CURRICULUM VITAE Updated: 5/11/2023

David C. Poole, Ph.D.,D.Sc.

H-Index (GS), 84; total cites, >26,300
H-10, 284; ResearchGate reads, >158,000

Date of Birth July 8, 1959

Place of Birth Nairobi, Kenya

Higher Doctorate

2000/2001	D.Sc. (Physiology) John Moores University, Liverpool

Education

1987-1990	Post-Doctoral Fellow, Department of Medicine, University of California, San Diego
1987	Post-Doctoral Fellow, Department of Medicine University of California, Los Angeles
1986	Ph.D. (Kinesiology: Specialization, Physiology) University of California, Los Angeles
1984	M.S. (Kinesiology) University of California, Los Angeles
1980	B.Sc. (Applied Physiology/Sports Science, Honours) Liverpool Polytechnic, England

Academic Appointments

2019-	Coffman Chair for University Distinguished Teaching Scholars
2018-	University Distinguished Professor, Kansas State University (KSU)
2006-2009	Professor/Visiting Professor School of Sport and Health Sciences, University of Exeter, England
1999-	Professor, Departments of Kinesiology, Anatomy/ Physiology, KSU
1994-1999	Assistant/Associate Professor Departments of Kinesiology and Anatomy/Physiology, KSU
1992-1994	Assistant Professor Department of Medicine, University of California, San Diego (UCSD)
1990	Assistant Research Physiologist, Department of Medicine, UCSD
1990-1992	Lecturer, Department of Biology, UCSD

1982-1985 Research/Teaching Associate, Department of Kinesiology
University of California, Los Angeles

Summary of Administrative Experience

Kansas State University

Director/Co-director: Clarenburg Cardiorespiratory Laboratory, College of Veterinary Medicine, Kansas State University, Manhattan, Kansas (1995-). Responsibilities: Obtain funding (NIH, AHA, industry), manage research budgets and salaries for up to 19 employees and students, direct research in collaboration with Dr. Timothy I. Musch, interact with upper administration across Colleges of Veterinary Medicine, Arts and Sciences and Health and Human Sciences.

Departmental:

Kinesiology Graduate Committee, 1995-
Tenure and Promotions Committee, 1996-
Chair, Anatomy and Physiology Research Review Panel, 2002-2008.
Chair, Kinesiology Scholarship and Awards Committee, 2007-2016.
Chair, Kinesiology Awards Banquet Committee, 2007-2016
Chair, Kinesiology Merit Award Committee, 2010.
Anatomy and Physiology, Graduate Executive Committee, 2011-2016
Kinesiology Department Head Review Committee (Dr. David Dzewaltowski reappointment), 2012.
Anatomy and Physiology, Departmental Advisory Committee, 2013-2017.
Kinesiology Marketing Committee, 2017-
Chair, Kinesiology Promotion and Tenure Committee, 2018-2019.

College/University:

All-University, Graduate Program Self Study (Dean appointment), 1999-2005.
Member and Chair, Research Committee, College of Veterinary Medicine, 2008-2012.
Human Ecology Scholarship Committee, 2014-2016.
Assoc. Dean for Research, 5 yr review, College of Veterinary Medicine, 2016.
College Committee on Planning, 2015-2017
College of Human Ecology, Tenure and Promotion Committee, 2017-
College of Human Ecology, Physician's Assistant Program Initiation Committee, 2017-2018
College of Human Ecology, Physician's Assistant Program Director Search Committee, 2017-2018
All-University, Provost's Task Force on Faculty Development, 2018-2019
All-University, College of Veterinary Medicine, Dean's Search Committee, 2019
University Distinguished Professors' Graduate Student Award, 2020/2021
Vice President for Research, 2020/2021
KSU President, 2021
Dean, College of Health and Human Sciences, 2022

National/International

Leadership:

ACSM (American College of Sports Medicine), **Fellow**, 1994.
ACUE (Association of Colleges and Universities Educators), **Fellow**, 2018.
FAPS (American Physiological Society), **Fellow**, 2022.

President, American College of Sports Medicine, Central States Region, 2001-2002; Ex-Officio 2002-2005.
Responsibilities – manage finances, increase membership, organize and deliver annual convention and meeting(s).

North American Editor and Founding Editor: Equine and Comparative Physiology, 2002-2005.

Chair, National Institutes of Health CSR, Cardiovascular and Respiratory Sciences Study Section,
10 ZRG1 CVRS-Q (90), 2013.

Chair, National Institutes of Health CSR, Cardiovascular and Respiratory Sciences Study Section,
ZRG1 CVRS-Q(80), 2014.

Organizing Committee, ACSM and World Congress on the Basic Science of Exercise Fatigue, 2015-2016.

Program Chair, American Physiological Society, Exercise and Environmental Physiology, 2014-2016.

Joint Programming Committee, American Physiological Society, EEP Representative, 2014-2016.

Organizing Committee, Joint APS/ACSM Integrative Biology of Exercise international meeting, 2017-2018.

Editor: European Journal of Applied Physiology, 2011-2017.

Editor-in-Chief for Medicine and Science in Sports and Exercise, Contrasting Perspectives, 2017-

Associate Editor: Journal of Applied Physiology, 2011-2017.

ACUE (Association of College and University Educators), **K-State Fellow**, 2018.

APS EEP Councillor and Steering Committee Member, 2018-2021.

FASEB SRC Advisory Committee, 2019-2021.

Organizing Committee, Joint APS/ACSM Integrative Biology of Exercise international meeting, 2022.

American Physiological Society, Chair, Exercise and Environmental Physiology Section, 2021-2024

Deputy Editor-in-Chief: Experimental Physiology, 2022-

Additional Committee Service (National/International):

ACSM Pronouncements Committee 1996-1999.
ACSM Research Awards Committee 2002-2006.

American Physiological Society Research Awards Committee 2002-2006.
American Physiological Society Exercise Study Design Workshop 2003-2004.
Microcirculatory Society Awards Committee 2008-2011.
America Physiological Society, EEP Section Steering Committee 2014-2021.
Experimental Biology, Special Meetings Advisory Committee 2018-2021.
American Physiological Society, Exercise and Environmental Physiology Section, Councillor, 2018-2021.
American Physiological Society, Exercise and Environmental Physiology Section, Chair, 2021-
American Physiological Society, Sections Advisory Committee 2021-2024.

Research Grant Awards, <u>Awarded</u>. *Total dollars awarded to D.C.P. as <u>Principal Investigator</u>* ***= $6,742,220.*** *As <u>Co-Investigator</u> ~$31,000,000.*

A. Microcirculatory Function

Current

2022-2027 National Institutes of Health, "Mechanisms of oxygen off-loading from red blood cells in murine models of human disease." PI W.F. Boron, Co-I D.C. Poole and K-State subcontract PI. Funded 3/2022.

2021-2024 National Institutes of Health, 1R15AG078060-01. 9/30/2021-8/31/2024. "Do heart failure and aging potentiate diaphragm vascular dysfunction?" Co-PIs B.J. Behnke, D.C. Poole. Total costs: $456,000.

2021-2022 National Institutes of Health, NIGMS "Mitochondrial dysfunction and its role in Alzheimer's disease." CNAP, Cognitive and Neurological Approaches to Plasticity. COBRE. P20GM113109. PI: K. Kirkpatrick, Mentee: Stephanie Hall, Mentor: David C. Poole. Funded 6/2021

2021-2026 National Institutes of Health, RO1 HL-155599 "Targeting skeletal muscle perfusion and oxidative capacity in HFpEF." PI P. Zamani, Co-I D.C. Poole and K-State Lead and subcontract PI. Total costs: $4,007,200.

2021-2026 National Institutes of Health, RO1 HL-157264-01 "Multidrug Metabolic Approach to Improve Exercise and Skeletal Muscle Oxidative Capacity in HFpEF." PI P. Zamani, Co-I D.C. Poole and K-State Lead and subcontract PI. Total costs: ~$4,700,000.

2021-2023 A Novel Multi-Disciplinary Approach to Improve Cancer Therapeutics, Brad Behnke, David C. Poole et al., Johnson Center for Basic Cancer Research, Total Costs: $100,000.

2021-2022 CVM SMILE Award: "Soluble guanylyl cyclase activator and stimulator effects on skeletal muscle oxygenation in male and female rats with heart failure." PI: D.C. Poole, Co-I's: T.I. Musch, R.E. Weber, K.M. Schulze. Total costs: $36,000.

2019-2021(NCE) Bayer AG. Effects of soluble guanylate cyclase activators and stimulators on muscle Oxygen delivery in heart failure. $12,000. PI, D.C. Poole, Co-I, T.I. Musch.

2017-2021(NCE) National Institutes of Health, R15 HL137156-01A1. "Novel strategies to prevent respiratory muscle vascular dysfunction with mechanical ventilation." Total costs: $449,025, PIs: B.J. Behnke, D.C. Poole. 12/07/2017-11/30/2021 (NCE).

2021-2026 K-INBRE Developmental Research Project Program, $228,000, Mitochondrial dysfunction and its role in Alzheimer's disease; Principle Investigator: Stephanie Hall, Project Mentor: David Poole

Not funded

2021-2026 National Institutes of Health, "Sexual dimorphism of diaphragm vascular function in health." MPIs: B.J. Behnke, D.C. Poole. Total costs: $1,698,784.

2020-2025 National Institutes of Health, "Effect of human-specific evolutionary change in sialic acids on endurance running and oxygen transport." MPIs: San Diego, E.C. Breen, A. Varki, L. Nogueira; Manhattan, KS D.C.Poole, T.I. Musch. Total costs: $2,045,146. Not funded.

Previous

2013-2020 Innovative Cancer Award, Terry Johnson Cancer Foundation, "Effects of dietary nitrate supplementation on tumor oxygenation and microcirculation." PI: D.C. Poole, Co-I: T.I. Musch.

2015-2019 National Institutes of Health, HL-2-108328 "Heart Failure & Aging: Mechanistic Bases of Muscle Vascular Dysfunction." Total costs: $375,000. PI: D.C. Poole, Co-PI's: T.I. Musch, P. Fong, M.J. Kenney. Cardiology expert consultant: Dr. Justin Thomason.

2013-2017 SMILE CVM Intramural Grant, "Effects of chronic heart failure on aging: An integrative and therapeutic approach." PI, D.C. Poole, Co-I, T.I. Musch.

2011-2015 National Institutes of Health, HL-108328 "Mechanisms of muscle microcirculatory dysfunction in heart failure" Total costs: $365,546. PI: D.C. Poole, Co-I: T.I. Musch.

2010-2012 American Heart Association. "Role of nitric oxide synthase isoforms in microcirculatory dysfunction of heart failure." Total costs: $142,000, PI: D.C. Poole, Co-I: T.I. Musch. (10 GRANT 4350011)

2008-2010 SMILE CVM Intramural Grant, "Control of skeletal muscle blood flow by selective NOS isoforms: effects of exercise training and heart failure." Total costs: $33,628. PI, D.C. Poole, Co-I, T.I. Musch.

2008-2010 Cytokinetics Inc., "Effects of a calcium sensitizing agent on muscle performance and gas exchange." Total Costs: $78,000. PI, T.I. Musch, Co-I, D.C. Poole.

2004-2006 American Heart Association, Heartland Affiliate, "Mechanisms of microcirculatory dysfunction in heart failure." Direct costs; $143,000. PI, D.C. Poole, Co-I, T.I. Musch.

2001-2004 National Institutes of Health, PA-00-056. “Aging, chronic disease and skeletal muscle perfusion.” Total costs: $436,500. PI, T.I. Musch, Co.-I. D.C. Poole.

1998-2004 National Institutes of Health, RO1. “Muscle capillary geometry, flow and oxygen transfer” PI, D.C. Poole Total costs: $1,156,557.

1995-2000 National Institutes of Health, Program Project, "Physiological Consequences of Pulmonary Disease". $8,041,479. Total costs; Project 3, D.C. Poole $1,579,333.

2000-2002 National Institutes of Health, R15. “The NADPH oxidase and neutrophil recruitment in muscle.” PI, C.R. Ross. Total costs: $145,500.

2000-2002 American Heart Association, Heartland Affiliate, “Kinetics of muscle oxygen exchange in chronic heart failure.” Direct costs; $80,000. PI, T.I. Musch.

1995-2000 National Institutes of Health, RO1. "Microstructure,Function and Dysfunction in Diaphragm". Total costs; $1,201,000. 4th percentile. (Declined).

1994-1999 National Institutes of Health, FIRST Award. "Microstructure and Function in Diaphragm". Total costs; $411,720.

1994-1997 Tobacco-Related Diseases Research Program, Research Award. "Microcirculatory consequences of emphysema in diaphragm". Total costs; $275,808, 2nd percentile . (Declined).

1991-1994 Tobacco-Related Diseases Research Program, New Investigator Award. "Diaphragm Structural and Metabolic Changes in Emphysema". Total costs; $225,000

1991-1993 American Heart Association, Missouri Affiliate. "Microcirculatory Transport Capacity in Skeletal Muscle of Diabetic Rats". $50,000 PI, W.L. Sexton

1991 Microcirculatory Society: Travel Award. $1,200.

1988-1991 National Institutes of Health, Individual National Research Service Award. "Plasticity of Capillary Length Density and Anisotropy". P.I. D.C. Poole. Total costs; $109,000

1987-1988 California Lung Association Post-Doctoral Fellowship. "Effect of Endurance Training on Capillary Length Density and Anisotropy of Rat Skeletal Muscle". $20,000

B. Integrated Systems Physiology

2006-2007 American Association of Equine Practitioners. “Can conjugated estrogens and aminocaproic acid reduce EIPH? $75,000. PI, H.H. Erickson, Co-I’s T.S. Epp, D.C. Poole.

2005-2006 Lonza Pharmaceuticals. “Effects of L-Carnitine supplementation on muscle damage in racing Greyhounds.” Total costs; $62,214.

2005-2006 Kansas Racing and Gaming Commission. “The role of pulmonary leucocytes in reducing EIPH with concentrated equine serum – phase II. $11,981. PI, T.S. Epp, Co-I’s H.H. Erickson, D.C. Poole.

2005-2006 Kansas Racing and Gaming Commission. “Does left ventricular mass, heart size and the presence of valvular regurgitation affect performance in racing Greyhounds?” Total costs: $60,158. PI, T.S. Epp, Co-I’s. D.C. Poole, H.H. Erickson.

2003-2007 National Science Foundation. “An infrastructure veterinary telemedicine – Proactive herd management for disease prevention from farm to market. Total costs, $900,000. PI’s D. Andresen, S. Warren, H.H. Erickson, T.S. Epp, M. Spire, J. Sargeant, D.C. Poole.

2003-2004 Kansas racing and Gaming Commission, “The incidence and severity of exercise induced pulmonary hemorrhage in racing greyhounds.” Total costs, $21,522. Co-I’s, P. McDonough, H.H. Erickson, T.I. Hildreth.

2003-2004 Kansas racing and Gaming Commission, “Determination of the mechanistic basis for the reduction of EIPH with concentrated equine serum.” Total costs, $13,549. Co-I’s, T.I. Hildreth, P. McDonough, H.H. Erickson.

2000-2002 Sera Inc., “A preliminary treadmill exercise study to determine the efficacy of seramune equine IgG as a prevention and treatment for EIPH in athletic horses. Total costs; $48,086. PI, H.H. Erickson, Co-I’s, C.A. Kindig, B.R. Rush, P. McDonough.

2002-2003 National Science Foundation. Veterinary Telemedicine: Proactive herd health management for disease prevention from farm to market. Total costs; $145,566. PI’s D. Andresen, H.H. Erickson, S. Warren, J. Sargeant, D.C. Poole.

2001-2002 KSUCVM, “Evaluation of two herbal formulations used in athletic horses to prevent or treat EIPH. $5,000. P.I. H.H. Erickson, Co_I’s T. S. Hildreth, J.H. Cox, P. McDonough.

1999-2002 CNS, Inc. Evaluation of a nasal dilator in horses. Phases I, II, and III. Total costs; $225,172 PI, H.H. Erickson, Co-I, C.A. Kindig.

1999-2000 American Quarter Horse Association, “Does nitric oxide reduce pulmonary vascular pressures and EIPH? Total costs; $35,732 PI, H.H. Erickson, Co-I, C.A. Kindig.

1999-2000 Kansas Racing Commission, “Does nitric oxide reduce pulmonary vascular pressures and EIPH? Total costs; $5,556 PI, H.H. Erickson.

1992-1993 White Mountain Research Station, Director's Fellowship.
"Interaction of emphysema and inspiratory hypoxia on diaphragm structure". $3,000

1990-1995 National Institutes of Health, Program Project, "Physiological Consequences of Pulmonary Disease". $6,249,765 PI, P.D. Wagner. PI: Project 3, D.C. Poole $1,326,000.

1987 MacArthur Foundation Network for health promoting and damaging behaviours, UCLA Node. "Energy Expenditure at Rest and During Exercise in Anorexia Nervosa". $15,000

1984, 1986 University of California, Los Angeles, Graduate Division. Doctoral Research Awards. "The Parameters of the Power-Duration Relationships: Respiratory and Metabolic Correlates." $1,500

Research Grant Awards, <u>To be submitted</u>

National Institutes of Health, RO1. "Effects of chronic heart failure on aging: An integrative and therapeutic approach" Total costs: $1,867,532, PIs: D.C. Poole, T.I. Musch, P. Fong.

Student Awards and Grants:

1999-2000 ACSM. "Muscle microcirculatory plasticity and oxygen delivery." $4,891. PI, C.A. Kindig.

2000-2001 ACSM, Central States Chapter. "Dynamics of muscle microvascular oxygen pressure at the onset of contractions." $500. P.I. B.J. Behnke.

2001-2004 National Institutes of Health - NRSA (Post-doctoral). "Muscle fiber type, oxidative capacity and oxygen exchange." $120,000. PI, P. McDonough (Priority score 190, 10th percentile)

2002-2005 National Institutes of Health - NRSA (Post-doctoral). "Dynamics of oxygen uptake in contracting single myocytes." $120,000. PI, C.A. Kindig (Priority score 121, <2nd percentile)

2001-2005 National Institutes of Health - NRSA (Pre-doctoral). "Oxygen transport and exchange." $95,000. P.I., D. Padilla (Priority score 178, 18th percentile)

2002 ACSM, Central States Chapter. "Effects of heart failure on microvascular oxygen dynamics" $500. P.I. Emily R. Diederich

2002-2004 National Institutes of Health - NRSA (Pre-doctoral). "Dynamics of muscle microvascular PO_2 across the rest-exercise transition." $55,000. P.I., B. Behnke (Priority score 158, 9th percentile)

2002 ACSM, Central States Chapter. "Effects of systemic hypotension on muscle microvascular oxygen exchange." K.D. Ross. Best student poster.

2002 APS Student Research Award. "Impact of type I diabetes on the muscle microvascular PO_2." Experimental Biology, New Orleans. $550, P.I. B. Behnke.

2003 Phi Zeta, D. J. Padilla "Control of ventilation and arterial CO_2 pressure following maximal exercise in the Thoroughbred horse." 1st Place Poster Presentation.

2003 Phi Zeta, T. S. Hildreth "The effectiveness of immunotherapy in treating exercise-induced pul. hemorrhage." 1st Place Clinical Science and Research Presentations.

2003 Kansas State Student research Symposium, T.S. Hildreth "Immunotherapy and exercise-induced pulmonary hemorrhage. 3rd Place Research Presentations.

2004 American College of Sports Medicine, New Investigator Award, C.A. Kindig.

2004 ACSM, Central States Chapter. "Effects of Type II diabetes on muscle microvascular oxygen exchange." $500. P.I. D.J. Padilla.

2005 Leo and Gloria Whitehair Award. Funding for Veterinary Chiropractic Certification. $350. T.S. Epp.

2005 ACSM, Central States Chapter. "Effects of altered nitric oxide availability on rat muscle microvascular oxygenation during contractions." $500. P.I. L.F. Ferreira.

2008 Experimental Biology/Microcirculatory Society, San Diego, 2008. New Investigators Symposium. "The effects of aging on microcirculatory oxygen delivery (QO2) in contracting rat spinotrapezius muscle." PI, S.W. Copp.

2008-2012 CAPES-Brazil Fulbright Pre-doctoral Fellowship, Daniel M. Hirai, $100,000.

2009 Experimental Biology/Microcirculatory Society, New Orleans, 2009. Zweifach Travel Award. S.W. Copp.

2009 American Physiological Society. New Investigator Award. B.J. Behnke.

2009 American College of Sports Medicine. New Investigator Award. B.J. Behnke.

2010 American College of Sports Medicine Foundation – Doctoral Student Research Grant. $5,000. D.M. Hirai.

2010 Kansas State University Graduate Award for Academics (K-State Alumni Association) S.W. Copp.

2010 Notable Scholarly Graduate Student Achievements, *K-State's Graduate Student Council* 1: 1, 2010, Steven W. Copp.

2010 Notable Scholarly Graduate Student Achievements, *K-State's Graduate Student Council* 1: 1, 2010, Daniel M. Hirai.

2011 August Krogh Young Investigator Award, Microcirculation Society, $1,000, Steven W. Copp.

2011 Kansas State Graduate Student Council Travel Award for ACSM in Denver, $500, Daniel M. Hirai

2011 Microcirculation Society Travel Award for Microcirculation/Experimental Biology in Washington, D.C., $1,000, Daniel M. Hirai.

2011 Notable Scholarly Graduate Student Achievements, *K-State's Graduate Student Council* 1: 1, 2011, Steven W. Copp.

2011 Notable Scholarly Graduate Student Achievements, *K-State's Graduate Student Council* 2: 1, 2011, Daniel M. Hirai.

2011 Notable Scholarly Graduate Student Achievements, *K-State's Graduate Student Council* 2: 1, 2011, Scott K. Ferguson.

2011 American Physiological Society, Cardiovascular Section, New Investigator Award, Brad J. Behnke.

2011 American College of Sports Medicine Foundation – Doctoral Student Research Grant. $5,000. S.W. Copp.

2011 American College of Sports Medicine Foundation, Steven M. Horvath Travel Award. D.M. Hirai.

2011-2013 American Heart Association Pre-doctoral Research Fellowship, Steven W. Copp, $52,000.

2011-2012 K-SURF Pre-doctoral Fellowship, Steven W. Copp, $17,500.

2012 Leo and Gloria Whitehair Research Award in Veterinary Medicine, Daniel M. Hirai

2012 Anatomy and Physiology Doctoral Travel Award, Steven W. Copp, $1,000.

2012 Anatomy and Physiology Doctoral Travel Award, Daniel M. Hirai, $1,000.

2012 American Heart Association, Undergraduate Research Fellowship, Gabrielle Sims, "Chronic pentoxifylline administration in the treatment of chronic heart failure." $4,000.

2012 Graduate Student Council Travel Awards to attend Integrative Biology of Exercise VI meeting in Westminster, Colorado. Scott K. Ferguson, Daniel M. Hirai, Steven W. Copp, $600.

2013 Provost Award for Academic Excellence to attend American College of Sports Medicine annual meeting. Scott K. Ferguson, Gabi Sims, Steven W. Copp, $2,800.

2013 Cornelius Scholarship for research excellence in Anatomy and Physiology, Steven W. Copp.

2013 Best Masters Student in Kinesiology, Scott K. Ferguson.

2013 Best Doctoral Student in Kinesiology, Steven W. Copp.

2013 Graduate Student Council Travel Awards to attend American College of Sports Medicine national meeting in Indianapolis. Clark T. Holdsworth, Scott K. Ferguson, Steven W. Copp, $900.

2014 Caroline tum Suden/Francis A. Hellebrandt Professional Opportunity Award to attend Experimental Biology in San Diego, Scott K. Ferguson, $500.

2014 Graduate Student Council Travel Awards to attend American College of Sports Medicine national meeting in Indianapolis. Clark T. Holdsworth, Scott K. Ferguson, $1,000.

2014 A.S.R. Ganta Graduate Student Award: Scott K. Ferguson.

2014 American Physiological Society STRIDE Undergraduate Research Fellowship, Angela Glean, $5,600.

2014 Eva Lyman Scholarship in Kinesiology, Angela A. Glean.

2014 K-State Research Forum, Best Poster in the Biological Sciences by a Doctoral Student, "*Role of rat vascular KATP channels in muscle vascular control at test and during exercise*." Clark T. Holdsworth

2014 K-State Research Forum, Best Poster in the Biological Sciences by an Undergraduate Student*" Impact of nitrate supplementation via beetroot juice on capillary hemodynamics in skeletal muscle of rats in chronic heart failure*." Alex J. Fees

2014 University Distinguished Professors Graduate Student Award, Clark T. Holdsworth

2014 American Kinesiology Association Undergraduate Scholar, Angela Glean.

2014 Dean's Doctoral Dissertation Research Award, College of Human Ecology, Scott K. Ferguson.

2014 OURCI Research Award from the Office of Undergraduate Research & Creative Inquiry. $1,000. Alex Fees.

2013-2018 National Institutes of Health Predoctoral Award, Loan repayment, $70,000.

2015 American Physiological Society Exercise and Environmental Physiology Section, Nike Inc. Predoctoral Award, Scott K. Ferguson.

2015 American Physiological Society Exercise and Environmental Physiology Section, Predoctoral Award, Clark T. Holdsworth.

2015 American Physiological Society Exercise and Environmental Physiology Section, CAN-TROL Environmental Systems Predoctoral Award, Jennifer L. Wright.

2015 American Physiological Society Exercise and Environmental Physiology Section, Partnership for Clean Competition Beginning Investigator Award, Angela A. Glean.

2015 CVM Graduate Student Travel Award to Experimental Biology in Boston, 2015. $1,250, Jennifer L. Wright.

2015 Dr. Albert L. Burroughs Memorial Award, $1,500, Jennifer L. Wright.

2015 Dr. Charles E. Cornelius Award, $350, Jennifer L. Wright.

2015 Dr. G. Roger Spencer Award for dual Masters and DVM candidates, $1,000, Jennifer L. Wright.

2015 Provost Award for Academic Excellence to attend American College of Sports Medicine annual meeting. Scott K. Ferguson, Clark Holdsworth, Jenni Wright, Alex Fees, Trenton Colburn, $2,900.

2015 Kansas State University American Association for the Advancement of Science CASE (Catalyzing Advocacy for Science and Engineering) program representative to Washington, April 12-15, Clark T. Holdsworth.

2015 Kansas Research Foundation – All University Biological Sciences First Place Poster: Trenton Colburn, $500.

2015 Kansas State University, Golden Key Honour Society Outstanding Graduate Teaching Assistant (Top 1%), Scott K. Ferguson.

2015 CVM Graduate Student Awards Committee research travel award: Exeter University U.K. Scott K. Ferguson

2015 CHE Undergraduate Research Presentation Award. *"Impact of nitrate supplementation via beetroot juice on capillary hemodynamics in skeletal muscle of rats in chronic heart failure*." Alex J. Fees

2016 Timothy Donohue Distinguished Doctoral Student Award, **Trenton D. Colburn**, $5,000.

2016 OURCI Travel Research Award from the Office of Undergraduate Research & Creative Inquiry. $1,000. **Alex J. Fees**.

2016 All University Best Biological Science Poster: "*Effect of sodium nitrite on local control of contracting skeletal muscle microvascular oxygen pressure in healthy rats."* **Trenton D. Colburn,** $500.

2016 APS/EEP Gatorade Sport Science Institute Post-doctoral Research Award, Dr. **Steven W. Copp**. Presented at Experimental Biology, San Diego.

2016 National Institutes of Health, NHLBI Loan Repayment Program, Dr. **Scott K. Ferguson**, $80,000.

2016 APS/EEP National Space Biomedical Research Institute's Gravitational Physiology Post-doctoral Research Award, **Dr. Scott K. Ferguson**. Presented at Experimental Biology, San Diego.

2016 Best Masters Student in Kinesiology, **Trenton D. Colburn**, $650.

2016 Equine Graduate Scholarship, **Jenni K. Wright**, $70,000.

2017 APS Caroline tum Suden/Frances Hellebrandt Professional Opportunity Award, Dr. **Daniel M. Hirai**, $500.

2017 College of Human Ecology, Undergraduate Research Award, **Joseph Merino**, $1,000.

2017 Microcirculation Society, Pappenheimer Travel Award to Experimental Biology, **Daniel M. Hirai**, $1,500.

2018 College of Human Ecology, OURCI Grant, Undergraduate Research, **Jordan Eberhardy**, $1,000.

2018 Fulbright International Fellowship, Research Scholarship to Hungary, **Alex J. Fees**, $20,000.

2018 Outstanding Teacher/Researcher Award in Kinesiology, **Jesse C. Craig**.

2018 National Institutes of Health - NRSA (Pre-doctoral) 1F31HL145981.
. "Sexual dimorphism and oxygen transport." $69,000. P.I., **Trenton D. Colburn**.

2019 American Physiological Society Fleur L. Strand Professional Opportunity Award to **Trenton D. Colburn** to attend Experimental Biology, Orlando, FL, April. $1,200. (#1 out of 168).

2019 American Physiological Society, EEP (PCC) Pre-doctoral Fellow Award to **Trenton D. Colburn**, $700, declined.

2019 American Physiological Society, EEP (PCC) Post-doctoral Fellow Award to **Jesse C. Craig**, $700.

2020 Integrative Physiology of Exercise, Austin, TX November, Best Poster Presentation Award, Post-Doctoral Student, **Jesse C. Craig**, $500.

2020 Integrative Physiology of Exercise, Austin, TX November, Best Poster Presentation Award, Doctoral Student, **Kiana M. Shulze**, $500.

2020 Integrative Physiology of Exercise, Austin, TX November, Best Oral Presentation Award, Doctoral Student, **Ramona E. Weber,** $500.

2021 Experimental Biology, 2021 Gatorade Sport Science Institute Predoctoral Research Award, **Kiana Schulze**, $600.

2021 K-GRAD All University Best Biological Science Poster: **Kiana M. Schulze,** $500.

2021 K-GRAD All University Biological Science Poster, 2nd Place: "" **Ramona E. Weber,** $500.

2021 OURCI College of Health & Human Sciences Research Award. **Hannah Grant,** $350.

2022 Kansas State University, Graduate School Three Minute Thesis competition: **Kiana M. Schulze, 2nd Place**, "*Pulmonary Hypertension: Not just a lung disease*?" $250.

2022 K-GRAD All University Best Biological Science Poster: "*Effects of Supplemental Oxygen on Diaphragm Muscle Blood Flow and Oxygen Delivery During Mechanical Ventilation*" **Andrew G. Horn***,* $500.

2022 American Physiological Society, Cardiovascular Section Pre-doctoral Fellow Award to **Kiana M. Schulze**, $1,000.

2022 RSCAD College of Health and Human Sciences, Best Research Poster: "*Soluble guanylyl cyclase stimulator improves contracting skeletal muscle oxygen pressures in heart failure rats.*" **Ramona E. Weber**, $200.

2022 RSCAD College of Health and Human Sciences, Best Creative Display Research Poster (Tied for 1st Place): "*Pulmonary Hypertension: Beyond The Lungs*." **Kiana M. Schulze**, $100.

2022 RSCAD College of Health and Human Sciences, Best Creative Display Research Poster: (Tied for 1st Place) "*Monocrotaline-induced pulmonary hypertension impairs diaphragm vasomotor function*." **Andrew G. Horn**, $100.

2022 OURCI College of Health & Human Sciences Research Award. **Tyler McCoach,** $1,000.

2023 K-INBRE, All Kansas Competition, Best undergraduate oral presentation: "*Skeletal muscle oxygen delivery and uptake in cardiopulmonary disease*." **Hannah F. Wall** Kansas City, K-INBRE, January, 2023.

2023-25 National Institutes of Health - NRSA (Pre-doctoral) 1F31HL??????.
. "*Role of Angiotensin-(1-7) and Diaphragm Vascular Function in Heart Failure and Prolonged Mechanical Ventilation*." March. $70,000. P.I., **Andrew G. Horn**.

2023-2025 National Institutes of Health - NRSA (Pre-doctoral) 1F31HL??????. "Role for Nrf2 and exercise in mitigating pulmonary hypertension-induced vascular dysfunction." **Score 33, 33rd percentile.** P.I., **Kiana M. Schulze.**

TEACHING PORTFOLIO (DCP sole instructor unless otherwise indicated)

KIN 335: Physiology of Exercise (1996- Team Taught, 4 Credit Hours – Fall and Spring)

Students learn about the human body responses to exercise. Emphasis is placed on understanding the structure-function relationships of the respiratory, cardiovascular, and muscular systems and how their function is integrated to support the dynamics of muscular contraction. Limitations to exercise performance are examined in health and disease and the adaptability of the human body to physiological (i.e., exercise training) and environmental (e.g., hypoxia) stressors.

KIN 336: Physiology of Exercise (1996- 2 hrs lab per week - GTA supervision – Fall and Spring)

A laboratory course to supplement the material of KIN 335.

KIN 605 ZB: Cardiorespiratory/Comparative Physiology in Health and Disease (2014- 3 Credit Hours – Fall, Spring, Summer)

This course seeks to fulfill the following objectives: (1) To provide the student with an awareness and mechanistic understanding of the effects of physical activity on humans and animals and the concept of homeostasis. (2) Foster an understanding of the integrative nature of kinesiology/physiology by considering the relationships among different systems and their response to stress in humans and animal species in health and disease. Focus is brought to bear in particular on the pulmonary, cardiovascular and muscle systems. Chronic and acute adaptations to special environments and physical stress are considered and the students are asked to consider how the different systems are controlled in health and disease. This course is recommended for pre-med students, biology and physiology majors, aspiring scientists in physiology and/or medicine and those interested in a career in health and human services.

KIN 635: Nutrition and Exercise – K-State 8 Course (1996- 3 Credit Hours – Fall)

The interrelationships between diet, nutrition and exercise. Topics covered include: systems control, ventilation and gas exchange physiology, cellular energetics, metabolic control, nutritional supplements, physical fitness/oxygen transport, weight control, nutrient and substrate metabolism during exercise, and athletic performance.

AP 747: Veterinary Physiology - Integrative systems physiology (Respiratory Physiology - Team Taught 1998- Course Coordinator 2012-2014; 6 Credit Hours, Spring)

Function of the cardiovascular, endocrine, respiratory, renal, digestive, and reproductive systems of domestic animals with emphasis on physiologic control mechanisms, interrelationships of body systems, and criteria for evaluating animal health.

KIN 796/824: Critical reading in physiology: Cardiorespiratory – microcirculation (1995- Spring)

This course is designed to promote critical reading of the literature, particularly with respect to the understanding of the physiology of exercise. Students will take an active role in participation at all levels which includes presenting papers, joining in lively debate and discussion regarding all aspects of science and

scientific philosophy. Students should have a solid grounding in basic and applied respiratory/ cardiovascular exercise physiology.

KIN 800 ZA: Comparative Physiology of Oxygen Transport (2014- 3 Credit Hours – Fall)
This course uses the human as a template from which to understand how different animal species have adapted to take up oxygen from their environment, transport it to the tissues and contracting muscles and utilize it to produce energy and movement. Across the animal kingdom the structural and functional adaptation that facilitate superlative performances in flight, running and swimming will be examined. To illuminate different adaptive strategies, disparate environments (e.g., altitude, underwater), and acute and chronic adaptations in health, disease and aging will be studied. Information will be delivered through lectures and directed readings which will be provided. This course is especially relevant to students with an interest in health and science-related careers especially veterinary and human medicine.

Additional Responsibilities: Guest/Periodic Lecturer: KIN 310; KIN 801; AP 740

Elected Offices/Positions:
President, American College of Sports Medicine, Central States Region, 2001-2002
Touring Fellow, American College of Sports Medicine, Texas Chapter, 2003
American Physiological Society, Councillor, Exercise and Environmental Physiology Section, 2018-2021
American Physiological Society, Chair, Exercise and Environmental Physiology Section, 2021-2024

National Societies:
American College of Sports Medicine (Fellow)
American Physiological Society
International Symposium on Oxygen Transport to Tissue
Microcirculatory Society
American Heart Association

Teaching Experience:

1999-present Kansas State University, Department of Anatomy and Physiology.
Respiratory Physiology. Veterinary Medicine.
Lecture and Laboratory.

1995-present Kansas State University, Department of Kinesiology.
Cardiorespiratory Exercise Physiology, Cellular Energetics, Advanced Microcirculation, Pulmonary Gas Exchange. Graduate and Undergraduate.
Lecture and Laboratory.

1987-1994 University of California, San Diego, Department of Medicine.
"Respiratory Physiology". Class and Laboratory.

1991 University of California, San Diego, Department of Biology.
"Organ Physiology". Lecture.

1986-1987 University of California, Los Angeles, Department of Kinesiology. "Cardiorespiratory Physiology". Lecture.

1986-1987 University of California, Los Angeles, Department of Physiology. "Control of Breathing". Laboratory.

1986-1987 University of California, Los Angeles, Department of Kinesiology. "Energetics and Human Performance". Lecture.

1984-1985 University of California, Los Angeles, Department of Anesthesiology, Program of Nurse Anesthesia."Respiratory Physiology and Anatomy for Nurse Anesthetists". Laboratory.

1981-1985 University of California, Los Angeles, Department of Kinesiology, Teaching Assistant. "Respiratory and Environmental Physiology". Laboratory.

1983-1985 University of California, Los Angeles, Department of Kinesiology, Graduate Division. "Selected Topics in Respiration". Lecture.

1984 University of California, Los Angeles, Department of anesthesiology, Program of Nurse Anesthesia."Basic Statistical Principles and Their Application". Lecture.

Teaching/Research Honors/Awards:

KSU College of Health & Human Sciences Faculty Research Excellence Award, May, 2023

World Rankings

Top 0.0079% (6 out of 75,875) of World Oxygen Consumption experts, @Expertscape

Top 0.11% (34 out of 30,790) of World Exercise Tolerance experts, @Expertscape

Top 0.004% (8 out of 218,146) of World Muscle Physiologists, @ExpertscapeNews, September, 2021

Top 2% (#79 to date) Physiologist World Ranking, Stanford Survey, https://dx.doi.org/10.17632/btchxktzyw **Jan. 2021**

Dr. Ron and Rae Iman Outstanding Faculty Award for Research, October, 2019

Coffman Chair for Distinguished Teaching Scholars, 2019-

K-State Professorial Performance Award (2007,2013,2019)

College of Veterinary Medicine, Faculty of the Month Award, Class of 2022, March, 2019

ACSM Citation Award, 2019

University Distinguished Professor, Kansas State University, 2018

Distinguished Service Citation, The American Physiological Society, 2017

Outstanding Graduate Faculty, College of Human Ecology, 2017

The Physiological Society, Top Reviewer, 2016-17, 2019-2020

Kansas State University SPOTLIGHT (Top 10 teachers at KSU), 2017

Kansas State University International Collaboration Award, 2016
Myers-Alford Outstanding Teaching Award, College of Human Ecology, 2016
Kansas State Provost's Academic Excellence Award, 2015
KSU College of Human Ecology, Faculty Research Excellence Award, 2013
Merial Award for Excellence in Veterinary Medical Teaching (2012/2013)
Kansas State Provost's Academic Excellence Award, 2013
American Physiological Society, Star Reviewer, 2012 (top 1 of 3,000)
Pfizer Award for Research Excellence, College of Veterinary Medicine, (2010)
Microcirculatory Society, Weiderhelm Award, Most Cited Paper,
Experimental Biology, New Orleans (2009)
American Physiology Society Renowned Professor recognition: Advances Physiol. Educ. 31:308-311, 2007
Merial Award for Excellence in Veterinary Medical Teaching (2006)
Lambda Chi Alpha, Exceptional Faculty Recognition Award (2006)
Commerce Bank Award for Distinguished Undergraduate Teaching (2002)
Phi Zeta Honorary Membership (2000)
Mortar Board Senior Honor Society (1999 and 2005)
Golden Key National Honor Society (1998)
Sigma Kappa, Exceptional Faculty Recognition Award (1997)
Medicine and Science in Sports and Exercise, Top Reviewer (1995)

Editorial Positions:

Deputy Editor-in-Chief (U.S.A): Experimental Physiology (2022-)
Associate Editor-in-Chief: Medicine & Science in Sports & Exercise (2017-)
Editor: European Journal of Applied Physiology (2011-2017)
Associate Editor: Journal of Applied Physiology (2011-2017)
North American Founding Editor: Equine and Comparative Physiology (2002-2005)
Boardmember: Medicine and Science in Sports and Exercise (1996-2001)
Boardmember: Journal of Applied Physiology (1995-2011)
Boardmember: European Journal of Applied Physiology (2003-2010)
Boardmember: Respiration Physiology and Neurobiology (2006-)
Boardmember: Journal of Exercise Science and Fitness (2009-)
Boardmember: Microcirculation (2010-)
Boardmember: Frontiers in Exercise Physiology (2011-)
Boardmember: European Journal of Sports Science (2011-)
Boardmember: American Journal of Physiology – Heart (2011-)
Boardmember: International J. Anatomy & Applied Physiology (2015-)
Boardmember and Distributing Editor: "Function", (2019-)

Grant Review Boards:

Canadian INSERM and NSERC grant review boards 1995-
Canadian Killiam Awards Review Group, 1996-.
American Heart Association, Kansas Affiliate, 1997-98
Department of Defence, PPCR Study Section, 1999.
National Institutes of Health, Heart, Lung, Blood Institute, reviewers reserve, 1998-.

National Institutes of Health, Respiratory and Applied Physiology, 2000.
National Institutes of Health, Special Emphasis Panel, 2001.
Bank of America, Jeffress Memorial Trust Research Grant reviewer, 2002-.
Pilot and Feasibility Study Program, Mouse Metabolic Phenotyping
Center,Vanderbilt, Dr. Richard Roberts: Optical Imaging of Capillary Blood Flow in Living Mice, 2003.
The Nuffield Foundation, United Kingdom. Science, Engineering and Mathematics, 2003/2004
National Institutes of Health, General Clinical Research Center review panel, Mayo Clinic, Rochester, 2004
California Tobacco Related Diseases Research Program, *ad hoc*, San Francisco, California, 2005, 2006
K-State FDA and USRG grant review board, 2005, 2006, 2007
Fonds Wetenschappelijk Onderezoek, Belgian Post-doctoral Fellowship – Dr. Katrien Koppo, 2006, 2007,2008
Fonds Wetenschappelijk Onderezoek, Belgian Post-doctoral Fellowship – Dr. Wim Derave, 2007
Wellcome Trust, United Kingdom, 2007.
Natural Sciences and Engineering Research Council of Canada (NSERC) Reviewers Reserve Panel, 2007-
National Institutes of Health, Hypertension and Microcirculation Study Section, 2007-2009
National Institutes of Health, Hypertension and Microcirculation Study Section, Special Emphasis Panel, October, 2007.
National Institutes of Health, HM Study Section, Special Review panel: Circulation Regulation and Pathophysiology, February 2008.
National Institutes of Health, HM Study Section, AED Special Review panel (ZRG1 CVS-F (90) S: Circulation Regulation and Pathophysiology, March 2008.
K-Inbre Major Starter Grant Application. Paige C. Geiger "Protective Role of Heat Shock proteins in Insulin resistance." June, 2008.
Wellcome Trust, United Kingdom, 2008. Dr. Anni Vanhatalo, Research Fellow Application.
Biotechnology and Biological Sciences Research Council Research Grant, U.K. Dr. Harry B. Rossiter, 2010.
National Institutes of Health, CSR National Registry of Volunteer Reviewers, 2010-
Romanian Research Council, Life Sciences Expert Review Panel, 2011-
National Institutes of Health CSR Special Emphasis Panel, Cardiovascular and Respiratory Sciences IRG, ZRG1 CVRS-B (90), 2012
National Institutes of Health CSR Special Emphasis Panel, Cardiovascular and Respiratory Sciences, ZRG1 CVRS-M (90), 2013
National Institutes of Health CSR, Cardiovascular and Respiratory Sciences, 10 ZRG1 CVRS-Q (90), 2013, Chair
National Institutes of Health CSR, Cardiovascular and Respiratory Sciences, ZRG1 CVRS-E80 A, 2013
National Institutes of Health CSR, Cardiovascular and Respiratory Sciences,

ZRG1 CVRS-Q(80), 2014, Chair

Pi Beta Phi Distinguished Faculty, 2014

National Institutes of Health CSR, Cardiovascular and Respiratory Sciences, ZRG1 CVRS-K(80), 2014.

NASA Research and Technology Development to Support Crew Health and Performance in Space Exploration Missions. NASA/NSBRI 2014-2015 Crew Health Step-2 Review Study Section, 2015.

NSF Physiological Mechanisms & Biomech. Study Section, October 5, 2015.

Congressionally Directed Medical Research Programs - Cardiovascular Health. Focused Program Award of the Dept. of Defense. Dec./Jan., 2015-16.

Canadian INSERM grant review board 2015-16.

National Institutes of Health CSR, Cardiovascular and Respiratory Sciences, ZRG1 CVRS-Q (80) A, 2016.

Biotechnology and Biological Sciences Research Council (**BBSRC**) – UK Research Council. "*The tongue microbiome and nitric oxide bioavailability across the human lifespan*." 2016.

U.K. Leverhulme Trust Awards Committee, 2016.

National Institutes of Health CSR, Cardiovascular and Respiratory Sciences, ZRG1 CVRS-L (80), 2017.

National Institutes of Health, HLBI, Special Emphasis Panel/Scientific Review Group **2018/01 HLBP 1** Program Project review: "*Mechanisms of Exercise Intolerance and Adaptation in HFpEF.*" 2017.

Auckland Medical Research Foundation, Project Grant, Dr. G. Carrick-Ranson, "*Cardiovascular Disease in Older Women*", 2017.

Muscular Dystrophy UK. Prof. A.M. Jones and Dr. Catherine Moorwood: "*Effects of inorganic nitrate on mitochondrial bioenergetics in DMD muscle cells*", 2018.

Research Council KU Leuven, Belgium. *"Combating age-related sarcopenia: the anti-inflammatory approach."* PI Dr. Katrien Koppo (C24/18/071), 2018.

Sydney and J.L. Huffines Institute for Sports Medicine and Human Performance, Faculty Research Seed Grant Program, 2018.

K-State UDP Graduate Student Award, 2020, 2021

Fonds Wetenschappelijk Onderezoek, ESF Grant "*Modern applications of the Critical Power Concept: real-time monitoring of energetic balance during exercise."* Dr. Jan Boone, June 2021

Danish National Research Fund: Dr. Soren Grubb, "*Protection of the microcirculation in the aging brain*." July, 2021

Canadian Foundation for Innovation: Dr. Michael Stickland, "*Precision Human Health Laboratory*", University of Alberta, August, 2022

Canadian NSERC grant review board. Discovery Grants Program, Dr. Rodrigo Villar "*Mechanisms regulating autonomic, cardiovascular, respiratory and skeletal muscle oxygenation: An integrative and comparative approach*" December, 2022.

United Kingdom Medical Research Council: African Research leaders 2023: "*Developing capacity for use of exercise testing in physical health and performance appraisal in Kenya, SSA*." February, 2023.

Journals Reviewed:

Science
American Journal of Physiology: Heart Circ
American Journal of Physiology: Regulatory and Integrative
Journal of Applied Physiology
Journal of Physiology (London)
Medicine and Science in Sports and Exercise
Journal of Clinical Investigation
International Journal of Sports Medicine
American Journal of Clinical Nutrition
International Journal of Obesity
Journal of Experimental Physiology
European Journal of Applied Physiology
Journal of Clinical Investigation
The Veterinary Journal, Microcirculation
Microvascular Research
Respiratory Physiology and Neurobiology
PLOS1
Physiological Reports
Microcirculation
American Journal of Respiratory and Critical Care Medicine
FASEB J.
Molecular and Cellular Endocrinology

Committees (National): ACSM Pronouncements Committee 1996-1999.
ACSM Research Awards Committee 2002-6
American Physiological Society Research Awards Committee 2002-6
American Physiological Society Exercise Study Design Workshop 2003-4
Microcirculatory Society Awards Committee 2008-2011
ACSM and World Congress on the Basic Science of Exercise Fatigue, 2015, Organizing Committee
APS Exercise and Environmental Physiology Program Chair, 2014-2016
FASEB Science Research Conferences: Advisory Committee, 2018-2021
EEP Exercise Councillor, 2018-2021

Committees (University/College):

Graduate Program Self Study, 1999-2005
Research Committee, Member and Chair, College of Veterinary Medicine, 2008-2012
Assoc. Dean for Research, 5 yr rev., College of Veterinary Med. 2016
College Committee on Planning, CCOP, Human Ecology, 2015-2017

College of Human Ecology, Tenure and Promotions Committee, 2017-2020
Provost's Task for on Professional Development, 2018
Search Committee, Dean of Veterinary Medicine, 2018
Chair, College of Human Ecology, Tenure and Promotions Committee, 2019-2020
University Distinguished Professors Graduate Student Grant Award Selection Committee, 2020
University Distinguished Professors Selection Committee, 2020, 2021
Vice President for Research Search Committee, 2021
President's Search Committee, 2021
CHHS Dean Search Committee, 2022

Committees (Departmental): Faculty Search Committee, Dr. Thomas J. Barstow, 1996.
Faculty Search Committee, Dr. Richard M. McAllister, 1996.
Faculty Search Committee, Dr. Craig A. Harms, 1997.
Faculty Search Committee, Dr. Nancy Gyurcik, 2000.
Faculty Search Committee, Dr. Paul Estabrooks, 2000.
Kinesiology Graduate Comm. 1995-
Anatomy and Physiology Research Review Panel, 2002.
Scholarship and Awards Committee (Chair), 2007-2016
Awards Banquet Committee (Chair), 2007-2016
Merit Award Committee (Chair), 2010.
Anatomy and Physiology, Graduate Executive Committee, 2011-2016
Faculty Review Committee (Dr. David Dzewaltowski reappointment), 2012.
Faculty Search Committee, Dr. Brad J. Behnke, 2013.
Faculty Search Committee, Dr. Steven W. Copp, 2014/15.
Faculty Search Committee, Dr. Carl Ade, 2016.
Anatomy and Physiology, Departmental Advisory Committee, 2013-

Referee for Tenure and/or Promotion: Susan A. Ward, Professor, UCLA
Russell S. Richardson, Associate Professor, UCSD
Ronald A. Herb, Associate Professor, N. Arizona Univ.
Andrew M. Jones, Senior Lecturer, Manchester Metropolitan Univ.
William L. Sexton, Professor, Kirksville College of Osteopathic Med.
I. Mark Olfert, Project Scientist, UCSD
John David Symons, Assist. Prof. Univ. of Utah (2^{nd} / 3^{rd} year revs.)
Richard M. McAllister, Associate Professor, Kansas State University
David Dzewaltowski, Professor, Kansas State University
Thomas J. Barstow, Professor, Kansas State University
Craig A. Harms, Associate Professor, Kansas State University

Brian J. Whipp, Professor, University of Leeds, U.K.
John David Symons, Associate Prof. University of Utah
Andrew M. Jones, Professor, Manchester Metropolitan Univ.
Mark Olfert, Assistant Professor, UCSD
Andrew M. Jones, Professor, University of Exeter
Kenneth H. McKeever, Professor, Rutgers
Ramiro Isaza, Associate Professor, University of Florida
Bruno Grassi, Professor, University of Udine, Italy
James C. Martin, Associate Professor, University of Utah
John P. Mattson, Associate Professor, Gustavius Adolphus University
Kenneth H. McKeever, Professor, Rutgers
Brad J. Behnke, Assistant Professor, Florida State University
Donald H. Paterson, Distinguished University Professor, UWO
Michael C. Hogan, Professor, University of California, San Diego
Jefferson C. Frisbee, Professor, West Virginia University
Paige C. Geiger, Associate Professor, Dept. Molecular & Integrative Physiology, University of Kansas, School of Medicine
Ellen C. Breen, Research Scientist, UCSD
John R. Halliwill, Professor, University of Oregon, 2011.
Brendon J. Gurd, Assist. Professor, Queens University, Canada, 2011
Yutaka Kano, Professor, University of Electro-Communications, Chofu, Japan, 2012
Harry B. Rossiter, Associate Professor, Harbor-UCLA, 2012
Mark Burnley, Senior Lecturer, University of Kent, 2012
Ingrid Langsetmo, Assistant Professor, Texas A&M, 2012
Jason David Allen, Associate Professor, Duke University, 2012
John David Symons, Professor. University of Utah, 2012
Christos S. Katsanos, Associate Prof. Arizona State University, 2013
Joslyn Ahlgren, Senior Lecturer, University of Florida, 2013
Lisa A. Lesniewski, Assistant Professor. University of Utah, 3rd year reappointment, 2012
Anthony J. Donato, Associate Professor with tenure. University of Utah, 2014
Lisa A. Lesniewski, Assistant Professor. University of Utah, 5th year reappointment, 2014
Russell S. Richardson, VA Rehabilitation Research and Development (RR&D) Senior Research Career Scientist Award, 2014
Russell T. Hepple, Professor, McGill University, Canada, 2014.
Mark Olfert, Associate Professor, University of West Virginia, 2014.
Mikel Egana, Associate Professor, Trinity College, Dept. of Medicine, University of Dublin, 2015.
Scott L. Davis, Associate Professor, Dept. Applied Physiology & Wellness, Southern Methodist Univ., Dallas, 2015
Ken McKeever, Distinguished Professor, Rutgers, 2015.
Lisa A. Lesniewski, Associate Professor. University of Utah, 2015
Michael K. Stickland, Professor of Medicine, Univ. of Alberta, 2016

Lisa A. Lesniewski, GS 14/1, Veterans Admin., SLC, Utah, 2016
Arturo Figueroa, Professor, Department of Nutrition, Food and Exercise Sciences, Florida State University, 2016
John G. Wood, Professor, Department of Molecular and Integrative Physiology, University of Kansas School of Medicine, 2016
David M. Keller, Professor, Department of Kinesiology, University of Texas at Arlington, 2016
Juan M. Murias, Associate Professor, Faculty of Kinesiology, University of Calgary, Canada, 2016
Bruno T. Roseguini, Associate Professor, Department of Health and Kinesiology, Purdue University, 2017
Paige C. Geiger, Professor, Dept. Molecular & Integrative Physiology, University of Kansas, School of Medicine, 2017
Gary P. Van Guilder, Associate Professor, Dept. Health and Nutritional Sciences, South Dakota State University, 2017
Siddhartha Angadi, Assoc. Professor, Arizona State University, 2018
Brian A. Irving, Assoc. Professor, Louisiana State University, 2018
Michael D. Nelson, Assoc. Professor, UT Arlington, 2018
Darren P. Casey, Assoc. Professor, University of Iowa, 2018
Joanne L. Bowtell, Professor and Head, University of Exeter, 2018.
Lisa A. Lesniewski, Associate Professor G14, VA Hospital, University of Utah, 2019
Ryan A. Harris, Professor, University of Georgia, 2019
Anthony J. Donato, Professor, University of Utah, 2019
Sushmiti Purkayastha, Associate Professor, Southern Methodist University, 2019
Michael Tschakovsky, Professor, Queens University, Canada, 2019
Barry Scheuermann, Professor, University of Toledo, 2019
Douglas J. Casa, Distinguished Professor, UCONN, 2019
Jefferson C. Frisbee, Dean's Distinguished Performance Award, UWO, Canada, January, 2020
Robert F. Chapman, Professor, Univ. Indiana, April, 2020
Moh H. Malek, Professor, Wayne State University, July 2020
Craig A. Harms, American Kinesiology Association, Jerry R. Thomas Distinguished Leadership Award, July, 2020
Bruce L. Gladden, Auburn University Creative Research & Scholarship Award, October, 2020.
Melissa L. Bates, Associate Professor, Univ. of Iowa, October, 2020
Lisa A. Lesniewski, Professor and compatible VA ranking, University of Utah and VA Hospital, 2021
Mark Olfert, Professor, University of West Virginia, 2021.
Abdulhameed Al Ameer, Professor, King Fahd University of Petroleum & Minerals, Saudi Arabia, 2021
Ryan Broxterman, Assistant Professor, University of Utah, School of Medicine, 2021
Daryl P. Wilkerson, Associate Professor, University of Exeter,

Exercise and Sport Science, 2021
Mathew Brothers, Professor, University of Texas at Arlington, 2022
Alessandro Adami, Associate Professor, Department of Kinesiology, University of Rhode Island, 2022
Leonardo F. Ferreira, Associate Professor, University of Basel, Switzerland, 2022
Brian Glancy, Senior Investigator, National Institutes of Health, 2022

Support of Fellowship in Professional Societies

APS (FAPS) Dean John Buckwalter, 2019
APS (FAPS) Thomas J. Barstow, 2019
APS (FAPS) Kenneth H. McKeever, 2019

Media Releases **1/26/2010** **"Antioxidants aren't always beneficial to your health"**

3/23/2011	**"Anderson has strived for years to make Manhattan more livable"**
8/02/2011	**AJP Podcast "The rate of oxygen loss from mesenteric arterioles is not unusually high" R.N. Pittman, W.G. Weir, K.H. Keehan, D.C. Poole**
1/10/2012	**AJP Podcast "Muscle oxygen transport and utilization in heart failure: Implications for exercise (in)tolerance." D.C. Poole, I. Zucker, K.H. Keehan, P.D. Wagner.**
4/2012	**Perspectives Update, Kansas State University "For better health: Rats, beetroot juice and fish oil." Steven W. Copp.**
8/2012	**Cooking Light Magazine "Antioxidants Reconsidered" p. 51. Expert quote.**
11/14/2012	**AJP Podcast "Sildenafil improves oxygen uptake kinetics in heart failure" D.C. Poole, J.A. Neder, K.H. Keehan, D.A. Kass.**
3/1/13	**DVM Newsmagazine "Clearing the airway: Nasal strips and EIPH" E. Kane; expert opinion D.C. Poole.**
4/23/14	**AJP Podcast "Aerobic exercise acutely prevents the endothelial dysfunction induced by mental stress." A.C.L. Nobrega, N. Kanagy, K.H. Keehan, D.C. Poole**
4/29/2014	**Kansas State Collegian. "Despite study local experts say active lifestyle still ideal." Expert opinion.**
5/21/2014	**Kansas State News and Editorial Services. "Researchers find equine nasal strip reduces lung damage, may improve performance." H.H. Erickson, D.C. Poole.**
5/22/2014	**Horse Talk, New Zealand. "Do nasal strips help horses?" Expert opinion. D.C. Poole.**
5/25/2014	**ESPN. "Straight from the horse's nose. Does California Chrome's nasal strip actually work?" Expert opinion.**

10/23/2014	**Kansas News Channel 27. "Beetroot juice for athletes and heart failure patients." Story and interview.**
8/1/2016	**JAPPL Podcast "The effect of high intensity training on endothelial function in obese patients" G.A. Gaesser, M. Dawson, D.C. Poole.**
9/9/2016	**JAPPL Podcast "Home-based aerobic exercise training improves oxidative metabolism in patients with metabolic myopathies." S. Porcelli, A. Adami, D.C. Poole.**
9/12/2016	**JAPPL Podcast "Pregnancy at high altitude in the Andes leads to increased total vessel density in healthy newborns." I.K.M. Reiss, L.G. Moore, D.C. Poole.**
6/28/2017	**JAPPL PodCast "Effect of exercise timing on post prandial glucose levels." H. Tanaka, S. Kurti, D.C. Poole.**
6/30/2017	**Science of Ultra. Ultramarathon Podcast "Application of Critical Power Theory to Ultramarathon Running: S. Bearden, D.C. Poole.**
9/06/2017	**"Professors are rated by students and colleagues differently." K-State Collegian, p. 3. D.C. Poole.**
6/20/18	**ACUE Community of Professional Practice: "Teaching and Research Excellence: Complimentary Sides of the Same Coin." D.C. Poole. Distributed to 8,000+ higher education administrators, faculty members and stakeholders.**
11/28/2018	**MSSE Blog. "*Contrasting Perspectives in Medicine & Science in Sports & Exercise.*"**
4/28/2020	**APS-AJP-Heart PodCast. "Poole, D.C., S.W. Copp, M. Sturek, D. O'Leary, I.H. Zucker, and T.I. Musch. "*Guidelines for animal exercise and training protocols for cardiovascular studies*."**

Specific Airings of "Beetroot juice for athletes and heart failure patients":

Report:

http://mms.tveyes.com/NetReport.aspx?ReportHash=a19bd0250db0b431d950a57e0e8f652a

UPDATE

8/10/15:

http://mms.tveyes.com/NetReport.aspx?ReportHash=ed38f0df4ed4deef98c9748e5d00c89e

Pathfire Downloads:

Stories Aired:

- KSNT **NBC** (10.24.14)
  - Topeka, KS - 4 a.m., 6 a.m.

 KTKA **ABC** (10.24.14)
- Topeka, KS - 6 a.m.

 KSAT **ABC** (10.24.14)
- San Antonio, TX - 5 a.m.

 KNOP **NBC** (10.30.14)
- North Platte, NE - 6 a.m.

 WNYT **NBC** (11.11.14)
- Albany, NY - 5p.m.

 KLRT **FOX** (11.11.14)
- Little Rock, AR - 5 p.m.

 KVRR **FOX** (11.11.14)
- Fargo, ND - 9 p.m.

COVERAGE UPDATE: 8.10.15 - Additional value: $4,424

 WBKPDT **CW** (8.03.15)
- Marquette, MI - 7 a.m.

 WNLY (8.03.15)
- New York, NY - 7 a.m.

 WRAZ---RAL FOX (8.3.15)
- Raleigh, NC – 6 a.m.

The Horse. 75 minute talk: "Exercise-induced pulmonary hemorrhage: Pushing and pulling across the blood gas barrier." http://www.thehorse.com/videos/38098/mechanisms-of-exercise-induced-pulmonary-hemorrhage?utm_source=Newsletter&utm_medium=health-news&utm_campaign=09-06-2016

1/18/2017 **JAPPL Podcast "*The effect of obesity on the contractile performance of isolated mouse soleus, EDL and diaphragm muscles*." J. Tallis, L.F. Ferreira, D.C. Poole.**

1/27/2017 **K-State Today Cover article: "*Research collaboration pushes exercise past the 'red line*'" M. Burnley, A. Vanhatalo, and D.C. Poole.**

5/2018 **Seek: Research Magazine for Kansas State University, Spring 2018, p. 31. "*Keeping hearts beating with beetroot*", Jennifer Tidball.**

8/21/2021 **Wearing Covid-19 Masks: Blood oxygenation and exercise capacity**
Newstalk! https://www.kwch.com/video/2021/08/20/k-state-research-extension-masks-gyms/

9/03/2021 **K-State Today "K-State study finds that exercise and masks do mix"**.
https://www.k-state.edu/media/newsreleases/2021-09/masks-ok-during-exercise9221.html

10/6/2021 **"*Extraordinary Human Performances*": Consultant for Michael Batchelder and Kerry Lambert. The History Channel and Prometheus Entertainment, Los Angeles.**

10/8/2021 ***Kinesiology Today*** **Article: "Wearing Covid-19 masks and physical activity: The science". Article by Patrick Wade (217-390-2261).**

10/19/2021 **Platinum Performance Webinar "Exercise-induced Pulmonary Hemorrhage in Performance Horses", RACE-AAEP Approved continuing education. With Dr. Warwick Bayly and Jesse Bengoa.**
https://www.platinumperformance.com/articles/managing-bleeders.html

10/2021 **Quoted in the he Horse magazine "The bleeding edge of EIPH" by Stacey Oke, pages 14-21.**

12/21/2022 **Quantifying the benefits of inefficient walking: Monty Python inspired laboratory based experimental study. British Medical Journal 2022;379:e072833.**

Measuring human energy expenditure: public health application to counter inactivity. British Medical Journal 2022;379:o2937.

https://www.washingtonpost.com/wellness/2022/12/21/monty-python-silly-walk-exercise/

https://www.thescottishsun.co.uk/health/9956822/monty-python-style-silly-walk-help-live-longer/

https://arstechnica.com/science/2022/12/adopting-a-silly-walk-like-monty-pythons-mr-teabag-burns-more-calories/

https://www.dailymail.co.uk/sciencetech/article-11562563/Walking-like-Monty-Pythons-Mr-Teabag-help-adults-meet-exercise-targets-study-reveals.html

Invited Presentations (selected)

Harbor-UCLA, 1985. Department of Medicine. "Interrelationships between metabolism and pulmonary gas exchange kinetics."
Harbor-UCLA, 1986. Department of Medicine. "Control of breathing during isometric exercise."
UCLA, 1986. Department of Anaesthesiology. "Metabolic and gas exchange limitors of high intensity exercise."
University of Western Ontario, Canada, 1988. Department of Medical Biophysics. "Plasticity of capillary geometry after exercise training."
University of Arizona, 1991. Department of Cardiothoracic Surgery. "Microvascular structure as a determinant of maximal oxygen transfer capacity."
University of Arizona, 1991. Dept. of Physiology. "Cap.-to-fiber geometrical changes during systole."
Kirksville College of Osteopathic Medicine, 1992. Department of Physiology. "Capillary and fiber geometry in the heart during systole and diastole: Implications for oxygen transfer."
University of Texas, Southwestern Medical Center, 1992. "Diaphragm microstructure: Implications for function."

Freie Universitat, Berlin, Germany, 1992. Department of Anaesthesiology. "Tissue Gas Exchange: structural plasticity and hypoxemia."
University of Wisconsin at Madison, Wisconsin, 1993. Department of Kinesiology. "Structural and functional plasticity in the pathway for oxygen."
Kansas State University, Manhattan, 1994. Departments of Kinesiology and Anatomy/Physiology. "Skeletal muscle microstructure and function."
Baylor College of Medicine, Houston, 1996. Departments of Molecular Physiology and Biophysics and Medicine. "Diaphragm microcirculation: Structure and Function."
University of Kansas Medical Center, Kansas City, 1996. Departments of Physiology and Medicine. "Integrated structure-function relationships in the diaphragm."
Arizona State University, Tempe, Arizona, 1997. Department of Exercise Science. "Skeletal muscle structure, plasticity and function."
University of California, San Diego, 1997. Department of Medicine. "Structural and Functional Microcirculatory Plasticity."
University of North Texas, Denton, 1997. Department of Kinesiology. "Pulmonary and peripheral gas exchange during exercise."
Hiroshima Womens University, Hiroshima, Japan, 1997. Department of Kinesiology. "Pulmonary and peripheral oxygen exchange during exercise."
Kyoto University, Kyoto, Japan, 1997. Japanese Respiratory Physiology Society. "Mechanistic bases for $\dot{V}O_2$ kinetics."
Keio Medical School, Tokyo, 1997. Biochemistry Department. "Muscle microcirculatory consequences of myocardial and diabetic pathology."
Kirksville College of Osteopathic Medicine, 1998. Department of Physiology. "Microcirculatory structure-function relationships in myocardial pathology."
John Moores University, Liverpool, 1998. Research Institute for Sports and Exercise Sciences. "Muscle microcirculation: structure-function relationships."
University of Birmingham, England, 1998. Department of Physiology**.** "Muscle microcirculatory control."
St. George's Medical School, London, England, 1998. Department of Physiology. "Control of muscle oxygen delivery."
Biomedical Engineering Society, Cleveland, Ohio, 1998. "Mechanistic basis for the $\dot{V}O_2$ slow component."
Biomedical Engineering Society, Cleveland, Ohio, 1998. "Effects of chronic disease on muscle microcirculatory O_2 delivery."
Florida State University, Tallahassee, Florida, 1999. "Muscle oxygen exchange: Physiology and Pathophysiology"
Rutgers University, New Brunswick, New Jersey, 2000. "Oxygen exchange dynamics in health and disease."
University of North Texas, Health Sciences Center, 2001. "Dynamics of oxygen exchange in skeletal Muscle."
Vanderbilt, Nashville, Tennessee, 2001. "Dynamics of muscle oxygen exchange in health and disease: chronic heart failure and diabetes"
Case Western Reserve University, 2002. "Muscle microvascular oxygen exchange during exercise in health and disease"
Lexington, Kentucky, International Conference on Equine Exercise Physiology, 2002. "Current concepts of oxygen transport during exercise"
University of Kansas Medical School, 2002. "Dynamics of muscle oxygen exchange in health and disease."
University of North Texas Health Science Center, 2003. "Muscle microcirculatory oxygen exchange in health and disease."
Institute for Exercise and Environmental Medicine, 2003. "Muscle microcirculatory oxygen exchange in health and disease."

Texas A&M, Departments of Health and Kinesiology and Medical Physiology, 2003. "Muscle microcirculatory oxygen exchange in health and disease."
University of Texas Medical Branch, Galveston, 2003. "Muscle microcirculatory oxygen exchange in health and disease."
University of Texas Health Science Center, San Antonio, 2003. "Muscle microcirculatory oxygen exchange in health and disease."
Manchester Metropolitan University, England, 2003. "Muscle microcirculatory oxygen exchange in health and disease."
American College of Sports Medicine, Indianapolis, 2004. "Dynamics of microcirculatory oxygen exchange."
American College of Sports Medicine, Central States Chapter, Kansas City, 2004. "Sport, exercise and the ACSM: An historical perspective."
Havemeyer Workshop on EIPH, Vancouver, Canada, 2006. "Alternative therapies for EIPH."
American College of Sports Medicine, Indianapolis, 2006. "Control of oxygen uptake during exercise."
American College of Sports Medicine, Indianapolis, 2006. "Capillary recruitment in skeletal muscle during exercise: No"
School of Sports and Health Sciences, University of Exeter, 2006. "Limitations to oxygen transport during exercise in health and disease."
School of Sport and Exercise Sciences, University of Birmingham, 2006. "Is muscle capillary recruitment obligatory at exercise onset?"
Department of Sport and Exercise Science, Aberystwyth, 2006. "Limitations to oxygen transport during exercise in health and disease."
Institute of Membrane and Systems Biology, Leeds University, 2006. "Dynamics of oxygen exchange in health and disease."
Peninsula Medical School, Universities of Exeter and Plymouth, 2006. "Microvascular oxygen transport in health and disease: Myths and misconceptions."
Department of Sports Sciences, University of Ghent, Belgium, 2006. "Capillary recruitment at exercise onset: Yes or No?"
School of Sports and Health Sciences, University of Exeter, 2007. BASES Workshop. "An Introduction to $\dot{V}O_2$ Kinetics"
School of Sports and Health Sciences, University of Exeter, 2007. BASES Workshop. "Mechanistic bases to the $\dot{V}O_2$ slow component."
School of Sports and Health Sciences, University of Exeter, 2007. BASES Workshop. "$\dot{V}O_2$ kinetics: State of the art and directions for future research."
***Peter A. Rechnitzer Lecture, University of Western Ontario – Canadian Society for Aging, London Ontario, 2007.** "Muscle microcirculatory control in health and disease: Inconvenient truths."
School of Sports and Health Sciences, University of Exeter, 2008. BASES Workshop. "An Introduction to $\dot{V}O_2$ Kinetics"
School of Sports and Health Sciences, University of Exeter, 2008. BASES Workshop. "Mechanistic bases to the $\dot{V}O_2$ slow component."
School of Sports and Health Sciences, University of Exeter, 2008. BASES Workshop. "$\dot{V}O_2$ kinetics: State of the art and directions for future research."
***International Symposium on Oxygen Transport to Tissue, Sapporo, 2008.** "Muscle microcirculatory oxygen exchange in health and disease." **Keynote Address.**
Northlands American College of Sports Medicine Annual Meeting, Duluth, Minnesota, 2008. "Myths and the Microcirculation"
Northlands American College of Sports Medicine Annual Meeting, Duluth, Minnesota, 2008. "Muscle O_2 dynamics at exercise onset"

University of Kansas Medical Center, Kansas City, 2009. Departments of Molecular and Integrative Physiology and Medicine. "Myths and the microcirculation: Inconvenient truths."
University of Missouri, Columbia, 2009. Department of Biomedical Sciences. "Myths and the microcirculation: Inconvenient truths and contrary data."
Saint Louis University, 2009. Department of Pharmacological & Physiological Science. "Matching microcirculatory O_2 delivery to metabolic demands in skeletal muscle."
Virginia Commonwealth University, 2009. Department of Physiology and Biophysics. "Matching muscle oxygen delivery to demand in health and disease."
School of Sports and Health Sciences, University of Exeter, 2010. "Blood-muscle O_2 flux during exercise: Data versus dogma."
Exercise is Medicine Conference, University of Kansas Medical Center, Kansas City, 2010. "Adaptability of oxygen uptake kinetics: Mechanisms and implications."
***The Royal Danish Academy of Sciences and Letters, Copenhagen, Denmark. August Krogh Symposium, 2010.** "Dynamics of muscle microcirculatory and blood-myocyte O_2 flux during contractions."
Whole Health and Alternative Medicine, Department of Medicine, University of Kansas Medical Center, Kansas City, 2010. "Exercise and nutrition: Inconvenient truths."
West Virginia University, School of Medicine, 2010. "Matching microcirculatory O_2 delivery to metabolic demands in skeletal muscle: Health and disease"
University of Utah, Departments of Exercise Science, Medicine and Veterans Affairs, 2012. "Muscle microvascular oxygen delivery in health and disease: Data versus Dogma."
National Institutes of Health, 2012. HLBI Working Group on Exercise Training as Therapy for Heart Failure. "Basic Science: What more needs to be learned about pathophysiology of exercise intolerance in HFPEF (and HFREF) in order to design better exercise treatments?"
Anatomy and Physiology, Departmental Seminar, College of Veterinary Medicine, Kansas State, 2013. "Oxygen delivery to tissues in health and disease: Heart failure and hypoxia."
University of Aarhus, Department of Medicine, Aarhus, Denmark, 2014. "Muscle Microvascular Oxygen Delivery in Health and Disease: Data versus Dogma."
University of Copenhagen, Copenhagen, Denmark, 2014. "Balancing Muscle Microcirculatory O_2 Delivery and Utilization: Nullius in Verba."
European College of Sport Science annual meeting, Amsterdam, 2014. "The Power-Time Relationship: Mechanisms of Vascular Control."
International Symposium on Human Adaptation to Environment and Whole-body Coordination, Kobe, Japan, 2015. "Human Evolution of Exercise Tolerance."
University of Electro-Communications Chofu and Daiichi-Sankyo Co., Tokyo, 2015. "Oxygen Transport in Health and Disease: Role(s) of Nitric Oxide."
American College of Sports Medicine, National Meeting, San Diego, 2015. "Oxygen and skeletal muscle: Current perspectives/ Myths and twaddle."
American College of Sports Medicine, National Meeting, San Diego, 2015. "Vascular control above critical power."
***D.B. Dill Lecture. American College of Sports Medicine, SouthWest, Mesa, CA, 2015. "**Critical Power: Defining Human Physiology and Evolution"
***The Brasel Basic and Translational Science Seminar**, 2015. Harbor-UCLA Medical Center, Torrance, CA. "Muscle Microvascular Oxygen Transport: Challenges in Heart Failure"
University of Oklahoma, Department of Health and Exercise Science, 2015. "Evolution of Exercise Tolerance."
American Association of Equine Practitioners, Chicago, Il, October/November, 2015. Expert panel on Exercise-Induced Pulmonary Hemorrhage (EIPH). "Role of the cardiovascular vs. respiratory systems on EIPH."
Department of Biochemistry and Molecular Biophysics, Kansas State University, June, 2016. "Muscle microvascular oxygen transport: Nitric oxide and heart failure."

European College of Sports Sciences, Vienna, 2016. "Oxygen uptake kinetics in health and disease."
University of Kentucky Gluck Equine Research Foundation, Lexington, Kentucky, October, 2016. "*Pushing and pulling across the blood-gas barrier: Mechanisms of Exercise-Induced Pulmonary Hemorrhage*"
***60th Texas ACSM Lecture, 2016.** "Muscle microvascular oxygen transport: Challenges in heart failure."
Department of Anatomy and Physiology TED Talk Series, March, 2017: "Strolling Along the Oxygen Transport Pathway."
***2017 Health and Physical Activity Distinguished Lecture,** Virginia Commonwealth University, March, 2017. "*Heart Failure and Exercise: Novel Insights*."
***Alley Memorial Lecture,** University of Iowa, April, 2017. *"Muscle Vascular O_2 Transport: Myths and Mechanisms."*
Departments of Physiology and Medicine, Trinity College, Dublin University, Ireland, July/August, 2017. "*The Oxygen Transport Pathway in Health and Disease: Novel Insights.*"
American Physiological Society Conference: Cardiovascular Aging, Denver, Colorado, August, 2017. "*Skeletal muscle oxygen transport during exercise: Effects of aging and heart failure.*"
* **Environmental and Exercise Physiology (EEP) Edward F. Adolph Distinguished Lectureship**, *"Muscle microcirculation: Gateway to function and dysfunction."* Experimental Biology, San Diego, April, 2018.
Kansas Physical Therapy Association Annual Meeting, "*Heart Failure*: *Novel Discoveries, Therapeutic Insights*." Manhattan, Kansas, October, 2018.
American Physiological Society Writing Workshop, Instructor, "*Use of Correct Grammar in Scientific Writing*." Orlando, Florida, January, 2019.
All University Presentation: "*The Oxygen Transport Pathway in Health and Disease: Novel Insights.*" Molde University, Norway, March, 2019.
UCONN Sports Medicine Grand Rounds: *"Incorporating New Science into Medicine: Challenges and Opportunities."* University of Connecticut, March 29, 2019.
All University Lecture: "*Teaching and Research: Complementary Sides of the Same Coin.*" University of Connecticut, March 2019.
Department of Physiology, "*Matching muscle oxygen delivery to demand in health and disease*" Michigan State University, East Lansing, May 9, 2019.
Scandinavian Physiological Society, International Meeting, Reykjavik, Iceland, August, 2019.
"*The Racehorse: A Model of Superlative Oxygen Transport and lung Failure*."
Leo and Anne Albert Inaugural Workshop, "*Understanding the acute effects of exercise on the brain*." Scottsdale, Arizona, October 4-6, 2019.
American Physiological Society Writing Workshop, Instructor, "*Use of Correct Grammar in Scientific Writing*." Orlando, Florida, January 23-26, 2020.
Biomedicine 2020, Virtual Symposium Keynote Speaker. "How our smallest blood vessels limit what humans can do. Memorial University, St. John's, Newfoundland, Canada, July 17, 2020.
***Kansas State University Provost's Lecture October, 2020.** "Teaching and Research Excellence: Best Practices in Times of Covid-19." https://mediasite.k-state.edu/mediasite/Play/1382043c7aa84aec8291af3a04a35c871d
Kansas State University, Exercise is Medicine, October, 2020. "Exercise in time of Covid-19: Physiology of Masks." https://fb.watch/1YZCD0Kpbe/
American Physiological Society Writing Workshop, Instructor, "*Writing a Title and Abstract*." And "*Being a Reviewer.*" Virtual, January 15-18, 2021.
University of California, San Diego. Department of Medicine, March, 2021. "Intramuscular Oxygen Transport: Old Myths and Novel Insights."
ACSM J.B. Wolffe Memorial Plenary Lecture June 2021, *"How Do YOU Power Aerobic Exercise?"
***History of Physiology Distinguished Lecture: "*Skeletal Muscle Microcirculation: Misconceptions and Missed Perceptions*." Experimental Biology, Philadelphia, April 2022.**

Kansas State University, Department of Diagnostic Medicine and Pathology: " November, 2022. "***Skeletal Muscle Microcirculation in Health and Disease*.**"
https://ksu.zoom.us/rec/share/0VzqPTGx5dQehrOfOsfjk1OZ5rP5bf-XudGLbKuWcPQNdR1us2Znp2RP5j6NNctJ.Td26Ow2HDxgUYINw?startTime=1668114444000
Passcode: 6X^%mP%8
***German National Academy of Sciences**, Leopoldina, Halle, Germany. "*Capillary-mitochondria Oxygen Transport: Paradigm Shifts*." March, 2023.

***Distinguished/Named Lectureships**

Scientific Sessions Chaired

American College of Sports Medicine, National Meeting, Indianapolis, 1994. "Respiratory Physiology"
American College of Sports Medicine, National Meeting, Indianapolis, 2000. "Physical Activity and Cardiovascular Risk Factors"
American College of Sports Medicine, National Meeting, Baltimore, 2001. "Pulmonary Effects of Exercise"
American College of Sports Medicine, Central States Chapter, Kansas City, 2001. "Muscle metabolism and microcirculation."
American College of Sports Medicine, National Meeting, San Francisco, 2003. "Hypotension and Orthostasis." Guest chair with Dr. Michael L. Smith.
American College of Sports Medicine, National Meeting, Indianapolis, 2004. Symposium: "Oxygen uptake dynamics from muscle to mouth." Co-chaired with Dr. Andrew M. Jones, Manchester Metropolitan University, U.K.
The Physiological Society, Main Meeting, University College London, 2006. "Muscle-energetics and cardio-pulmonary determinants of exercise tolerance in humans."
ACSM Integrative Physiology of Exercise, Indianapolis, 2006. "Control of oxygen uptake during exercise."
American College of Sports Medicine, National Meeting, Denver 2011. "Blood flow."
American College of Sports Medicine, National Meeting, San Francisco, 2012. "Dynamic heterogeneity of exercising muscle O_2 exchange." Co-Chair with Professor Shunsaku Koga.
European College of Sport Science annual meeting, Amsterdam, 2014. "The Power-Duration Relationship: Physiological Determinants and Implications for Performance Assessment and Exercise Prescription." Co-Chair with Professor Andrew M. Jones.
International Symposium on Human Adaptation to Environment and Whole-body Coordination, Kobe, Japan, 2015. "Human Evolution of Exercise Tolerance and its Mechanistic Link." Co-Chair with Professor Shunsaku Koga.
American College of Sports Medicine, National Meeting, San Diego, 2015. Threshold Concepts in Athletic Performance. "Physiological thresholds: Measurement and mechanistic bases." Chair.
American College of Sports Medicine, National Meeting, San Diego, 2015. "Comparative aspects of fatigue." Dr. James H. Jones. **Introductions and Chair.**
European College of Sports Sciences, Vienna, 2016. Exercise testing.
European College of Sports Sciences, Vienna, 2016. Intermittent exercise training.
Scandinavian Physiological Society, National Meeting, Reykjavik, Iceland, August, 2019. "Evolutionary and cross-species aspects of cardiovascular function at rest and during exercise."

Symposium Presentations

American College of Sports Medicine, National Meeting, Seattle, 1993.
"Mechanistic basis of the slow component of $\dot{V}O_2$ kinetics during heavy exercise." **Chair and presenter**.

*__Oxygen Transport in Health and Disease, Barcelona, 1993.__
"Acute and Chronic Plasticity of Diaphragm Structure and Function." **Presenter.**

American College of Sports Medicine, National Meeting, Cincinatti, 1996
"Mechanical and Metabolic Heterogeneity in Diaphragm." **Co-chair and presenter.**

***Japanese Respiratory Physiology Society, Kyoto Symposium, 1997**
"Mechanistic bases for $\dot{V}O_2$ kinetics." **Keynote speaker.**

*__Biomedical Engineering Society, Cleveland, Ohio, 1998.__
"Oxygen uptake kinetics during heavy exercise." **Co-chair and presenter.**

American College of Sports Medicine, National Meeting, Indianapolis, 2000.
"Microcirculatory dynamics in health and disease." **Presenter.**

***BASES Conference, John Moores University, Liverpool, England, 2000.**
"Dynamics of muscle O_2 exchange: who's pulling, who's pushing?" **Keynote speaker.**

***European College of Sports Science, Cologne, 2001.**
"Slow component of oxygen uptake kinetics." **Presenter.**

***Experimental Biology, New Orleans 2002.** Wiggers Memorial Symposium in honor of Dr. Loring B. Rowell. "Capillary hemodynamics at the onset of muscle contractions." **Senior Author.**

***International Conference on Equine Exercise Physiology, Louisville, Kentucky, 2002.** "The role of the lungs and airways in exercise-induced pulmonary hemorrhage." **Presenter.**

***Respiratory Physiology and Neurobiology: Celebration of Peter Scheid's career, San Diego, California, 2003.** "Muscle oxygen exchange in health and disease." **Presenter.**

American College of Sports Medicine, Indianapolis, 2004. "Oxygen uptake dynamics: from muscle to mouth." **Co-Chair and Presenter.**

American College of Sports Medicine, Indianapolis, 2004. "Dynamics of microcirculatory oxygen exchange." **Presenter**.

American College of Sports Medicine, Nashville, 2005. "Microvascular oxygen exchange in emphysema." **Presenter.**

American College of Sports Medicine, Nashville, 2005. "Diabetes and gas exchange." **Presenter.**

***Experimental Biology, San Francisco 2006.** "Microcirculatory hemodynamics and oxygenation in aged muscle." **Presenter.**

***ACSM Integrative Physiology of Exercise, Indianapolis, 2006.** "Control of oxygen uptake during exercise." **Introduction.**

American College of Sports Medicine, Denver, 2006. "Determinants of oxygen flux from capillary to myocyte." **Presenter.**

***The Physiological Society, London, 2006.** "Oxygen exchange: muscle-vascular-pulmonary coupling." **Presenter and Co-Chair.**

***BASES Workshop, University of Exeter, 2007.** "Oxygen Uptake Kinetics: A Practical Approach." **Presenter and Co-organizer** with Professor A.M. Jones.

***BASES Workshop, University of Exeter, 2008.** "Oxygen Uptake Kinetics: A Practical Approach." **Presenter and Co-organizer** with Professor A.M. Jones.

American College of Sports Medicine, Indianapolis, 2008. "$\dot{V}O_2$max in Aging and Disease: Role of Skeletal Muscle." **Presenter and Chair.**

American College of Sports Medicine, Indianapolis, 2008. "Skeletal Muscle Microcirculation." **Presenter and Chair.**

***Canadian Federation of Biological Sciences, Winnipeg, Canada, 2008.** "Dynamics of Microcirculatory Function and Oxygen Delivery in Aged Muscle." **Presenter.**

American College of Sports Medicine, Seattle, 2009. "The Critical Power Concept: Implications for the Determination of $\dot{V}O_2$max and Exercise Tolerance." **Presenter.**

American College of Sports Medicine, Baltimore, 2010. "The slow component of $\dot{V}O_2$ kinetics: History and significance." **Co-chair and presenter**.

American College of Sports Medicine, National Meeting, San Francisco, 2012. "Dynamic heterogeneity of exercising muscle O_2 exchange" **Introduction and Co-Chair**.

American College of Sports Medicine, National Meeting, San Francisco, 2012. "Diabetic microangiopathy and impaired cardiopulmonary response to exercise." **Co-Chair and Presenter** with Dr. Chris Baldi.

American College of Sports Medicine, National Meeting, San Francisco, 2012. "Changing the oxygen cost of exercise: New discoveries, novel implications (In memory of Brian Whipp)" **Keynote Lecture.**

***The Systems Biology of Exercise: Cardio-Respiratory and Metabolic Integration, Leeds, U.K., 2012.** "Balancing muscle microcirculatory O_2 delivery and utilization: *Nullius in verba*. **Keynote Lecture.**

American College of Sports Medicine, National Meeting, Indianapolis, 2013. "Muscle hemodynamic control relative to critical power." **Presenter.**

American College of Sports Medicine, National Meeting, Indianapolis, 2013. "Brian Whipp's scientific legacy: Extraordinary insights and future directions." **Chair and Presenter.**

American College of Sports Medicine, National Meeting, Indianapolis, 2013. "Perspectives of scientific logic: Hindrances to understanding." **Presenter.**

American College of Sports Medicine, National Meeting, San Diego, 2015. "Oxygen and skeletal muscle: Current perspectives/ Myths and twaddle." **Presenter.**

American College of Sports Medicine, National Meeting, San Diego, 2015. "Vascular control above critical power." **Presenter.**

American College of Sports Medicine, National Meeting, San Diego, 2015. Threshold Concepts in Athletic Performance. "Physiological thresholds: Measurement and mechanistic bases**." Chair and presenter.**

European College of Sports Sciences, Vienna, 2016. "Oxygen uptake kinetics in health and disease."

***Experimental Biology, Chicago, 2017.** "Nitric oxide and muscle microvascular O_2 transport: health and heart failure."

American College of Sports Medicine, National Meeting, Denver, 2017. "The Racehorse: Selective Breeding for $\dot{V}O_2$max."

American College of Sports Medicine, National Meeting, Denver, 2017. "Mechanisms of Exercise Intolerance in Heart Failure."

Experimental Biology, San Diego, 2018. Craig, J.C. In: *Mechanisms of Exercise Tolerance in Health and Disease.* "Central cardiac determinants of the speed-duration relationship in heart failure rats."

***Integrative Physiology of Exercise, American College of Sports Medicine, 2018.** *"*Matching O_2 delivery to uptake and O_2 diffusion in skeletal muscle."

American College of Sports Medicine, National Meeting, Orlando, June, 2019. "The Anaerobic Threshold: 50 Years of Controversy."

***Scandinavian Physiological Society, National Meeting, Reykjavik, Iceland, August, 2019.**

"The Racehorse: A Model of Superlative Oxygen Transport and lung Failure."

***Invited speaker.**

Students/Scientists Trained

Selected Undergraduate: Casey A. Kindig, Emily R. Diederich, Richard J. Roberts, Jay Harper, William Marshall, Holly Brown-Feltner, Brad J. Behnke, Janet K. Bailey, John A. Russell, Kevin Eklund, Kelly R. Brown, Lanell Blubaugh, Melissa Timm, Joslyn Hansen, *Alex Fees, Angela Glean, Brian Collins, Trenton Colburn, Andrew Stevens, Konner Cool, Joseph Merino, Vanessa Turpin, *Jordan Eberhardy (*OURCI Scholars). *Howard Hughes Medical Institute Research Scholars 2002-*, Kyle Ross, Randy Eilert, Kyle Jansson. *McNair Scholars 2011-,* Gabrielle Sims, Hunter Jewett, Jordan Eberhardy, Ramona Weber, Kiana Shulze, Alaina Devolde. *K-INBRE Scholar 2022*, Hannah Wall.

Masters: Richard N. Petrisko*, Christine S. Williams, Jamie A. Bulf, LinJing Xu, Gwen M. Appleberry, Tonya M. Bunkers, James T. Griffing*, Karen Sue Hageman, Rebecca Harder, Casey A. Kindig*, Christian Larson, Jennifer R. Mendoza, Richard J. Roberts, Brianna Williams, Winiata Shortland, Patrick C. Pfeiffer, Kristen Meadows, Brian Frazier, Crystal Finkbone/Geer*, Emily R. Diederich*, Brad J. Behnke*, Troy E. Richardson*, Janet K. Bailey, John A. Russell*, Maria DeBoer, Kelly R. Brown, Serena McEntire, Kevin E. Eklund, Tyler Barker, Clay Greeson, Ekaterini Fotopoulou, Amy Downey, Allison Harper, Scott Hahn*, Jeremiah Williams, Kim Lawson-Roth, Derek Mantey*, Renee J. Wicker, Kyle F. Herspring, Steven W. Copp, Michelle Davis, Lauren Hammel, Matt Chrisman*, Robert T. Davis III, Kate E. Swain, Dan Debes, Peter J. Schwagerl, Katie E. Schmidt, Sarah Corn ,Chrishonda Brown, Zacharia Afram Modi, Scott K. Ferguson*, Ryan M. Broxterman, Tanner McNamara, Jeremy Keen, Gabrielle Rico (Sims), Erica Levitt, Susie Shlup, Samuel R. Emerson, Samuel Wilcox, Abigail Thomson (MFA), Megan Cole, Matthew Brown, Anthony Garcia, Brian Quaison, Jesse Craig (2014), Brian Sanborn* (2015), Alex Winter (2015), Tammi Paolili (2015), Angela A. Glean (2015), Samantha Kannawin (2015), Elizabeth Gittemeier (2016), Craig Doan (2016), Andrew Alexander (2017), Dennis Jilka* (2017), Jackie Bell*(2017), Joseph Augustine (2017), Shelbi Sutterfield (2017), Andrew Stevens (2018), Kyle Ragusan (2018), Nicole Caitloth (2018), Connor Nace, Dakota Coates (2018), Andrew Horn* (2019), Kiana Schulze* (2020), Ramona Weber* (2020), Vanessa Rose-Turpin (2020), Shea Crum (2020), Emma Hilgenfeld (2020), Kendra Holte (2020), Cale Hepler (2021), Nate Ernst, Liza Rogers (*Chair/Co-Chair). Total = 93. 18 Major Professor.

Professional NIH Veterinary Scholars: Janet K. Bailey*, Leah Ferguson, Casey Ramsel, Lisa Abbo* Jessica Gentile,* Stuart Clark-Price, DVM, Melanie Ray*, Michael J. White, Jennifer L. Wright (2014)*, Michael J. Shettler (2016)* Jason Gregory (2019) (*Chair)

Doctoral: Donald E. Bebout, Sanjay Batra, Ingrid Langsetmo*, D.V.M., John P. Mattson, M.S., Casey A. Kindig*, M.S., Paul McDonough, Timothy Bauer, Brad J. Behnke*, Danielle Padilla*, Leonardo F. Ferreira, Tammi Epp*, Barbara Lutjemeir, Dana Townsend, Steven W. Copp, Fred DiMenna, Carl J. Ade, Daniel M. Hirai (2012)*, Ryan M. Broxterman (2015), Scott K. Ferguson* (2015), Christopher M. Bopp (2015), Clark T. Holdsworth (2015), Joshua Smith (2017) Jesse C. Craig* (2018), Shane Hammer (2019), Trenton D. Colburn* (2020), Andrew Alexander (2021), Kelly N. Shunje (Chemistry), Korynne Rollins (2021), Alec L.E. Butenas (2023), Kiana Schulze*, Ramona Weber*, Andrew G. Horn*, Steven

Hammond (2023), Keshari Sudasinghe – 34 total (*Chair/Co-Chair) **External Chair:** Li-Chun Lin, Barry Lambert, Jennifer Case, Mathew David Johnson, Nicole M. Green (2018), Michael D. Kleinhenz (2018), Smreeti Dahariya (2019)

Post-Doctoral: Walter Schaffartzik, M.D., Douglas R. Knight, M.D., Ph.D., Toniann Derion, Ph.D., Russell S. Richardson, Ph.D., Jose Arcos, M.D., Renato Prediletto, M.D., Bruno Grassi, M.D., Koichi Tsukimoto, M.D., Sadi S. Kurdak, M.D., Lorraine H. Manciet, Ph.D., Paul McDonough, Ph.D., Yutaka Kano, Ph.D. (2004-5), Tadakatsu Inagaki, Ph.D.(2014), Daniel M. Hirai, Ph.D. (2016-2018)

Clinical Faculty/DMP Mentoring Committees (2007-2017): Dr. Marco Margiocco, Assistant Professor of Cardiology and Dr. Justin Thomason, Assistant Professor of Cardiology: Department of Clinical Sciences, Kansas State University, College of Veterinary Medicine. Dr. Sally Davis, Diagnostic Medicine and Pathology, College of Veterinary Medicine.

External Examiner/Mentor (International): Fred Dimenna (Doctoral, Exeter, UK, 2010), Romina Villamonte (Masters, Auckland University, NZ, 2014), Alyssa Fenuta (Doctoral Candidacy, Queen's University, Canada, 2015), Scott Sheng-Yi Betteridge (Doctoral, Victoria University, Melbourne, Australia, 2015), Phillip M. Bellinger (Doctoral, Griffith University, Australia, 2016). Norita Gildea (Doctoral, Trinity College, Dublin University, 2017). Ole Kristian Berg (Doctoral, Molde University College, Norway, 2019). Hedyeh Khademi Motlagh (Masters, Shahid Beheshti, University, Tehran, Iran, 2021); Asher Mendelson (Doctoral, University of Western Ontario, Canada, 2021); Braden L. Mitchell (Doctoral, University of Adelaide, Australia, 2019-2022).

Detailed information on select Students/Scientists Trained

Name, degree, thesis title, publications, grants, awards/honors, current/last position (if known).

Most Recent Undergraduate Students

Gabrielle Rico/Sims, Project Title: *"The role of nNOS in cardiovascular control."*
Hunter Jewett
Adam Huff
Angela Glean, Project/Talk Title: *"Effect of nitrite infusion on blood flow & conductance in heart failure."*
Samuel Wilcox
Alex J. Fees, Project/Talk Title: *"Vascular K_{ATP} channels reduce severe muscle O_2 delivery-to-O_2 utilization mismatch during contractions in chronic heart failure rats."*
Jordan Eberhardy, *OURCI, $1,000, 2018*
Ramona Weber, *McNair Scholar, 2018 "Role of K_{ATP} channels in oxygen transport: Central versus peripheral effects"*

Professional (DVM) Students

Janet K. Bailey, Project Title: "*Spinotrapezius muscle microcirculatory function: effects of surgical exteriorization*"

Leah Ferguson, Project Title: "*Effects of external nasal support on pulmonary gas exchange and EIPH in the horse.*"
Casey Ramsel, Project Title: "*Inclined running increases pulmonary hemorrhage in the Thoroughbred horse."*
Lisa Abbo, Project Title: "*Hypovolemic hypotension alters the dynamic balance between O_2 delivery and utilization in contracting skeletal muscle."*
Jessica Gentile, Project Title: "*Exercise-induced pulmonary hemorrhage (EIPH) during sub-maximal exercise."*
Melanie A. Ray, Project Title: *"Effects of nNOS Inhibition on Sympathetic Nerve Activity"*
Michael J. White, Project Title: "*Epicatechin administration and exercising skeletal muscle vascular control and microvascular oxygenation in healthy rats."*
Jennifer Wright, Project Title: *"Microcirculatory consequences of traumatic ischemia."*
Michael J. Schettler, Project Title: "*No evidence for sexual dimorphism of nitric-oxide (NO) mediated vascular control in rat skeletal muscle*."
Jason Gregory, Project Title: *"ATP-sensitive potassium channel blockade: Mechanisms for decreased exercise tolerance."*

<u>Masters Students</u>

Richard N. Petrisko, M.S., Thesis Title: *"Structural and functional heterogeneity of the horse diaphragm."* **1 publication, 1 abstract, Medical Research Assistant, Sloane Kettering Hospital.**

Rebecca Harder, M.S., Thesis Title: *"The use of exercise in the prevention of falling in the elderly population."* **Registered Nurse specializing in care of the elderly.**

Linjing Xu, M.S., Thesis Title: "*Microvascular consequences of chronic heart failure in skeletal muscle: Implications for oxygen transfer.*" **1 publication, 1 abstract, Research Associate, Physiology, University of Iowa.**

Patrick C. Pfeiffer, M.S., Thesis Title: *"Effects of skeletal muscle oxidative capacity on exercise tolerance following myocardial infarction."* **2 publications, 2 abstracts, Doctor of Physical Therapy, Creighton University.**

K. Sue Hageman, M.S., Thesis Title: *"Skeletal muscle blood flow responses in female and male rats at rest and during exercise."* **3 publications, 4 abstracts, Research Technician, Dept. Anatomy and Physiology, Kansas State University.**

Emily R. Diederich, M.S., Thesis Title*: "The effect of myocardial infarction on microvascular PO_2 dynamics."* **1 publication, 4 abstracts; 1st Place poster award, ACSM (Central states Chapter), M.D. and Medical Resident; University of Pennsylvania.**

Toby Tinsley, M.S., Thesis Title: *"The effects of heating on paraventricular nucleus FOS expression."* **M.D. Baylor, Texas.**

Kevin E. Eklund, M.S., Thesis Title: "*Impact of aging on muscle blood flow in chronic heart failure."* **2 publications, 2 abstracts, Doctoral student, Dept. Physiology, University of Missouri, Columbia.**

Brad J. Behnke, M.S., Thesis Title: *"Dynamics of muscle microvascular PO_2 across the rest-exercise transition."* **3 publications, 8 abstracts, Post-Doctoral Fellow (12/03); Texas A&M University (Mentor: Dr. Michael Delp) Tenure Track Assist. Prof. Univ. Florida.**

Janet K. Bailey, M.S., Thesis Title: "*Spinotrapezius muscle microcirculatory function: effects of surgical exteriorization."* **2 publications, 4 abstracts; NIH Short-term training program scholar 1999-2000, Resident Veterinarian in Cardiology, University of Louisiana Veterinary Medical Center.**

Casey A. Kindig, M.S., Thesis Title: *"A comparison of the microcirculation in the passive spinotrapezius and diaphragm muscles of the rat."* **4 publications, 11 abstracts, continued into Doctoral Program, Anatomy and Physiology, Kansas State University, Deceased.**

Crystal M. Geer, M.S., Thesis Title*: "Dynamics of microvascular oxygen exchange: Role of oxidative capacity."* **1 publication, 2 abstracts, Research Consultant; Gore Medical Products; Flagstaff, AZ.**

Troy E. Richardson, M.S., Thesis Title*: "The effects of chronic heart failure on skeletal muscle blood flow across the rest-to-exercise transition: Implications for oxygen diffusing capacity."* **3 publications, 5 abstracts: 1st Place poster award, ACSM (Central States Chapter, ACSM), Ph.D. Candidate, Department of Statistics, Kansas State University.**

John A. Russell, M.S., Thesis Title: *"Effects of aging on muscle microcirculation."* **1 publication, 1 abstract, Research Technician and Doctoral Student; University of Wisconsin, Madison, WI.**

Tyler Barker, M.S., Thesis Title: *"The critical power-oxygen uptake relation at different pedaling frequencies."* (Major Professor: Dr. T.J. Barstow). **1 publication, 1 abstract, Ph.D., Oregon State University. Staff Scientist, The Orthopedic Specialty Hospital, Murray, UT.**

Kyle F. Herspring, M.S., 2 publications, 5 abstracts. Thesis Title*: "Effects of antioxidants on contracting muscle microvascular oxygenation and blood flow in aged rats."* **2 publications, 5 abstracts. Physicians Assistant Program, Wichita State University.**

Steven W. Copp, M.S., Thesis Title: *"The effects of aging on capillary hemodynamics in contracting rat spinotrapezius muscle."* **4 publications, 6 abstracts, Doctoral Program in Anatomy and Physiology at Kansas State University, currently a post-doctoral fellow with Dr. Marc Kaufman, Heart and Vascular Institute, Penn State College of Medicine, Hershey, PA.**

Katherine E. Swain, M.S., Thesis Title: "*Sex differences in exercise-induced flow limitation in prepubescent children: prevalence and implications*." **2 publications (1 published, 1 in preparation), 1 abstract, 1st year of Medicine, College of Osteopathic Medicine at Des Moines University.**

Scott A. Hahn, M.S., Thesis Title: *"Downhill treadmill running trains the rat spinotrapezius muscle."* **3 publications, 1 abstract, Research Associate, Kansas State University College of Veterinary Medicine.**

Peter J. Schwagerl, M.S., Thesis Title: *"The Effects of Ascorbic Acid on Skeletal Muscle Blood Flow in Aged Rats."* **1 publication, 4 abstracts, Pre-doctoral scholar, University of Florida.**

Clark T. Holdsworth, M.S., Thesis Title: *"Effects of dietary fish oil on exercising skeletal muscle vascular control in chronic heart failure rats."* **6 publications, 10 abstracts, Pre-doctoral scholar, K-State, A&P.**

Scott K. Ferguson, M.S., Thesis Title: *"Impact of dietary nitrate supplementation via beetroot juice on exercising muscle vascular control in rats."* **8 publications, 12 abstracts, Kinesiology Best Master's Student Award, 2013. Pre-doctoral scholar, K-State, A&P.**

Gabrielle Rico (Simms), M.S., Thesis Title: "*Effect of pentoxyfilline on muscle vascular control in chronic heart failure***" Medical Studies Director, KU Med.**

Angela Glean, M.S. Thesis Title: "*Effects of nitrate supplementation on muscle vascular control in health and cardiovascular disease.***" APS Summer Stride Scholarship.**

Trenton D. Colburn, M.S. Thesis Title: "*Effect of sodium nitrite on local control of contracting skeletal muscle microvascular oxygen pressure in healthy rats."* **All-University Best Biological Science Poster, 2016.**

Kiana M. Shulze, M.S. Thesis Title: *"Nitric oxide donor reveals alterations in interstitial oxygen pressures during skeletal muscle contractions in rats with pulmonary hypertension." (2020)*

Ramona E. Weber, M.S. Thesis title: "*Effects of soluble guanylate cyclase activation on skeletal muscle microcirculatory oxygen exchange in rats with heart failure with reduced ejection fraction*."

<u>Doctoral Students</u>

John P. Mattson, Ph.D. (1997), Dissertation/Project Title: *"Induction of mitochondrial stress proteins following treadmill running."* **H-Index 5; 6 publications, 10 abstracts; ACSM Young investigator Award, 1996, Assistant Professor, Physiology, Gustavus Adolphus University, Minnesota.**

Ingrid Langsetmo, Ph.D. (1998), Dissertation/Project Title: *"$\dot{V}O_2$ kinetics in the horse at moderate and heavy exercise."* **7 publications, Fibrogen Inc., San Francisco, Director of Cardiovascular Research.**

Casey A. Kindig, Ph.D. (2001), Dissertation Title: *"Regulation of microvascular oxygen exchange in skeletal muscle."*
H-index 21; 32 publications, 49 abstracts; 3 grants including: NIH Post-Doctoral Fellowship; ACSM Young Investigator Award, Assistant Research Physiologist; UCSD (La Jolla), Tenure Track Assist. Prof. Univ. Kansas, School of Medicine. Deceased.

Brad J. Behnke, Ph.D. (2003), Dissertation Title: *"Control of microvascular oxygen pressures at the onset of contractions in health and disease"* **Current H-index 26; At K-State - 33 publications, 34 abstracts; 3 grants including NIH Pre-doctoral Fellowship; APS Environmental and Exercise Physiology Recognition Award; ACSM 1st Place Student Research Award, Individual NIH NRSA 2005-2008, NIH K-Award 2008, APS EEP New Investigator Award 2009. Professor of Kinesiology, Kansas State University, 2016.**

ACSM New Investigator Award 2009, Post-Doctoral Fellow (12/03); Texas A&M University (Mentor: Dr. Michael Delp), Tenure Track Assist. Prof. Univ. Florida.

Timothy A. Bauer, Ph.D., (2005) Dissertation Title: "*Oxygen uptake kinetics in peripheral arterial disease."* **2 publications, Research Associate, University of Colorado Health Sciences Center.**

Danielle J. Padilla, Ph.D., (2005) Dissertation Title: *"Cardiovascular and ventilatory limitations in the oxygen transport pathway."* **H-index 5; 16 publications, 20 abstracts; NIH Pre-doctoral Fellowship; American Quarter Horse Association Research Grant, Post-doctoral Fellow, EPA – Toxicology, N. Carolina. Health Science Administrator, the Division of Extramural Research & Training at the National Institutes of Environmental Health Sciences (NIEHS).**

Tammi S. Hildreth/Epp, Ph.D., (2005) Dissertation Title*: "Exercise-induced pulmonary hemorrhage: Determination of mechanisms and potential treatments."* **8 publications, 5 abstracts; 4 grants including NSF, KRGC, AAEP; Excellence in Science Presentation, 2nd Place, 2003, United BioNutrition, Director of Research, Equine Consultant.**

Leonardo F. Ferreira, Ph.D., (2006) Dissertation Title: "*Effects of altered nitric oxide availability on rat muscle microvascular oxygenation during contractions."* **H-index 6; 16 publications, 17 abstracts, ACSM. Science Award, >$110,000 grant funding, Post-Doctoral Fellow, Dept. of Physiology, University of Kentucky (Mentor: Dr. Michael B. Reid). Associate Professor, Department of Applied Physiology and Kinesiology, University of Florida, Gainesville, FL.**

Daniel M. Hirai, Ph.D. (2012) Dissertation Title: "*Oxygen delivery-utilization matching in skeletal muscle*." **Capes-Brazil Fulbright Fellow. H-index 5; 19 publications, 15 abstracts, ACSM Pre-doctoral Fellow Science Award, >$105,000 grant funding. Post-doctoral mentor: Dr. Alberto Neder , Department of Medicine, Queens University, Kingston, ON.**

Carl J. Ade, Ph.D. (2013) Dissertation: "*Anterograde and retrograde blood velocity profiles in the intact human cardiovascular system."* **9 publications, Co-I on NASA Grant, $1,000,000 with T.J. Barstow (Major Professor). Assistant Professor, Department of Health and Exercise Science, University of Oklahoma.**

Steven W. Copp, Ph.D. (2013) Dissertation Title: "*Enzymatic regulation of skeletal muscle oxygen transport: Novel roles for neuronal nitric oxide synthase*." **H-index 8; 28 publications, 29 abstracts, ACSM Pre-doctoral Fellow Science Award, >$80,000 grant funding. Post-doctoral mentor: Dr. Marc Kaufman, Hershey Medical Center, Hershey, Pennsylvania.**

Scott K. Ferguson, Ph.D. (2015) Dissertation Title: "S*keletal muscle vascular and metabolic control: Impacts of exogenous and endogenous nitric oxide synthesis."* **H-index 6; 17 publications, 20 abstracts, APS Pre-doctoral Award, Best Master's Student in Kinesiology, 3 CVM Scholarships, 2 Provost's Research Excellence Awards. Post-doctoral mentor: Dr. David C. Irwin. Cardiovascular Pulmonary Research Group, Division of Cardiology, School of Medicine, University of Colorado at Denver.**

Clark T. Holdsworth, Ph.D. (2015) Dissertation Title: "*Vascular ATP sensitive potassium channels impact spatial and temporal oxygen transport: Implications for sulphonylurea therapy*." **H-index 6. University Distinguished Professor's Doctoral Award. 17 publications, 17 abstracts, APS Pre-doctoral Award, 2 CVM Scholarships, 2 Provost's Research Excellence Awards.**

Joshua R. Smith, Ph.D. (2017) Dissertation Title: "*Sex differences in cardiopulmonary responses to exercise.*" **H-index 4. Charles M. Tipton Student Scholar Award, 2017. 24 publications, 20 abstracts.**

Jesse C. Craig, Ph.D. (2018) Dissertation Title: "*Exploring the mechanisms of sexual dimorphism in oxygen delivery-utilization matching in skeletal muscle"* **H-index 6. Kinesiology Best Doctoral Student (2017), Clarenburg Research Fellow (2017-18). 23 publications, 39 abstracts.**

Trenton D. Colburn, Ph.D. (2020) Dissertation Title: "*Sexual Dimorphism in the Physiological Function of ATP-sensitive Potassium Channels*" **H-index 8. Kinesiology Best Doctoral Student (2018), Clarenburg Research Fellow (2018-20). NIH Pre-Doctoral Fellowship (2018-2020), 22 publications, 31 abstracts.**

Post-Doctoral Fellows

Walter Schaffartzik, M.D., Project Title: "Contribution of exercising legs to the slow component of oxygen uptake kinetics in man." **6 publications, 7 abstracts, Head of Intensive Care Department, Frei Universitat, Berlin, Germany.**

Douglas R. Knight, M.D., Ph.D., Project Title: "*Relationship between body and leg* $\dot{V}O_2$ *during maximal cycle ergometry."* **9 publications, 13 abstracts, Cardiology Diagnostic Services, Children's Hospital, Columbus, Ohio.**

Toniann Derion, Ph.D., Project Title: "*Ventilation/ perfusion (*$\dot{V}_A/\dot{Q}$*) relationships in the lung during head-out water immersion."* **3 publications, 3 abstracts, Science Editor, BELS.**

Russell S. Richardson, Ph.D., Project Title: *"High muscle blood flow in man: Is maximal* O_2 *extraction compromized?"* **4 publications, 9 abstracts, Professor, Division of Geriatrics, Department of Medicine, University of Utah, Salt Lake City.**

Bruno Grassi, M.D., Project Title: ***"****Muscle* O_2 *kinetics in humans: implications for metabolic control****."*** **4 papers, 5 abstracts, Professor, Universita degli Studi di Udine, Italy.**

Sadi S. Kurdak, M.D., Project Title: ***"****L-(+)-Lactate infusion into working dog gastrocnemius: no evidence lactate per se mediates* $\dot{V}O_2$ *slow component."* **4 publications, 4 abstracts, Clinical and Science Faculty, Cukurova Universitesi, Balcali-Adana, Turkey.**

Paul McDonough, Ph.D., Project Title: *"Effects of fiber type profile on microvascular oxygenation during and following contractions."* **H-Index 12; 32 publications, 31 abstracts; 4 grants including NIH Individual Post-doctoral NRSA, Associate Professor, Department of Kinesiology, UT Arlington.**

Yutaka Kano, Ph.D., Project Title: ***"****Effects of eccentric exercise on microcirculation and microvascular oxygen pressures in rat spinotrapezius muscle."* **5 publications, 6 abstracts, Professor, Department of Applied Physics and Chemistry, University of Electrocommunications, Chofu, Tokyo, Japan.**

Daniel M. Hirai, Ph.D. "*Oxygen delivery-utilization matching in skeletal muscle*." **Capes-Brazil Fulbright Fellow. H-index 12; 467 citations; 66 publications.**

Community Academic Service

Eugene Field Science night (1st-3rd grade), 1997-. "How lungs work in health and what smoking does."
Professor M. Roger Fedde Retirement Roast, 1998. College of Veterinary Medicine.
Manhattan Mercy Hospital Better Breathers Association, 1999-. "Respiratory muscle function in emphysema." "Role of exercise training in reducing the ventilatory demands of physical activity."
GROW (Girls reaching out to the World) Program for introducing girls to science, 1998-. "Introduction to equine research and performance."
Treadmill demonstrations and introduction to equine research, 1998-. 4 H groups, 1998-. Animal Science, Veterinary, Kinesiology students
Flint Hills Christian School, 2002. "What blood cells looks like and how they work."
Animal Exercise Study Design Workshop, American Physiological Society, 2003-2005.
Presidential Lecture Series, 2005&2006. "The pathway for oxygen: Powering human and animal muscles"
American Heart Association, 2005. "Mechanisms of microcirculatory dysfunction in heart failure."
Graduate Student Council, 2006. "Teaching Philosophy for Graduating Graduate Students."
SCAVMA 1st Annual Talent Show. Master of Ceremonies and impromptu stand-up, 2007.
Presidential Lecture Series, 2007. "Everyone should be a scientist."
American Diabetes Association. Annual meeting abstract reviewer, 2008.
Presidential Lecture Series, 2008. "Running fast: Secrets from Animals."
SCAVMA 3rd Annual Talent Show. Master of Ceremonies and impromptu stand-up, 2009.
College of Veterinary Medicine, White Coat Ceremony. Basic Sciences speaker, 2009.
Lee Elementary School, 2009. "Oxygen: Why we need it, where it goes and how it gets there."
Presidential Lecture Series, 2009/2010/2011. "Why horses run faster than we do: An oxygen transport story."
Presidential Lecture: Council Grove High School, 2009.
Presidential Lecture: Macksville High School, "Everyone should be a scientist". 2010.
Presidential Lecture: Topeka West High School, "Why do horses run faster than we do?": An oxygen transport story. Ms. Lila Bartel, 2011**.**
Professor Howard H. Erickson Retirement Speech, 2011. College of Veterinary Medicine.
President Barack Obama Recognition Award Speech, 2011**.** To Mrs. Markeydi Ewing and Lee School.
Presidential Lecture: Olathe North High School "Is obesity a disease?" Ms. Sara Heptig, 600 E. Prairie, Olathe, KS 66061, 2011.
SCAVMA 5th Annual Talent Show. Master of Ceremonies and impromptu stand-up, 2012.
Animal Resource Facility Lecture, **K-State** "Chronic heart failure: experimental strategy and progress." 2012.
Meet the Editor, Journal of Applied Physiology, American Physiological Society, ACSM National Meeting, San Francisco, 2012.
Lee Elementary School, 2013. "Costa Rica, Fauna, Flora and Herpetology."
Kansas State University Open House, "**Obesity as a Disease**", 2014.
Lee Elementary School, 2014. "The heart and lungs in health and disease."
Presidential Lectures: Olathe North High School "Is obesity a disease?" Ms. Mary Caylamore, 600 E. Prairie, Olathe, KS 66061, 2013.
Auctioneer, Exotic Animal Medicine Club, College of Veterinary Medicine semi-annual fundraiser, 2012, 2014, 2016, 2018, 2021.
Herpetological Surveyor, Fort Riley, Kansas, 2013, 2015, 2016, 2017, 2018, 2021
Meet the Editor, Journal of Applied Physiology, American Physiological Society, ACSM National Meeting, Indianapolis, San Diego, Boston, 2013-2016.

Presidential Lecturer: "Is obesity a disease?" 2013-2016.
SCAVMA 7th Annual Talent Show. Master of Ceremonies and impromptu stand-up, 2014-
Parallel Paths College of Veterinary Medicine Mentor. 2016-
Grants Review Workshop, NIH Panel Expert, Kansas State University, College of Human Ecology, 2016.
Human Ecology GSC Speakers in Higher Education Panel Discussion on Teaching, 2016.
KSU New TEVAL Research Panel, 2016.
Mortar Board Honor Society, Kansas State University, 2017. "Last Lecture."
Journal of Physiology Top Reviewer 2016-2017.
Presidential Lectures: Butler Community College, El Dorado, "How science in Kansas impacts the World", 2017.
Graduate Student Association, National Post-doc Appreciation Week, "Preparing for a career in science", September, 2017.
Science Café, "Oxygen transport and your health: Humor, hubris and a little physiology", March, 2018.
Celebration of Excellence, Voiceover presenter, College of Human Ecology, 10/11/2018.
Graduate Student Association, Professional Development for Post-doctoral Fellows: "Appling for your first job: Do's and definitely don't's" September, 2018.
Invested Faculty Presentation, K-State Bluemont Room, "Engaging the Students: Why we are (still) relevant." November, 2018.
American Physiological Society, Professional Skills Training Workshop, Writing and Reviewing for Scientific Journals, Plenary Talk: "*The Grammar of Science*." Orlando, January 10-13, 2019.
The Teaching and Learning Center, "*Engaging the Learner: Lessons from an Ex-GTA.*" Kansas State University, January 17, 2019.
Veterinary Medical Students Casino Night, Blackjack croupier, April 19, 2019.
Graduate Student Association, Professional Development for Post-doctoral Fellows: "Writing a Research Statement for your First Professional Job." September, 2019.
College of Engineering, KSU: "Unraveling how our smallest blood vessels limit what humans can do." March, 2020. Host: Dr. Todd Easton.

Publications

Refereed Papers (Students bolded)

1. Maughan, R.J. and D.C. Poole. The effects of a glycogen loading regimen on the capacity to perform anaerobic exercise. Eur. J. Appl. Physiol. 46:211-219, 1981.

2. Gaesser, G.A., D.C. Poole and **B.P. Gardner**. Dissociation between $\dot{V}O_2$ and ventilatory threshold responses to endurance training. Eur. J. Appl. Physiol. 53:242-247, 1984.

3. Poole, D.C. and G.A. Gaesser. Response of ventilatory and lactate thresholds to continuous and interval training. J. Appl. Physiol. 58:1115-1121, 1985.

4. Gaesser, G.A. and D.C. Poole. Lactate and ventilatory thresholds: Disparity in time course of adaptations to training. J. Appl. Physiol. 61:999-1004, 1986.

5. Henson, L.C., D.C. Poole, C.P. Donahoe and D. Heber. Effects of exercise training on resting energy expenditure during caloric restriction. Am. J. Clin. Nutr. 46:893-899, 1987.

6. Poole, D.C. and L.C. Henson. The effect of acute caloric restriction on work efficiency. Am. J. Clin. Nutr. 47:15-18, 1988.

7. Poole, D.C., S.A. Ward and B.J. Whipp. Control of blood gas and acid-base status during isometric exercise in humans. J. Physiol. (London). 396:365-377, 1988.

8. Poole, D.C., S.A. Ward, G. Gardner and B.J. Whipp. A metabolic and respiratory profile of the upper limit for prolonged exercise in man. Ergonomics 31: 1265-1279, 1988.

9. Gaesser, G.A. and D.C. Poole. Blood lactate during exercise: Time course of training adaptation in humans. Int. J. Sports Med. 9: 284-288, 1988.

10. Poole, D.C., O. Mathieu-Costello and J.B. West. Capillary tortuosity in rat soleus muscle is not affected by endurance training. Am. J. Physiol. 256: H1110-1116, 1989.

11. Poole, D.C., and O. Mathieu-Costello. Muscle capillary geometry: Effects of chronic altitude exposure. Respir. Physiol.77: 21-30, 1989.

12. Henson, L.C., D.C. Poole and B.J. Whipp. Fitness as a determinant of the oxygen uptake response to constant-load exercise. Eur. J. Appl. Physiol. 59: 21-28, 1989.

13. Poole, D.C., S.A. Ward and B.J. Whipp. The effect of training on the metabolic and respiratory profile of heavy and severe exhausting exercise. Eur. J. Appl. Physiol. 59: 421-429, 1990.

14. **Bebout, D.E., D. Story**, J. Roca, M.C. Hogan, D.C. Poole, R. Gonzalez, **O. Ueno**, P. Haab and P.D. Wagner. Effects of altitude acclimatization on pulmonary gas exchange during exercise. J. Appl. Physiol. 67: 2286-2295, 1990.

15. Poole, D.C., and O. Mathieu-Costello. Analysis of capillary geometry in rat sub-epicardium and sub-endocardium. Am. J. Physiol. 259: H204-210, 1990.

16. Poole, D.C., and O. Mathieu-Costello. Effect of hypoxia on capillary orientation in anterior tibialis muscle of highly active mice. Respir. Physiol. 82: 1-10, 1990.

17. Poole, D.C., W. Schaffartzik, D.R. Knight, T. Derion, B.Kennedy, H.J.B. Guy, R. Prediletto, and P.D. Wagner. Contribution of exercising legs to the slow component of oxygen uptake kinetics in man. J. Appl.Physiol. 71:1245-1253, 1991.

18. **Schaffartzik, W**., D.C. Poole, **T. Derion**, **K. Tsukimoto**, M.C. Hogan, **J. Arcos, E. Bebout** and P.D. Wagner. $\dot{V}_A/\dot{Q}$ distribution during heavy exercise and recovery in humans: implications for pulmonary edema. J. Appl. Physiol. 72: 1657-1667, 1992.

19. Poole, D.C., **S. Batra**, O. Mathieu-Costello, K. Rakusan. Capillary geometrical changes with fiber shortening in rat myocardium. Circ. Res. 70: 697-706, 1992.

20. **Derion, T**., H.J.B. Guy, K. Tsukimoto, **W. Schaffartzik, R. Prediletto, D.R. Knight**, D.C. Poole, and P.D.Wagner. Ventilation/ perfusion ($\dot{V}_A/\dot{Q}$) relationships in the lung during head-out water immersion. J. Appl. Physiol. 72: 64-72, 1992.

21. Poole, D.C., and O. Mathieu-Costello. Capillary and fiber geometry in rat diaphragm perfusion fixed in situ at different sarcomere lengths. J. Appl. Physiol. 73: 151-159, 1992.

22. **Knight, D.R**., D.C. Poole, **W. Schaffartzik**, H.J. Guy, **R. Prediletto**, M.C. Hogan, and P.D. Wagner. Relationship between body and leg $\dot{V}O_2$ during maximal cycle ergometry. J. Appl. Physiol. 73: 1114-1121, 1992.

23. Roca, J., A.G. Agusti, A. Alonso, D.C. Poole, C. Viegas, J.A. Barbera, R. Rodriguez-Roisin, A. Ferrer, and P.D. Wagner. Effects of training on muscle O_2 transport at $\dot{V}O_2$max. J. Appl. Physiol. 73: 1067-1076, 1992.

24. Poole, D.C., G.A. Gaesser, M.C. Hogan, **D.R. Knight**, and P.D. Wagner. Pulmonary and leg $\dot{V}O_2$ during submaximal exercise: implications for muscular efficiency. J. Appl. Physiol. 72: 805-810, 1992.

25. Schaffartzik, W., **E.D. Barton**, D.C. Poole, M.C. Hogan, **K. Tsukimoto, D.E. Bebout**, and P.D. Wagner. The effect of altered hemoglobin concentration on O_2 diffusion from blood to muscle at maximal exercise. J. Appl. Physiol. 75: 491-498, 1993.

26. Richardson, R.S., D.C. Poole, D.R. Knight, **S.S. Kurdak**, M.C. Hogan, B. Grassi, E.C. Johnson, **K.Kendrick**, B.K. Erickson, and P.D. Wagner. High muscle blood flow in man: Is maximal O_2 extraction compromized? J. Appl. Physiol. 75: 1911-1916, 1993.

27. **Knight, D.R., W. Schaffartzik**, D.C. Poole, M.C. Hogan, and P.D. Wagner. Effect of hyperoxia on maximal leg O_2 supply and utilization in man. J. Appl. Physiol. 75: 2586-2594, 1993.

28. Poole, D.C., R.L. Lieber, and O. Mathieu-Costello. Myosin and actin filament lengths in diaphragm from emphysematous hamsters. J. Appl. Physiol. 76: 1220-1225, 1994.

29. Poole, D.C., L.B. Gladden, **S. Kurdak**, and M.C. Hogan. L-(+)-Lactate infusion into working dog gastrocnemius: no evidence lactate per se mediates $\dot{V}O_2$ slow component. J. Appl.Physiol. 76: 787-792, 1994.

30. Manciet, L.H., D.C. Poole, O. Mathieu-Costello, P.F. McDonough and J.G. Copeland. Microvascular compression during myocardial ischemia: mechanistic basis for no-reflow phenomenon. Am. J. Physiol. 266: H1541-1550, 1994.

31. Sexton, W.L., D.C. Poole, and O. Mathieu-Costello. Microcirculatory structure-function relationships in skeletal muscle of diabetic rats. Am. J. Physiol. 266: H1502-1511, 1994.

32. Suematsu, M., F.A. DeLano, D.C. Poole, R.L. Engler, B.W. Zweifach, and G.W. Schmid-Schoenbein. Spatial and temporal relationship between leucocyte behavior and cell injury in postischemic muscle microcirculation. Lab. Invest. 70: 684-695, 1994.

33. Hogan, M.C., L.B. Gladden, **S. Kurdak**, and D.C. Poole. L-(+)-lactate infusion into submaximally working dog gastrocnemius. II. Tension reduction independent of pH. Med. Sci. Sports Exerc. 27: 371-377, 1995

34. Richardson, R.S., **D.R. Knight**, D.C. Poole, **S. Sadi Kurdak**, M.C. Hogan, B. Grassi and P.D. Wagner. Determinants of $\dot{V}O_2$ during single leg knee extensor exercise in man. Am. J. Physiol., 268: H1453-1461, 1995.

35. Wait, J.L., **D. Staworn**, and D.C. Poole. Diaphragm thickness heterogeneity at functional residual capacity and total lung capacity. J. Appl. Physiol. 78: 1030-1036, 1995.

36. Poole, D.C., P.D. Wagner, and D.F. Wilson. Diaphragm microvascular plasma PO_2 measured in vivo. J. Appl. Physiol. 79: 2050-2057, 1995.

37. Sexton, W.L., and D.C. Poole. Costal diaphragm blood flow heterogeneity at rest and during exercise. Respir. Physiol. 101: 171-182, 1995.

38. Suzuki, H., D.C. Poole, B.W. Zweifach and G.W. Schmid-Schoenbein. Temporal correlation between maximum force and cell death in postischemic rat skeletal muscle. J. Clin. Invest. 96: 2892-2897, 1995.

39. Grassi, B., D.C. Poole, R.S. Richardson, **D.R. Knight**, B.K. Erickson, and P.D. Wagner. Muscle $\dot{V}O_2$ kinetics in humans: implications for metabolic control. J. Appl. Physiol. 80: 988-998, 1996.

40. **Knight, D.R**., D.C. Poole, M.C. Hogan, **D.E. Bebout**, and P.D. Wagner. The effect of inspired O_2 concentration on leg lactate release during incremental exercise. J. Appl. Physiol. 81: 246-251, 1996.

41. Poole, D.C., and O. Mathieu-Costello. Relationship between fiber capillarization and mitochondrial volume density in control and trained rat soleus and plantaris muscles. Microcirculation 3: 175-186, 1996.

42. Musch, T.I., and D.C. Poole. Blood flow response to treadmill running in the rat spinotrapezius muscle. Am. J. Physiol. 271: H2730-2734, 1996.

43. Poole, D.C., and O. Mathieu-Costello. Effect of pulmonary emphysema on diaphragm capillary geometry. J. Appl. Physiol., 82: 599-606, 1997

44. Poole, D.C., T.I. Musch, and C.A. Kindig. In vivo microvascular structural and functional consequences of muscle length changes. Am. J. Physiol. 272: H2107-2114, 1997.

45. **Langsetmo, I., G.E. Weigle**, M.R. Fedde, H.H. Erickson, and D.C. Poole. $\dot{V}O_2$ kinetics in the horse during moderate and heavy exercise. J. Appl. Physiol. 83: 1235-1241, 1997.

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