormone concentration, Diabetes, 51: 1310-1318, 2002.

34 Koyama Y, **Coker RH**, Denny JC, Lacy DB, Jabbour K, Williams PE, Wasserman DH, R3ole of carotid bodies in control of the neuroendocrine response to exercise, Am J Physiol, 281: E742-E748, 2001.

35. **Coker RH**, Simonsen L, Bulow, J, Wasserman DH, and M Kjaer, Stimulation of splanchnic glucose production during exercise in humans contains a glucagon-independent component, Am J Physiol, 280: E918-E927, 2001.

36. Koyama, Y, **Coker, RH**, Stone, EE, Lacy, DB, Jabbour, K, Williams, PE, and DH Wasserman, Evidence that carotid bodies play an important role in glucoregulation in vivo, Diabetes, 49: 1434-1442, 2000.

37. Krishna, MG, **Coker, RH**, Lacy, DB, Zinker BA, Halseth AE, Wasserman DH, Glucagon response to exercise is critical for accelerated hepatic glutamine metabolism and nitrogen disposal, Am J Physiol, 279: E638-E645, 2000.

38. **Coker RH**, Lacy DB, Williams PE, Wasserman DH, Hepatic α- and β- receptors are not essential for the increase in R_a during exercise in diabetes, Am J Physiol, 278: E444-E451, 2000.

39. **Coker RH**, Koyama Y, Lacy DB, Williams PE, Rheaume N, Wasserman DH, Pancreatic innervation is not essential for exercise-induced changes in glucagon and insulin or glucose kinetics, Am J Physiol, 277 (Endocrinol Metab 40): E1122-E1129, 1999.

40. Galassetti P, Koyama Y, **Coker RH**, Lacy DB, Cherrington AD, Wasserman DH, Role of a negative arterial-portal venous glucose gradient in the postexercise state, Am J Physiol, 277 (Endocrinol. Metab. 40): E1038-E1045, 1999.

41. Galassetti P, **Coker RH**, Lacy DB, Cherrington AD, Wasserman DH, Prior exercise increases net hepatic glucose uptake during a glucose load, Am J Physiol, 276(Endocrinol. Metab. 39): E1022-E1029, 1999.

42. **Coker RH**, Lacy DB, Krishna MG, Wasserman DH, Splanchnic glucagon kinetics in exercising alloxan-diabetic dogs, J Appl Physiol, 86(5): 1626-1631, 1999.

43. **Coker RH**, Krishna MG, Lacy DB, Bracy DB, Wasserman DH, Role of hepatic α- and β-adrenergic receptor stimulation on hepatic glucose production during heavy exercise, Am J Physiol, 273 (Endocrinol Metab. 36): E831-E838, 1997.

44. **Coker RH**, Krishna MG, Zinker BA, Allen EJ, Lacy DB, Wasserman DH, Sympathetic drive to liver and nonhepatic splanchnic tissue during prolonged exercise is increased in diabetes, Metabolism, 46(11): 1327-1332, 1997.

45. **Coker RH**, Krishna MG, Lacy DB, Allen EJ, Wasserman DH, Sympathetic drive to liver and nonhepatic splanchnic tissue during heavy exercise, J Appl Physiol, 82(4): 1244-1249, 1997.

46. **Coker RH**, Brown SP, Chitwood LF, Keith WB, Nicotine use and athletic performance, J Strength Conditioning Res, 10(4): 279-282, 1996.

First or Senior Author Abstracts

1. **Coker RH**, et al., The caloric costs and metabolic benefits of wilderness hunting in Alaska, American College of Sports Medicine, Minneapolis, MN, 2018.

2. Johannsen MM, et al., Seasonal changes in body composition and blood lipids in wildland firefighters, American College of Sports Medicine, Minneapolis, MN, 2018.

3. Johannsen MM, et al., The potential influence of follistatin and myostatin on body composition during the Yukon Arctic Ultra, Experimental Biology, San Diego, CA, 2018.

4. Kim J, et al., Ultra-endurance Exercise in the Cold: Influence on Serum Myostatin and Body Composition, Society for the Advancement of Chicanos/Hispanics and Native Americans in Science, The National Diversity in STEM Conference, Salt Lake City, UT, 2017.

5. Shin, K, et al., Nutrient Formulation and Liver Health, University of Alaska Biomedical Research Conference, Fairbanks, AK, 2017.

6. Crawford et al., Fasting Status of Stellar Sea Lion Pups as an Index of Potential Nutritional Stress in Decreasing and Increasing Populations, Halifax, Nova Scotia, CA, 2017.

7. Johannsen M, et al., Differences in Energy Expenditure Between Genders in Ultra-Endurance Nordic Skiing, American College of Sports Medicine Meeting, Denver, CO, Med Sci Sports Exerc. 49(5S), 580, 2017.

8. Campbell C, et al., Determination of Metabolic Pathways in Response to Cycling Versus Vinyasa Yoga, American College of Sports Medicine Meeting, Denver, CO, Med Sci Sports Exerc. 49(5S), 580 2017.

9. Shin K, et al., Alaska Mountain Wilderness Ski Classic: Alterations in Body Composition, Northwest Regional Chapter of the American College of Sports Medicine, Bend, OR, International Journal of Exercise Science, Conference Proceedings, 8(5), 10, 2017.

10. Crawford SG et al., Using Fasting Status to Evaluate the Nutritional Stress Hypothesis in Steller Sea Lion Pups, The Wildlife Society Annual Conference, Raleigh, NC, 2016.

11. Baker L et al., Clinical Research Nursing: Embodying Team Science for Participant-Focus Care, International Association of Clinical Research Nurses, Lake Buena Vista, FL, 2016.

12. Weaver AN, et al., Serum Myokine Levels during the 430 Mile Yukon Arctic Ultra, American College of Sports Medicine Meeting, Boston, MA, Med Sci Sports Exerc. 48(5 Suppl 1):565. 2016.

13. Flora L, et al., The Importance of SkiKu on Physical Activity and Sleep Efficiency in Alaska Native Youth, American College of Sports Medicine Meeting, Boston, MA, Med Sci Sports Exerc. 48(5 Suppl 1):959-60 2016.

14. Leonard K, et al., SkiKu and Physical Activity in Alaska Native Youth, Northwest/Alaska Regional American College of Sports Medicine Meeting, Tacoma, WA, International Journal of Exercise Science, Conference Proceedings, 8(4), 2016.

15. Wing H, et al., SkiKu and Sleep Quality in Alaska Native Youth, Northwest/Alaska Regional American College of Sports Medicine Meeting, Tacoma, WA, International Journal of Exercise Science, Confernence Proceedings, 8(4), 2016.

16. Crawford S, et al., Using fasting profiles of Stellar sea lion pups from populations of differing trajectories to evaluate the nutritional stress hypothesis, Midnight Sun Symposium, University of Alaska Fairbanks, Fairbanks, AK, 2016.

17. Weaver A, et al., Serum Irisin and Meteorin during the Yukon Arctic Ultra, NIH IDeA Conference, Couer d'Alene, ID, 2015.

18. MacDougall R, et al., The NANANordic ski program and physical activity in Alaska Native children, Arctic Science Conference, Fairbanks, AK, 2014

19. Keshel T, at al., The NANANordic ski program and sleep quality in Alaska Native children, Arctic Science Conference, Fairbanks, AK, 2014.

20. **Coker RH**, **et al.,** Molecular markers of mitochondrial metabolism are not affected by the chronic influence of caloric restriction- or exercise-induced weight loss, Integrative Physiology of Exercise, Miami, FL, 2014.

21. **Coker RH**, **et al.,** Acute lysine supplementation does not improve hepatic or peripheral insulin sensitivity in older, obese individuals, Experimental Biology, San Diego, CA, 2014.

22. **Coker RH**, **et al.,** Essential amino acids and phytosterols promote improvements in metabolic risk factors in individuals with mild hyperlipidemia, Agricultural Circumpolar Conference, University of the Arctic, Girdwood, AK, 2013.

23. **Coker RH**, **et al.,** Dysregulation of fat and glucose metabolism is worsened by bedrest in older, obese adults, *American Diabetes Association*, Philadelphia, Diabetes, 61(1) Suppl., 2012.

24. **Coker RH**, **et al.,** Divergent exercise-induced responses of ATGL, CGI 58 and IMCL are dependent on weight loss in obese women and men, American Diabetes Association, New Orleans, LA, Diabetes, 58(1) Suppl., 2009.

25. **Coker RH, et al.,** Exercise training with and without weight loss: effects on hepatic and peripheral insulin sensitivity, *American Diabetes Association*, Chicago, IL Diabetes, 56(1) Suppl., 2007.

26. **Coker RH**, **et al.,** Exercise training- versus caloric restriction-induced weight loss: effects on hepatic and peripheral insulin sensitivity, *Integrative Physiology of Exercise*, Indianapolis, IN, 2006.

27. Yeo, et al., Exercise-induced changes in abdominal adipose tissue: effects of intensity and caloric expenditure, *Integrative Physiology of Exercise*, Indianapolis, IN, 2006.

28. **Coker RH**, **et al.,** Plasma adiponectin is not altered by moderate or heavy training in elderly, overweight individuals, *American College of Sports Medicine*, Denver, CO, *Med. Sci. Sports Exer,* 37(5) Suppl., 274, 2006.

29. Yeo et al., Inverse relationship between visceral fat and hepatic insulin action in obese adults, *American Diabetes Association*, Washington, DC, *Diabetes,* 55(1) Suppl., 2006.

30. **Coker RH, et al.,** Distribution of abdominal fat and glucose metabolism in older, obese males and females. *American Diabetes Association*, San Diego, CA, *Diabetes,* 54(1) Suppl., 2005.

31. **Coker RH**, **et al.,** Improved peripheral insulin action with heavy exercise training but not moderate exercise training in overweight elderly subjects, American College of Sports Medicine, Nashville, TN, *Med Sci Sports Exer,* 36(5) Suppl., 273, 2005.

32. Honea et al., Synergistic reduction in low-density lipoprotein cholesterol with combined HMG-CoA reductase inhibitor and aerobic exercise therapy in obese, hypercholesterolemic males, *American College of Sports Medicine*, St. Louis, MO, *Med Sci Sports Exer.* 33(5) Suppl., 273, 2002.

33. **Coker RH, et al.,** Catecholamine- and pancreatic-hormone independent stimulation of endogenous glucose production prevents overt hypoglycemia during exercise. *American Diabetes Association*, San Antonio, TX, *Diabetes* 49(1) Suppl., 0042, 2000.

34. **Coker RH**, **et al.,** Stimulation of splanchnic glucose production despite glucagon deficiency during euglycemic exercise. *American College of Sports Medicine*, Indianapolis, IN, *Med Sci Sports Exer,* 32(5) Suppl., 1262, 2000.

35. **Coker RH, et al.,** Direct hepatic adrenergic stimulation does not mediate the exercise-induced increment in endogenous glucose production during moderate exercise in poorly-controlled diabetes, *American Diabetes Association*, San Diego, CA, *Diabetes* 48(1) Suppl., 0061, 1999.

36. **Coker RH**, **et al.,** Stimulation of hepatic glucose production, independent of changes in pancreatic hormones and hepatic adrenergic stimulation, during hypoglycemic exercise, American College of Sports Medicine, Indianapolis, IN, *Med Sci Sports Exer,* 32(5) Suppl.,1262, 2000.

37. **Coker RH**, **et al.,** Poorly-controlled diabetes increase the exercise-induced increment in portal vein glucagon, *American College of Sports Medicine*, Orlando, FL, *Med Sci.Sports Exer,* 30(5) Suppl., S195, 1998.

38. **Coker RH, et al.,** Pancreatic innervation is not essential for exercise-induced changes in glucagon, insulin, or glucose homeostasis, *American Diabetes Association*, Chicago, IL, *Diabetes*, 47(1) Suppl., 1116, 1998.

39. **Coker RH**, **et al.,** Effect of selective hepatic adrenergic blockade on glucose production during heavy exercise in dogs, *American College of Sports Medicine*, Denver, CO, *Med Sci Sports Exer,* 29(5) Suppl., S195, 1997.

40. **Coker RH, et al.,** Sympathetic drive to nonhepatic splanchnic and hepatic tissues during prolonged exercise is increased in diabetes, *American Physiological Society Intersociety Meeting*, Vancouver, British Columbia, Canada, *The Physiologist*, 39(5) A-19, 1996.

41. **Coker RH**, **et al.,** Assessment of sympathetic drive nonhepatic splanchnic and hepatic tissue during heavy exercise: norepinephrine spillover in the dog, American College of Sports Medicine, Cincinnati, OH, *Med Sci Sports Exer*, 28(5) Suppl., S195, 1996.

Grants in Review

United Stated Army
Medical Research and Materiel Command
Sex Differences in Occupational Resilience: Measurement of Integrated Protein Turnover and Alterations in Skeletal Muscle during Arduous Field Operations (PI: Coker)
The objective of this study is to investigate potential differences in protein metabolism and muscle health during conditions of operational stress in the female and male warfighter.

National Institutes of Health
National Institute of General Medical Sciences P20
Mammalian Hibernation Research- A Path Towards a Center for Transformative Research in Metabolism (PI: Drew); Scored as a 34 and awaiting Council Review
Nutrient Strategies for Muscle Preservation in the Elderly (Project Leader: Coker)
The purpose of the proposed study is determine the importance of essential amino acids in improvement of muscle and metabolic health during weight loss in older, obese adults.

Federal Emergency Management Association
Optimizing pre-season preparedness of wildland firefighters: mitigation strategies to reduce musculoskeletal and heat related injury risk. (PI: Ruby, Subaward PI: Coker)
The purpose of this project series is to identify individuals who are at greater risk for injuries, determine job specific fitness, and characterize musculoskeletal changes in wildland firefighters.

Active Grants

National Institutes of Health
National Institute of General Medical Sciences
I-Trep Internship at Direct Action Networks, International in New York City, NY
Biometrics and Nutrient Management in the Arctic Warfighter
This project is focused on the utilization of a multidisciplinary approach that will ultimately improve warfighter resilience in the extreme cold.

National Institutes of Health
National Institute of Aging Small Business Technology Transfer Phase II Grant (R42AG050375)
(PI: Wolfe; Managing Partner: Coker RH)
Nutritional Therapy in Elderly Individuals with Heart Failure
This project will evaluate the influence of an amino acid formulation called UpBeat that is designed promote physical function and quality of life in older individuals with heart failure.

United States Forest Service; National Technology and Development Center
Metabolic Resilience in Wildland Firefighters (PI Coker RH)
The objective of this study is to evaluate pre- and post-fire season changes in body composition (lean mass, fat mass, and bone mineral density), tissue lipid and metabolic health in Alaskan local and hot-shot wildland firefighters.

Equipment Grants

Office of the Provost- University of Alaska Fairbanks
Instructional Equipment Award (PI Coker RH)
This equipment award provided our faculty with a Parvomedics Indirect Calorimetry System that is specifically designed to measure respiratory gas exchange and energy expenditures in real time. It will be used in conjunction with BIOL 412/612 and BIOL 393 as well as incorporated into the aims of current research initiatives.

National Institutes of Health: Diversity Program Consortium
BLaST Equipment Grant (PI Coker RH)
The current grant provides an electronically braked cycle ergometer than be used in conjunction with the Parvomedics Indirect Calorimetry System indirect calorimetry system. These devices and/or pieces of instrumentation will be used in the BIOL 412/612 and BIOL 393.

Conference Grants

TREND and Alaska EPSCoR
Enhancing Economic Development and SBIR/STTR Performance (PI Coker RH)
The purpose of this grant is to establish an Economic and Biotechnology Development Board in Alaska and to offer a workshop on preparing competitive SBIR and STTR proposals. Six SBIR proposals were submitted to various agencies from UAF, and USDA SBIR was funded.
Held in the International Arctic Research Center at the University of Alaska Fairbanks.

Alaska Chapter of American College of Sports Medicine
Enhancing Physical Activity and Nutrition in the Teenage and Adult (PI Coker RH)
The purpose of this regional conference was focused on leveraging and planning partnerships to improve physical activity in youth that translate into adulthood.
Held at the University of Alaska Anchorage

Grants Reviewed but not Funded

University of Alaska, Faculty Initiative Fund
Lean-Launchpad for Alaska (Co-PIs: Coker and Webley)
The objective of this proposal is to develop courses on entrepreneurship and commercialization. One course will be implemented into the MBA program and focused on “Hacking for Defense” directives. A summer sessions course will also be focused on five sectors identified by the Alaska Department of Commerce: Marine, Energy, Aviation, Outdoor and Food Manufacturing.

University of Alaska, Enrollment, Retention and Graduation Rate Initiative
Increasing Student Success through the Lean LaunchPad Program (Co-PIs: Coker and Webley)
This proposal was focused on addressing the need for diversification of the Alaskan economy.

National Institutes of Health R21
National Institute of Alcohol Abuse and Alcoholism
Nutritional Therapy for Alcohol Use Disorder. (PI Coker)
The focus of this proposal is directed towards the evaluation of a nutritional therapy specifically designed to decrease hepatic steatosis, maintain lean body mass, and improve physical function in individuals with alcohol use disorder.

National Aeronautics and Space Administration
IOS Physiological Mechanisms and Biomechanics
Metabolic Suppression in a Large Hibernator (Toien, O: PI) (Co-I Coker RH)
This proposal is focused on broadening our understanding of the long-term metabolic flexibility in hibernating bears. We proposed to study the influence of hibernation on mitochondrial respiration and energy demand, and the link between risk factors related to metabolic disease.

National Institutes of Health; Alaska INBRE
Nutritional Formulation for Alcohol Rehabilitation (PI Coker RH)
The objective of this proposal was to evaluate the effectiveness of proprietary nutritional therapy on hepatic steatosis individuals with mild to moderate alcohol use disorder. This proposal received a 1.8/10 merit score from the expert external reviewers but was ultimately not funded.

National Science Foundation
RII Track 2 FEC: Advancing Neurotechnology and Research Infrastructure in Alaska and Kansas through Research, Education and Commercialization of Devices for Real-Time Monitoring (PI Drew; Co-I Coker RH).
The long-term goal of this proposal is focused on the development of a new generation of separation-based sensors for monitoring intercellular signaling.

National Institutes of Health
National Institute on Aging Multi-Site R01 (PI Coker RH)
Functional Benefits of Weight Loss in the Elderly
This study is designed to evaluate the influence of weight loss on functional outcomes and quality of life in the elderly when skeletal muscle is preserved. Headquartered in Alaska, we received special permission to exceed the NIH cap on this proposal, and it involved 7 academic institutions across the United States.

National Institutes of Health
National Institute of Alcohol Abuse and Alcoholism (NIAAA) R21 (PI Coker RH)
Therapeutic Nutrition for Alcohol Rehabilitation
This proposal was written to support a NIH R21 application directed at the preservation of muscle mass, reduction of hepatic steatosis and normalization of plasma concentrations of the precursors of important neurotransmitters in individuals recovering from alcohol use disorder.

National Institutes of Health (NIA) R15 (PI Coker RH)
Muscle Preservation during Weight Loss in Older, Overweight Individuals
This proposal was focused on providing clinical research opportunities to undergraduate and graduate students in the field of sarcopenic obesity.

National Institutes of Health
National Institutes of Alcohol Abuse and Alcoholism (NIAAA) R43 (LCI Coker)
Nutritional Formulation for Alcohol Rehabilitation
This objective of this study was focused on the influence of a patent protected nutritional formulation on muscle protein synthesis in individuals recovering from alcohol use disorder. This proposal received an "intent to fund" but was ultimately not awarded this round.

National Institutes of Health FAST TRACK (LCI Coker) First and Second Submission
Muscle Preservation during Weight Loss in Older, Overweight Individuals (PI Coker RH)
Based on previous successful experience in the field, these submissions were focused on an aggressive combination of clinical research and commercialization. These proposals were well-received but suggested more preliminary data to support our assertions.

National Institutes of Health NIAAA Phase I First submission
A Nutritional Formulation for Alcohol Rehabilitation (PI Coker RH)
This proposal was focused on a unique subset of the population that are largely underserved with respect to nutritional therapy. While it received a favorable score and an official "intent to fund" by NIH, it was ultimately not funded as an NIH SBIR.

National Science Foundation RII Track – 2 FEC: Advancing Neurotechnology and Research *Infrastructure in Alaska and Kansas through Research, Education and Commercialization of Devices for Real-Time Monitoring* (PI Drew) (Co-I Coker RH)
The focus of this proposal was directed at the generation of separation based sensors for monitoring intercellular signaling. It was our assertion that the generation of these unique sensors would overcome the limitations associated with current microdialysis technology.

National Science Foundation *Alaska Science, Technology, and Economic Development Center; Healthy Botanicals and Nutrition* (Kuhn, T: PI) (Co-I: Coker RH)
The primary purpose of this proposal was to promote rigorous academic training and ignite economic development through enhancements in translational capacity. While this singular proposal was not funded, it did help promote many entrepreneurial initiatives at UAF, including the recent TREND supported seminars which led to multiple NIH SBIR submissions.

Grants Awarded but Returned or Transferred

National Institutes of Health
Small Business Innovations in Research (Phase II)
Anabolic Countermeasures against Sarcopenic Obesity (PI Coker RH)
The aim of this award was to further investigate the long-term therapeutic efficacy of a meal replacement rich in essential amino acids in the treatment of sarcopenic obesity. Moreover, this included a methods-based commercialization of the product into the private sector.

National Institutes of Health
Small Business Innovations in Research (Phase I)
Nutritional Countermeasures against Sarcopenic Obesity (PI Coker RH)
The specific aim of this award was to determine the efficacy of a unique formulation of essential amino acids in protecting against the loss of lean mass during caloric restriction-induced weight loss in the obese elderly population.

American Heart Association; Heartland Affiliate
BGA 03653552
Influence of Caloric Restriction and Exercise Training on Metabolic Syndrome (PI Coker RH)
This proposal was funded on the first submission but was returned upon receipt of the SDA award from the American Heart Association

Previous Grants

BUILD-funded Biomedical Learning and Student Training (BLaST) Curriculum Development Grant; *Exercise Physiology Laboratory Topics* (PI Coker RH)
The objective of this award is focused on providing students with "hands-on" experience in the use of indirect calorimetry systems and dual x-ray absorptiometry scanners as part of BIOL 412.

IDeA Network of Biomedical Research Excellence: Alaska (INBRE) Curriculum Development Project *Exercise Physiology Laboratory Course* (339943-60212 - FIN016) (PI Coker)
The goal of the project is to develop laboratory experiences linked to the measurement of mitochondrial function and tissue lipid in humans.

BLaST 2016 Faculty Pilot Project
Influence of SkiKu on Resilience in Alaska Native Youth (PI Coker RH)
This proposal utilizes the measurement of physical activity (using state-of-the-art Actigraph technology) and the assessment of behavioral health (culturally appropriate Youth Community Protective Factors Scale) so that we can examine the interactive relationships between "being out" and promoting resilience in Alaska Native youth.

National Institutes of Health
National Institute of Diabetes and Digestive and Kidney Diseases Small Business Innovations in Research (R43 AG051298-01) (PI: Wolfe; LCI and Managing Partner: Coker RH); This was the first NIH R43 ever awarded through UAF, and now eligible for a R44 grant.
Muscle Preservation during Weight Loss in Older, Overweight Individuals
This study will evaluate the impact of a meal replacement on the loss of adipose tissue and the preservation of muscle during caloric restriction-induced weight loss in older, obese individuals.

National Institutes of Health
National Institute of Aging Small Business Technology Transfer Phase I Grant (R41AG050375) (PI: Wolfe; Managing Partner: Coker RH)
Nutritional Therapy in Elderly with Heart Failure
This project will develop a nutritional beverage to improve physical function in elderly individuals with heart failure. The Phase I project will formulate the beverage and perform the necessary studies to prepare for a Phase II randomized clinical trial related to this initiative.

Alaska Phase 0 TREND: The Technology Research and Development Center of Alaska
(PI: Coker RH)
This grant was awarded to support the submission of a Phase II SBIR application focused on the clinical development and commercialization of an experimental meal replacement (EMR). Two grant proposals were submitted in the fall of 2016, received comments from the review committees and will be resubmitted in the fall of 2017 in conjunction with patent revisions.

NIH 1P30AG028718-01A2
Arkansas Claude Pepper Older Americans Independence Center
(Program Director: Wei, JY); Resource Core 2 (RC2) (Co-Leader: Coker RH)
Goals: This RC2 (*Nutrition, Metabolism and Physiology Core*) provided many key resources including body composition analysis, standardized testing for metabolic function, a dietician and a metabolic kitchen.

National Institutes of Health
National Institute of General Medical Sciences; Clinical Translational Research Infrastructure Network Grant G10288
Nutritional Formulation for Alcohol Rehabilitation (PI Coker RH)
This objective of this study will be focused on the influence of a patent protected nutritional formulation on muscle protein synthesis in individuals recovering from alcohol use disorder.

National Dairy Association
Macronutrients and Metabolic Syndrome (Co-PI's Ferrando and Coker RH)
The purpose of this project was to determine the influence of dairy products in the prevention of metabolic syndrome.

R01 DK034817 National Institutes of Health
Substrate Cycling in Energy Metabolism (PI Wolfe RR) (Co-I Coker RH)
The goal of this study was to investigate the relationship between free fatty acid delivery to the liver and very low-density lipoprotein triglyceride production and secretion.

NIH 1RC2GM092277 National Institutes of Health
Stable Isotope Analytical Core for Studies in Human Metabolism (PI Wolfe) (Co-I Coker RH)
The primary purpose of this grant was to provide core laboratory offering routine and specialized sample analysis and assistance in methods development and training in use of stable isotopes in human metabolic studies.

Clinical Merit Review; (PI Coker RH)
Veterans Administration
Weight Loss and Insulin Action
The specific aim of this award was to elucidate the degree of weight loss necessary to reduce adipocyte inflammation and normalize insulin resistance in obese adults.
P01 AG023591-01

NIH/NIA
Bedrest and Aging, Evans (Program Director)
Insulin Resistance and Carbohydrate Metabolism; Coker RH (Project Leader)
The major goal of this project was to examine the influence of bedrest on insulin action in the elderly and provide clinically useful strategies to prevent its deleterious influence.

K01 DK 64716-01 (PI Coker RH)
NIH/NIDDK
Therapeutic Adaptation of Insulin Action
The goal of this grant was to determine the separate influence of weight loss from exercise training on hepatic and peripheral insulin action in obese persons.

American Heart Association
Influence of Caloric Restriction and Exercise Training on the Pathogenesis of Metabolic Syndrome (PI: Coker RH)
The primary goal of this grant was to determine the influence of caloric restriction vs. exercise training on insulin action in persons with impaired glucose tolerance.

R01 AG 19346-01; (PI: Evans) (Co-I Coker RH)
NIH/NIA
Influence of Physical Activity on Insulin Resistance in the Elderly
This grant was to determine the impact of exercise intensity on glucose metabolism.

JDFI 397014; Coker (PI)
Juvenile Diabetes Foundation, International
Role of Adrenergic Drive in Regulation of Carbohydrate Metabolism during Exercise in Health and Diabetes
The goal of this grant in combination with R01 DK50277 was to determine the role of adrenergic stimulation in carbohydrate metabolism during exercise in health and disease.

Television Interviews

1. Health Report: UAF dietary study, interviewed by Katie Luper, aired on April 03, 2018.

Podcast Interviews

1. On The Line with Drs. Charlie Palmer and Brent Ruby, Seasonal alterations in metabolic risk factors in Alaska Wildland Firefighters, http://ontheline.libsyn.com/seasonal-alterations, May 03, 2018.

Radio Interviews

1. Nutrition and Aging, interviewed by Charlie O'Toole for iHeart Radio, 2016.
2. Physical Activity for Elderly Individuals, interviewed by Charlie O'Toole for iHeart Radio, 2015.

Web-based or Media Articles on Published Research

1. Why humans are optimized for endurance running, not speed, The Guardian, https://www.theguardian.com/science/blog/2018/mar/14/why-humans-are-optimised-for-endurance-running-not-speed, March 14, 2018.

2. Why people are swimming in freezing water, TIME magazine, http://time.com/5159851/why-people-are-swimming-in-freezing-water/?iid=sr-link1, February 15, 2018.

3. UAF Office of Intellectual Property and Commercialization, Nanook Innovations, Innovation Spotlight September 2017, Dr. Robert Coker. http://www.uaf.edu/oipc/publications/Nanook-Innovation-News-September-2017.png

4. A continued study: The Yukon Arctic Ultra 2017, August 2017. http://charite-in-space.de/8399-2/

5. Skiku: Program introduces village children to Nordic skiing, Alaska Magazine, October, 2016.

6. The Science of Play, The Montana Institute, http://www.montanainstitute.com/blog/2016/3/16/u7x5o7frsyfb5uovbtp94d3ruksk1b, 2016.

7. Science of play at heart of healthier, happier humans, written by Marie Thoms. http://www.publicnow.com/view/C67F9737C77635C426F80C9DAA644DDF58DD929D?7559xxx1455573733, 2016.

8. Whey protein, amino acids may boost fat loss, Written by Kathleen Doheny and reviewed by Laura J. Martin, MD. http://www.webmd.com/diet/news/20121212/whey-amino-acids-fat-loss.

Invited Presentations

1. "Appalachia to Alaska: Permutations in Metabolic Stress", Distinguished Faculty Award and Seminar Series, Department of Health and Human Performance, University of Montana, Missoula, MT, 2018.

2. "Challenges of Physical Activity Programs in Alaska", Positive Leadership for Active Alaskan Youth, Alaska Native Tribal Health Consortium, Anchorage, AK, 2018.

3. "Activity and Resilience in Alaska Native Youth", Positive Leadership for Active Alaskan Youth, Alaska Native Tribal Health Consortium, Anchorage, AK, 2018.

4. "How are Northwest Participant Clinical Interaction Sites integrating Research and Healthcare?, Institute of Translational Health Sciences. University of Washington, Seattle, WA, 2018.

5. "Cold Exposure and Physiological Resilience", Arctic Survival School, Eielson Air Force Base, Alaska, 2017.

6. "Therapeutic Nutrition for Alcohol Rehabilitation", University of Nevada Las Vegas Annual Clinical Translational – Infrastructure Network meeting, Las Vegas, NV, 2016..

7. "Human Survival and Performance in the Extreme Environments of North America", Northwest/Alaska Regional Chapter Meeting of the American College of Sports Medicine, Tacoma, WA, 2016.

8. "The Efficacy of Physical Activity Programs for Alaska Native Children Living in the Remote Arctic", Positive Leadership for Active Alaskan Youth, Anchorage, AK, 2016.

9. "The Challenge of Human Movement: How and Why?", BLaST One Health Seminar Series, University of Alaska Fairbanks, Fairbanks, AK, 2015.

10. "Health and Longevity in the Last Frontier", Healthy Living Series, Fairbanks Memorial Hospital and the University of Alaska Fairbanks, 2014.

11. "Nutraceuticals in Alaska", Fairbanks Economic Development Corporation, Carlson Center, 2014.

12." Muscle Preservation in the Elderly", Patient-Centered Outcomes Research Institute, Multi-Care Health System, Tacoma, WA, 2014.

13. “Anabolic Efficiency, Why does it matter?”, Life Science Seminar Series, Institute of Arctic Biology, University of Alaska Fairbanks. 2014.

14. “Clinical Research and Technology Transfer in the Mountain West”, Institute of Translational Health Sciences, University of Washington, Seattle, WA 2014.

15. “Nutraceuticals and Metabolic Health”, Inventors Forum sponsored by the Office of Intellectual Property and Commercialization, University of Alaska Fairbanks, 2014.

16. “Aging, Exercise and Disease Prevention”, Public Lecture Series, Undergraduate Research and Scholarly Activity, 2013.

17. “Interaction between Diet and Disease in Alaska Natives”, Banner Health: Tanana Valley Clinic, Fairbanks, AK 2013.

18. “Anabolic Efficiency and Muscle Preservation in Older Individuals”, Alaska Interior Medical Education Summit, Murie Building, University of Alaska – Fairbanks, Fairbanks, AK 2013.

19. “Therapeutic Efficacy of Exercise-Induced Weight on Systemic Insulin Resistance in Obesity”, University of Alaska – Fairbanks, 2012.

20. “Nutritional Countermeasures against Metabolic Disease” Claude Pepper Older Americans Independence Center-Sponsored Seminar, University of Arkansas for Medical Sciences, 2012.

21. “Influence of Activity and Nutrient Availability on Fat, Muscle and Insulin Resistance: A Multi-Faceted Approach”, Georgia Southern University, 2011.

22. “Modulation of Hepatic and Peripheral Insulin Sensitivity through Diet and Activity”, Department of Kinesiology, Auburn University, 2010.

23. The Impact of Lifestyle Interventions of the Etiology of Insulin Resistance in Obesity, Grand Rounds, University of Arkansas for Medical Sciences, Little Rock, AR, 2008.
24. “Lifestyle Interventions and Insulin Resistance”, Department of Nutritional Sciences, Invited Seminar, University of Kentucky, Lexington, KY, 2009.

25. “Exercise and Weight Loss”, Dean’s Research Forum, University of Arkansas for Medical Sciences, Little Rock, AR, 2008.

26. “Exercise, Obesity, and Diabetes”, Best Practices in the Continuum of Care: Management of Diabetes in Older Adults, Department of Veterans Affairs, Central Arkansas Veterans Healthcare System, Little Rock, AR 2007.

27. “Caloric Restriction versus Exercise Training: Effects on Hepatic and Peripheral Insulin Resistance”, REAP Seminar on lipotoxicity and metabolic syndrome (Research Enhancement Award Program), UAMS, Little Rock, AR, 2007.

28. “Influence of Caloric Restriction versus Exercise Training on Metabolic Syndrome”, Scientist Development Award Research Symposium, American Heart Association, Chicago, IL, 2006.

29. “Mini Medical School: Obesity and Public Health”, School of Medicine, University of Arkansas School of Medical Sciences, Little Rock, AR, 2005.

30. “Managing type 2 diabetes through diet and exercise”, Department of Physical Medicine and Rehabilitation, Baptist Hospital, Little Rock, AR, 2005.

31. “Exercise and diabetes”, Arkansas Rural Health Program, Little Rock, AR, 2004.

32. “Overcoming insulin resistance”, Arkansas Nurses Association, Little Rock, AR, 2004.

33. “Diabetes and exercise”, Southern Gerontological Nursing Association Convention, Little Rock, AR, 2003.

34. “Nutrition: facts about supplementation for high school athletes”, Annual University Sports Medicine Coaching Conference, University of Mississippi Medical Center, Jackson, MS, 2000.

35. “Regulation of metabolic fluxes under conditions of additional metabolic stress” Department of Biology, University of Mississippi, University, MS, 1999.

36. “Sympathoadrenal influence of metabolism during exercise in health and disease” Chair, Symposium, American College of Sports Medicine, Seattle, WA, 1999.

37. “Additional metabolic stressors during exercise: influence of adrenergic mechanisms” Howard Hughes Medical Institute, Vanderbilt University, Nashville, TN, 1999.

38. “Regulation of fuel metabolism during exercise, Coastal Systems Command, Naval Experimental Diving Unit, Scientific Seminar Series, Panama City, FL, 1999.

39. “Glucoregulation during exercise imposed on additional metabolic stressors, Department of Health and Human Performance, Auburn University, Auburn, AL, 1999.

Courses Taught

Human Anatomy and Physiology	- 1 semester	Univ. of Alaska Fairbanks (UAF)
Clinical Physiology	- 6 sessions;	Univ. of Arkansas for Med. Sci.
Medical Physiology	- 7 semesters;	Univ. of Arkansas for Med. Sci., UAF
Exercise Physiology	- 11 semesters;	Univ. of MS and Univ. of Arkansas, UAF
Health Aspects	- 7 semesters;	Univ. of Mississippi
Metabolism	- 2 semesters;	Univ. of Mississippi
Clinical Research Methods	- 2 semesters;	UAF
Internship in Physical Therapy	- 2 semesters;	UAF
Lean Launchpad Methodology	- will be taught as part of UAF MBA program in QY 18-19	

Graduate students

Stephanie Crawford, MS candidate in Biological Sciences Sciences (*scheduled to defend in September 2018 but on medical leave*), Nutrient Status in Alaskan Stellar Sea Lion Pups, Alaska Fish and Game and University of Alaska Fairbanks.

Kenneth Shin, MS candidate in Biological Sciences, Condition-Specific Nutrition in Alcohol Rehabilitation, Department of Biology, University of Alaska Fairbanks; withdrew to pursue his Pharm D at Idaho State University.

Michelle Johannsen, PhD, candidate in Biological Sciences, Physiological Resilience during Metabolic Stress, Department of Biology, University of Alaska Fairbanks.

Aline Colin, PhD Candidate in Biochemistry, Influence of Alaska Blueberry Extracts on Insulin Resistance in Mature Adipocytes, University of Alaska Fairbanks.

Sarah Rice, PhD candidate in Biochemistry, Cross-Talk between the Central Nervous System and Metabolism in NMDAR Mediated Arousal from Hibernation in Arctic Ground Squirrels, University of Alaska Fairbanks.

Karen Jeans, PhD in Nursing, A Descriptive Comparison of Human Research Protection Program Characteristics and Accreditation Outcomes in VA facilities", College of Nursing, University of Arkansas for Medical Sciences, 2010.

La'Tasha M. Smith, PhD in Molecular Physiology, "Comparative Profiling of Adipokines and Gene Expression of Adipocyte Differentiation Factors in Obese African-American and Caucasian Women", Department of Molecular Physiology and Biophysics, College of Medicine, University of Arkansas for Medical Sciences, 2008.

Chad Carroll, PhD in Molecular Physiology, "Human Muscle Specific Protein Synthesis with Amino Acids", Department of Molecular Physiology and Biophysics College of Medicine, University of Arkansas for Medical Sciences, 2004.

Rick H. Williams, MS in Molecular Physiology, "Application of Microdialysis for the Measurement of Skeletal Muscle Protein Degradation", Department of Molecular Physiology and Biophysics College of Medicine, University of Arkansas for Medical Sciences, 2003.

Kendal P. Honea, PhD, "The Effects of a 3-Hydroxy-3-Methylglutaryl Coenzyme-A reductase Inhibitor and Moderate Cardiorespiratory Exercise on Cholesterol Metabolism in Obese, Hypercholesterolemic Males", Department of Health and Exercise Science, 2001.

Undergraduate Students – Capstone Projects and Internships

Grant Galvin, BS in Biological Sciences, "Physiological Effects of the Alaska Wildland Firefighting Season on Firefighters, University of Alaska Fairbanks, Fairbanks, AK, 2018.

Connor Ito, BS in Biological Sciences, Internship at Bristol Bay Health Corporation, Kodiak, Alaska. Ms Ito was recently accepted to the Doctorate in Physical Therapy program at the University of Southern California.

Farimang Touray, BS in Biological Sciences, Internship at United Physical Therapy in conjunction with Providence Health Systems, Anchorage. He has pending applications with several graduate Physical Therapy programs in the Pacific Northwest.