CURRICULUM VITAE

Gregory D. Cartee, Ph.D.

ADDRESS:

University of Michigan School of Kinesiology Building 830 N. University Ann Arbor, MI 48109-1048 Work Phone: (734) 615-3458 email: gcartee@umich.edu

EDUCATION:

Postdoctoral Fellow, Washington University School of Medicine, St. Louis
Mentor: Dr. John O. Holloszy
Ph.D., Exercise Physiology, University of Texas at Austin.
Dissertation: The Effects of Age and Endurance Training on the Oxidative Metabolism
of Fisher 344 Rats
Mentor: Dr. Roger P. Farrar
M.S., Exercise Physiology, The Florida State University, Tallahassee.
Mentor: Dr. Charles E. Riggs
B.S., Health and Physical Education, University of Georgia, Athens.

PROFESSIONAL EXPERIENCE:

2004-present	University of Michigan
	Professor, School of Kinesiology,
	Research Professor, Institute of Gerontology
2013-2024	Associate Dean for Research, School of Kinesiology
2009	Interim Dean, School of Kinesiology
2007	Graduate Research Mentor, Program in Biomedical Sciences
2007	Faculty Mentor, Graduate Program in Cellular and Molecular Biology
2008	Professor, Molecular and Integrative Physiology, Medical School
2001-2003	University of Wisconsin-Madison
	Department of Kinesiology, Chair
1998-2003	University of Wisconsin-Madison
	Professor, Department of Kinesiology
1994-1998	University of Wisconsin-Madison
	Associate Professor, Department of Kinesiology
1993-1995	University of Wisconsin-Madison
	Biodynamics Laboratory Director (Acting)
1989-1994	University of Wisconsin-Madison
	Assistant Professor, Department of Kinesiology
	Interdepartmental Graduate Program in Nutritional Sciences, Affiliate
	Institute on Aging, Affiliate
1988-1989	Washington University School of Medicine, St. Louis, Missouri
	Research Instructor in Medicine, Department of Internal Medicine

GRANTS RECEIVED:

Extramural:	
2024	National Institutes of Health, R01DK126700, "Regulation of Elevated Postexercise
	Insulin-stimulated Glucose Uptake by Skeletal Muscle", \$2,341,693, Principal
	Investigator.
2024	National Institutes of Health, R21AG084931, "Non-canonical Mechanisms and
	Unconventional Approaches to Activate AMPK and Glucose Uptake in the Skeletal
	Muscle of Older Rats", \$429,000, Principal Investigator.
2023	National Institutes of Health, R56DK136700-01, "Regulation of Elevated Postexercise
	Insulin-stimulated Glucose Uptake by Skeletal Muscle", \$124,800 Principal
	Investigator
2019	National Institutes of Health R01AG010026-25 "Aging Calorie Restriction and Insulin
2017	Sensitivity" \$1.862.237 Princinal Investigator
2018	National Institutes of Health P01DK071771 10 "Skeletal Muscle Glucose Untake:
2018	Eversise and Insulin" \$1,577,867 Dringing Investigator
2012	National Institutes of Health D01AC010026 20 "A sing Coloria Destriction Everyise
2015	national institutes of Health, KUTAG010020-20, Aging, Calorie Restriction, Exercise
2012	and insum Sensitivity , 51,214,947, Principal investigator.
2012	National Institutes of Health, KUIDKU/1//1-06, "Skeletal Muscle Glucose Transport:
2011	Exercise and insulin", Diversity Supplement, \$90,667, Principal Investigator.
2011	National Institutes of Health, R01DK0/1//1-06, "Skeletal Muscle Glucose Transport:
	Exercise and Insulin", \$1,404,367, Principal Investigator .
2011	National Institutes of Health, R01AG010026-19S1, "Aging, Calorie Restriction and
	Insulin Signaling", Diversity Supplement, \$69,402, Principal Investigator.
2011	American Heart Association Midwest Affiliate, Pre-doctoral Fellowship (to James
	MacKrell), "Genetic Modification of AS160 to Identify the Mechanisms for Insulin
	Resistance in Single Muscle Fibers from Obese Rats, \$52,000, Sponsor.
2011	National Institutes of Health, K25DK0925578, \$698,645, Metabolic Flux in a Model of
	Reduced Oxidative Capacity, Co-Investigator
2010	National Institutes of Health, R01DK071771-04S1, "Skeletal Muscle Glucose Transport:
	Exercise and Insulin", Supplement, \$52,500, Principal Investigator.
2009	National Institutes of Health, R01AG010026-17S1, "Aging, Calorie Restriction and
	Insulin Signaling", Supplement, \$50,500, Principal Investigator.
2009	National Institutes of Health, P30AG013283-15S2, "Cellular and Molecular Biology of
	Aging", \$94,446, Co-Investigator.
2009	National Institutes of Health, P30AG013283, "Cellular and Molecular Biology of
	Aging", \$3,957,707, Co-Investigator.
2007	National Institutes of Health, R01AG010026, "Aging, Calorie Restriction and Insulin
	Signaling, \$1,541,912, Principal Investigator.
2007	National Institutes of Health, R01AG010026-17S109, "Aging, Calorie Restriction and
	Insulin Signaling", Supplement, \$76,000, Principal Investigator.
2006	National Institutes of Health, R01DK071771, "Skeletal Muscle Glucose Transport:
	Exercise and Insulin"\$1.532,000, Principal Investigator .
2004	National Institutes of Health, University of Michigan Claude D. Pepper Older Americans
	Independence Center Pilot Grant (Jeffrey Halter, Principal Investigator), "In Vitro
	Models for Insulin Sensitivity in Rat Muscle" \$61 200 Principal Investigator
2001	National Institutes of Health R01AG010026 "Aging Calorie Restriction and Insulin
2001	Signaling" Continuation \$1 166 250 Principal Investigator
1999	National Institutes of Health "Dietary Restriction and Aging in Rhesus Monkeys"
	Continuation \$5.611.100 Co-Investigator
1998	National Institutes of Health R01AG010026 "Aging Calorie Restriction and Insulin
	Signaling", \$558,989, Principal Investigator

1998	Ross Products Division, Abbott Laboratories, "Research in Carbohydrate Metabolism", \$19,600, Principal Investigator .
1998	Ross Products Division, Abbott Laboratories, "Yeast Extract and Glucose Metabolism", \$5400, Principal Investigator.
1998	National Institutes of Health, "Dietary Restriction, mt DNA Abnormalities and Aging", \$549,739, Co-Investigator .
1997	Ross Products Division, Abbott Laboratories, "Research in Carbohydrate Metabolism", \$4500, Principal Investigator .
1996	The Quaker Oats Company Student Research Grants, "Influence of Nutritional Intervention on GLUT-4 Plasma Membrane Localization in Muscle" and "Determination of Exercise- Induced Changes in Muscle TNF-α Receptor Levels", \$2000, Sponsor .
1995	The Quaker Oats Company Student Research Grants, "Effect of Vitamin and Mineral Supplementation on Muscle Glycogen Content during Brief Caloric Restriction" and "The Age-Related Reduction in Glucose Transport during Growth and Development", \$1600, Sponsor .
1994	National Institutes of Health, "Dietary Restriction and Aging in Rhesus Monkeys", \$4,541,955, Co-Investigator .
1992	The Quaker Oats Company Student Research Grant, "The Effect of PGE ₂ on Insulin Sensitivity in Exercised Skeletal Muscle", \$850, Sponsor .
1992	National Institutes of Health, R29AG010026, "Age Effects on Exercise-Stimulation of Glucose Transport", \$480,293, Principal Investigator .
1992	National Institutes of Health, "Glucose Metabolism in the Exercise Trained Heart, \$494,473, Collaborating Investigator .
1991	Diabetes Education and Research Foundation, "Do Insulin and Contractile Activity Increase Glucose Transport Rate by Stimulating the Movement of Glucose Transporters from Different Intracellular Sites?", \$17,000, Principal Investigator .
1991	American Federation for Aging Research, "Mechanisms of Altered Glucose Metabolism with Chronic Growth Hormone Treatment in Mature, Middle-aged and Old Rats", \$22,000, Principal Investigator .
1991	The Quaker Oats Company Student Research Grant, "The Persistent Effect of Exercise on Skeletal Muscle Amino Acid Transport", \$1000, Sponsor.
1991	American Heart Association, Wisconsin Affiliate, "Regulation of Glucose Transport in Ischemic Diabetic Myocardium", \$30,000, Collaborating Investigator .
1991	Juvenile Diabetes Foundation, "Does Acute High Dose Insulin and Glucose Therapy Benefit Diabetics with Myocardial Ischemia?", \$50,000, Collaborating Investigator .
1990	American College of Sports Medicine Foundation, "Aging Effects on Muscle Glucose Transport After Exercise", \$14,533, Principal Investigator .
Intramural:	

2018 The University of Michigan MCubed 3.0, "HDAC4-BRG1 complex regulate glucose metabolism during muscle transdifferentiation", \$13,334, Co-Principal Investigator.
2017 The University of Michigan Proteomics Resource Facility Pilot Project Program, "Identification of Novel Insulin-regulated Phosphoproteins in Skeletal Muscle of Calorie Restricted Rats", \$3,804, Principal Investigator.
2015 The University of Michigan MCubed 2.0, "Metabolic phenotyping of human single skeletal muscle fibers", \$16,667, Co-Principal Investigator.
2003 The University of Wisconsin-Madison Foundation Virginia Horne Henry Fund, "Effects of Gender on Post-Exercise Insulin Sensitivity in Skeletal Muscle", \$17,569, Principal Investigator.

2002	The University of Wisconsin-Madison Foundation Virginia Horne Henry Fund, "Effects of Pregnancy on Glucose Transport Activation by Muscle Contraction", \$19,599,
2001	The University of Wisconsin-Madison Foundation Virginia Horne Henry Fund, "Levels of Physical Activity and Physical Fitness in Women Survivors of Breast Cancer", \$31,252, Co. Principal Investigator
1999	The University of Wisconsin-Madison Foundation Virginia Horne Henry Fund, "Influence of Strength Exercise on Insulin Sensitivity and Secretion in Post-Menopausal Women", \$18,284, Co-Principal Investigator .
1995	The University of Wisconsin-Madison Graduate School Grant-in-Aid, "Investigation of the Role of Plasma TNF- α in Obesity and Insulin Resistance in Rhesus Monkeys", \$17.816 Principal Investigator
1991	The University of Wisconsin-Madison Graduate School Grant-in-Aid, "Investigation into the Mechanism of Enhanced Insulin-Stimulation of Muscle Glucose Transport after Contractile Activity" \$22,267 Principal Investigator
1990	The University of Wisconsin-Madison Graduate School Biomedical Research Support Grant, "Measurement of Muscle Membrane Glucose Transporter Content", \$15,000, Principal Investigator
1990	The University of Wisconsin-Madison Graduate School Grant-in-Aid, "Skeletal Muscle Glucose Transport Rate and Membrane Glucose Transporter Content in Young Adult and Old Rats", \$15,000, Principal Investigator .
AWARDS:	
2019	Montoye-Nagle Lecturer, Department of Kinesiology, University of Wisconsin-Madison, Madison, WI
2019	7 th Annual Gary R. Hunter Award, UAB Center for Exercise Medicine, University of Alabama at Birmingham Birmingham Alabama
2017	13 th Annual Piro P. Foa Endowed Lecturership, Department of Physiology, Wayne State
2014	School of Kinesiology Research Excellence Award, University of Michigan
2014	Department of Kinesiology and Health Education Hall of Honor Inductee, University of Texas at Austin
2012	American College of Sports Medicine Citation Award
2010	Texas Chapter of the American College of Sports Medicine (TACSM) Annual Meeting Keynote Speaker (Raven Lecture)
2005	Southeastern Regional Chapter of the American College of Sports Medicine (SEACSM), Invited Lecture Tour Speaker
2005	National Academy of Kinesiology Fellow
2003	Research Fellowship, Japan Society for the Promotion of Science, Nara, Japan
2002	Wenner-Gren Center Visiting Scientist, Karolinska Institute, Stockholm, Sweden
1998	American College of Sports Medicine Fellow
1987	Invited Participant in the Summer Aging Institute Sponsored by the National Institute on Aging Baltimore Maryland
1987	National Research Service Award, National Institute of Diabetes and Digestive and Kidney Diseases, National Institutes of Health
1983	Professional Development Award, University of Texas at Austin
1982-1985	University of Texas Fellowship, University of Texas at Austin

- 1979 Magna Cum Laude Graduate, University of Georgia, Athens
- 1979 Phi Kappa Phi, National Honor Fraternity
- 1975 Incoming Freshman Award, University of Georgia, Athens.
- 1975 Valedictorian, Liberty High School, Liberty, South Carolina.

PROFESSIONAL AFFILIATIONS:

- American College of Sports Medicine, Fellow
- American Diabetes Association
- American Physiological Society
- National Academy of Kinesiology, Fellow

PROFESSIONAL SERVICE:

National Service:

Editorial Responsibilities for Professional Journals:

- Journal of Applied Physiology (Associate Editor, 1999-2001)
- Exercise and Sports Sciences Reviews (Associate Editor, 2000-2011)
- Journal of Gerontology: Biological Sciences (Editorial Review Board, 1998-1999)
- American Journal of Physiology: Endocrinology and Metabolism (Editorial Board, 2007-2024)
- Journal of Applied Physiology (Editorial Board, 2007-2023)

Invited Reviewer for Professional Journals:

- Age
- American Journal of Physiology: Cell Physiology
- American Journal of Physiology: Endocrinology and Metabolism
- American Journal of Physiology: Regulatory, Integrative and Comparative Physiology
- American Journal of Physiology: Lung Cellular and Molecular Physiology
- BBA Molecular Basis of Disease
- Biochemical Society Transactions
- CardioRenal Medicine
- Cardiovascular Diabetology
- Cell Metabolism
- Cell Reports
- Cellular Signaling
- Clinical Science
- Diabetes
- Diabetes/Metabolism Research and Reviews
- Diabetes, Obesity and Metabolism
- Diabetic Medicine
- Diabetologia
- Essays in Biochemistry
- Experimental Diabetes Research
- *Experimental Gerontology*
- Experimental Physiology
- Exercise and Sport Sciences Reviews
- FASEB Journal
- FEBS Journal
- FEBS Letters
- Hormones and Behavior
- The International Journal of Biochemistry & Cell Biology
- International Journal of Molecular Sciences
- International Journal of Obesity
- International Journal of Sports Medicine

- iScience
- JCI Insight
- Journal of the American College of Nutrition
- Journal of Applied Physiology
- Journal of Biological Chemistry
- Journal of Cachexia, Sarcopenia and Muscle
- Journal of Endocrinology
- The Journals of Gerontology: Biological and Medical Sciences
- Journal of Lipid Research
- Journal of Molecular Endocrinology
- Journal of Nutrition
- Journal of Physical Activity and Health
- Journal of Visualized Experiments
- The Journal of Physiology
- The Journal of Physiological Sciences
- Life Sciences
- Mechanisms of Ageing and Development
- Medicine and Science in Sports and Exercise
- Metabolism: Clinical and Experimental
- Molecular and Cellular Biochemistry
- Molecular and Cellular Endocrinology
- Molecular Metabolism
- Nature Communications
- Nature Medicine
- Nature Metabolism
- Nature Reviews Endocrinology
- Nutrition and Diabetes
- Obesity
- Obesity Research
- Physiological Genomics
- Physiological Reports
- Physiological Reviews
- PLoS ONE
- Proceedings of National Academy of Sciences, U.S.A.
- Scientific Reports

Committees and Invited Reviews:

- Abstract Reviewer for American College of Sports Medicine National Meeting, 1990, 1994 and 1996.
- Department of Veterans Affairs Merit Review Research Application Reviewer, 1992 and 1998.
- *Exercise Physiology: Theory and Application to Fitness and Performance* by S.K. Powers and E.T. Howley, Wm. C. Brown Publishers, Reviewer, 1993 and 1995.
- American Heart Association, Minnesota Affiliate Grant-in-Aid Reviewer, 1994.
- American Heart Association-Wisconsin Peer Review Committee, 1995.
- University of Michigan Geriatrics Center, Institute of Gerontology and Michigan Alzheimer's Disease Research Center Pilot Feasibility Grant Program, External Reviewer, 1996, 1999, and 2003.
- National Institutes of Health Special Emphasis Panel on Geriatrics & Rehabilitation Medicine, Ad Hoc Reviewer, 1997.

- National Institutes of Health (Fellowship/AREA Special Emphasis Panel on Geriatrics & Rehabilitation Medicine), Member, 1998.
- National Institutes of Health (Oral Biology and Medicine Study Section), Ad Hoc Reviewer, 1998.
- Experimental Biology Meeting, Abstract Reviewer, 1998.
- American College of Sports Medicine Research Review Committee, 1999-2001.
- National Institutes of Health (Respiratory and Applied Physiology Study Section), Temporary Member, 1999, 2000 and 2001.
- National Institutes of Health (Geriatrics and Rehabilitation Medicine Study Section), Temporary Member, 2000.
- Washington University in St. Louis School of Medicine Diabetes Research Training Center Pilot and Feasibility Grant Reviewer, 2000.
- Opponent for Ph.D. Dissertation Defense of Xiao Mei Song, Department of Surgical Sciences, Section for Clinical Physiology, Karolinska Institute, Stockholm, Sweden, 2000.
- National Institutes of Health (Respiratory and Applied Physiology Study Section, Skeletal Muscle Biology Special Emphasis Panel), Regular Member, 2001-2005 and 2006-2010.
- Reviewer of Abstracts for American Diabetes Association Meeting, 2003, 2004.
- Research Career Development Core Award for National Institute on Aging sponsored University of Michigan Older American Independence Center, External Reviewer, 2003.
- University of Texas Health Science Center in San Antonio, Nathan Shock Center of Excellence in Basic Biology of Aging, Aging Research and Education Center Pilot Grant Reviewer, 2003.
- National Institutes of Health (Musculoskeletal, Oral and Skin Sciences: Integrated Review Group Special Emphasis Panel), Ad hoc Reviewer, 2004.
- National Science Foundation, Ad hoc Reviewer, 2005.
- American Diabetes Association Scientific Sessions Ad Hoc Subcommittee on Exercise, Member, 2005 and 2006.
- Alberta Heritage Foundation for Medical Research Scholar Award, Ad hoc Reviewer, 2005.
- American Diabetes Association Scientific Sessions, Integrated Physiology-Muscle Section, Abstract Reviewer, 2006.
- Diabetes UK, Ad hoc Research Grant Reviewer, 2006, 2014.
- American Physiological Society's Porter Physiology Development Committee, 2007-2009.
- University of Utah Center on Aging Pilot Grant Program, Ad hoc Reviewer, 2007.
- National Institutes of Health Special Emphasis Panel (Exercise, Insulin Action and Muscle Metabolism), Ad hoc Reviewer, 2007.
- American Diabetes Association Annual Meeting, Abstract Reviewer, 2007.
- The Welcome Trust UK Grant Review, Ad hoc Reviewer, 2008.
- National Institutes of Health Special Emphasis Panel, Ad hoc Reviewer, 2009.
- Diabetes UK Research Grant, Ad hoc Reviewer, 2009.
- Boston Area Diabetes Endocrinology Research Center Pilot and Feasibility Grant, Ad hoc Reviewer, 2009.
- Opponent for Ph.D. Dissertation Defense, Jonas Thue Treebak, Copenhagen University (Exercise and Sport Science), Copenhagen, Denmark, 2009.
- American Diabetes Association's Research Grant Review Committee, Reviewer, 2012-2014.
- National Institutes of Health Transformative Research Award, Ad hoc Reviewer, 2014.
- UK-Diabetes Grant, Ad hoc Reviewer, 2014
- National Institutes of Health Special Emphasis Panel Grant Review, Reviewer and Vice-Chair, 2014.
- American Diabetes Association Scientific Sessions Abstracts Reviewer, 2014
- American Diabetes Association Scientific Sessions Late-breaking Abstracts Reviewer, 2015
- National Institutes of Health Skeletal Muscle and Exercise Physiology Study Section, Ad hoc Reviewer, 2015

- Israel Science Foundation Grant, Ad hoc Reviewer, 2015
- Joslin Diabetes Research Center Pilot and Feasibility Grant Reviewer, 2015
- American Diabetes Association Scientific Sessions Exercise Subcommittee Member, 2015
- American Diabetes Association Scientific Sessions Oral Session Chair, 2015
- American Diabetes Association Scientific Sessions Abstracts Reviewer, 2016
- American Diabetes Association Scientific Sessions Late-breaking Abstracts Reviewer, 2016
- National Institutes of Health Special Emphasis Panel Grant Review, Reviewer, 2016
- American Diabetes Association Scientific Sessions Exercise Subcommittee Member, 2016
- Joslin Diabetes Research Center Pilot and Feasibility Grant Reviewer, 2016
- National Institutes of Health Skeletal Muscle and Exercise Physiology Study Section, Ad hoc Reviewer, 2017
- National Institutes of Health Special Emphasis Panel ZDK1 GRB-J O4 (NIDDK Program Projects Review), Ad hoc Reviewer, 2017
- German Research Foundation, Ad hoc Grant Reviewer, 2017
- Israel Science Foundation, Ad hoc Grant Reviewer, 2018
- American Diabetes Association Abstract Reviewer, 2018
- Diabetes UK, Ad hoc Grant Reviewer, 2018
- German Research Foundation, Ad hoc Grant Reviewer, 2018
- National Institutes of Health Special Emphasis Panel ZDK1 GRB-J O1 (NIDDK Program Projects Review), Ad hoc Grant Reviewer, 2018
- National Institutes of Health ZDK1 GRB-N (J2) Review Panel, Ad hoc Grant Reviewer, 2018
- American Federation for Aging Research (AFAR) National Scientific Advisory Council, 2019
- American Diabetes Association Scientific Sessions Abstracts Reviewer, 2019
- American Diabetes Association Scientific Sessions Late-breaking Abstracts Reviewer, 2019
- Dutch Diabetes Research Foundation, Ad hoc Grant Reviewer, 2019
- German Research Foundation, Ad hoc Grant Reviewer, 2019
- National Institutes of Health ZRG1 MOSS R(50) Special Emphasis Panel, Ad hoc Grant Reviewer and Alternate Chair, 2020
- German Research Foundation, Ad hoc Grant Reviewer, 2020
- American Diabetes Association Abstract Reviewer, 2021
- American Diabetes Association Late-breaking Abstract Reviewer, 2021
- German Research Foundation, Ad hoc Grant Reviewer, 2021
- American Federation of Aging Grants for Junior Faculty, Reviewer, 2021
- Dutch Diabetes Foundation, Ad hoc Grant Reviewer, 2021
- American Federation for Aging Research (AFAR) National Scientific Advisory Council (NSAC), Grant Reviewer, 2022
- National Institutes of Health, Aging Systems and Geriatrics Study Section, Ad hoc Reviewer, 2022
- National Institutes of Health ZRG1 F10B-C (20) L, Fellowships: Musculoskeletal, Rehabilitation and Skin Sciences, Ad hoc Reviewer, 2022
- National Institutes of Health ZRG1 MOSS-C (80) A, AREA/REAP: Musculoskeletal, Oral, and Skin Sciences, Ad hoc Reviewer, 2022
- Novo Nordisk Ascending Investigator Research Proposal Pre-submission Reviewer, 2023
- University of Michigan-Flint Research Creative Activity Small Grant Competition, External Reviewer, 2023
- National Institutes of Health, Aging Systems and Geriatrics Study Section, Ad hoc Reviewer, 2023
- American Diabetes Association Abstract Reviewer, 2023
- American Diabetes Association Late-breaking Abstract Reviewer, 2023

- Hevolution Foundation-GRO Awards in Aging Biology and Geroscience Letters of Intent Selection Committee, 2023
- National Institutes of Health ZRG1 MSOS-Q (80) Special Emphasis Panel, Ad hoc Grant Reviewer 2023
- Glenn Foundation for Medical Research and AFAR Grant for Junior Faculty and Sagol Network GerOmic Award for Junior Faculty, Ad hoc Reviewer of Letters of Intent, 2024
- National Institutes of Health, Skeletal Muscle and Exercise Physiology Study Section, Ad hoc Reviewer, 2024
- National Institutes of Health, Biology of Aging Special Emphasis Panel, ZRG1 CDB-B (02), Ad hoc Grant Reviewer 2024

Invited Lectures:

- "Effects of Exercise and Hypoxia on Skeletal Muscle Glucose Transport", Department of Cell Biology, University of Toronto, Toronto, Ontario, Canada, 1989
- "Stimulation of Muscle Glucose Transport by Exercise, Hypoxia, and Insulin", Department of Kinesiology, University of Texas, Austin, Texas, 1989
- "Influence of Exercise on Skeletal Muscle Glucose Transport", Department of Exercise and Sport Sciences, Tucson, Arizona, 1989
- "Exercise Effects on Muscle Glucose Transport", Exercise Physiology Laboratory, Ohio State University, Columbus, Ohio, 1989
- "Effects of Exercise on Skeletal Muscle Glucose Transport", Center for Exercise Science and Cardiovascular Research, Northeastern Illinois University, Chicago, Illinois, 1989.
- "Adaptability of Skeletal Muscle during the Aging Process", Department of Kinesiology, University of Texas, Austin, Texas, 1992
- "Effects of Growth Hormone Supplementation on Skeletal Muscle Glucose Transport in Young, Middle-aged, and Old Rats", American Federation for Aging Research Grantee Conference, Briarcliff, New York, 1992
- "Adaptations of Muscle Glucose Transport to Dietary and Exercise Interventions across the Lifespan", Department of Kinesiology, Louisiana State University, Baton Rouge, Louisiana, 1993.
- "Skeletal Muscle Glucose Transport", Institute of Pharmacology, Syntex Discovery Research, Palo Alto, California, 1993
- "Exercise and Aging: A Molecular Approach, Substrate Availability and Utilization", American College of Sports Medicine Meeting, Seattle, Washington, 1993
- "Aging and Skeletal Muscle", National Institutes of Health Workshop on Dietary Restriction in Nonhuman Primates, Devils Head, Wisconsin, 1993
- "Interaction among Age, Diet and Exercise in the Regulation of Skeletal Muscle Glucose Transport", Pennington Biomedical Research Center, Louisiana State University, Baton Rouge, Louisiana, 1994.
- "Influence of Growth Hormone Supplementation on Skeletal Muscle Glucose Transport of Adult and Old Rats", Joslin Diabetes Center, Boston, Massachusetts, 1994
- "What Insights into Age-related Changes in Human Skeletal Muscle Can Be Derived from Animal Models?", NIH Workshop on Sarcopenia, Warrenton, Virginia, 1994
- "Energy Metabolism and Fuel Utilization in Endurance Sports", Sports Nutrition Conference, Caracas, Venezuela, 1995
- "Influence of Caloric Restriction on Skeletal Muscle Glucose Transport", Experimental Diabetes, Metabolism, and Nutrition Section, National Institutes of Health, Bethesda, Maryland, 1996.
- "Effect of Hypoxia on Glucose Transport in Isolated Muscle", American College of Sports Medicine Meeting, Cincinnati, Ohio, 1996
- "Mechanisms Underlying the Calorie Restriction-Induced Increase in Insulin Sensitivity", University of Texas Health Science Center at San Antonio, Department of Physiology, San Antonio, Texas, 1997

- "Influence of Physical Activity on Sarcopenia: An Age-related Loss of Skeletal Muscle Mass and Function", The Gerontological Society of America Meeting, Cincinnati, Ohio, 1997
- "Nutritional Influences on Skeletal Muscle Insulin Signal Transduction", American College of Sports Medicine Meeting, Orlando, Florida, 1998
- "Insights Gained by Studying the Effects of Exercise and Diet on Insulin Action", Parke-Davis Pharmaceutical Research, Ann Arbor, Michigan, 1998
- "Skeletal Muscle Glucose Transport: Influence of Exercise, Nutrition, and Aging", Department of Kinesiology, University of Colorado, Boulder, Colorado, 1998
- Regulation of Skeletal Muscle Glucose Transport: Effects of Calorie Restriction, Department of Chemistry and Biochemistry, University of South Carolina, Columbia, South Carolina, 2000
- "Does Age Alter Skeletal Muscle Adaptability to the Physiologic Stress of Exercise or Caloric Restriction?", American Aging Association Meeting, Boston, Massachusetts, 2000
- "Exercise and Aging: Skeletal Muscle Insulin Signaling and Action", Integrative Biology of Exercise Meeting Sponsored by the American Physiological Society, Portland, Maine, 2000
- "Reduced Calorie Intake: Influence on Insulin Sensitivity and Insulin Signaling", Department of Surgical Sciences, Section for Clinical Physiology, Karolinska Institute, Stockholm, Sweden, 2000
- "Insulin Signaling and Action in Skeletal Muscle: Effects of Age and Caloric Restriction", From Basic Biology to Clinical Care: New Research Directions for Understanding Diabetes in Older Age, A Scientific Conference Sponsored by: National Institute of Diabetes & Digestive & Kidney Disease, National Institute on Aging, and Diabetes Mellitus Interagency Coordinating Committee, Bethesda, Maryland, 2001
- "Insulin Signaling and Action in Skeletal Muscle: Effects of Age and Caloric Restriction", IGF-1 and Insulin Pathways as Modulators of Longevity and Late-Life Disease Symposium, The Nathan Shock Center for the Biology of Aging and Claude Pepper Older American Independence Center, University of Michigan, Ann Arbor, Michigan, 2001
- "Aging and Exercise: Influence on Insulin Signaling and Action", International Congress of Physiological Societies, Christchurch, New Zealand, 2001
- "Insulin Signaling and Action in Skeletal Muscle: Effects of Age and Caloric Restriction", Department of Physiology, University of Arizona, Tucson, Arizona, 2001
- "Insulin Signaling and Action in Skeletal Muscle: Effects of Age and Caloric Restriction", Department of Endocrinology and Diabetology, Karolinska Hospital, Stockholm, Sweden, 2002
- "Insulin Signaling and Action in Skeletal Muscle: Effects of Age and Caloric Restriction", Washington University School of Medicine, St. Louis, Missouri, 2002
- "Insulin Signaling and Action: Effects of Age, Exercise, and Caloric Restriction", University of Illinois at Urbana-Champaign, Urbana, Illinois, 2002
- "Insulin Signaling and Action in Skeletal Muscle: Effects of Exercise, and Caloric Restriction", University of Michigan, Ann Arbor, Michigan, 2002
- "Insulin Signaling and Action in Skeletal Muscle: Influence of Caloric Restriction", Washington University School of Medicine, St. Louis, Missouri, 2003
- "Insulin Signaling and Action in Skeletal Muscle: Influence of Caloric Restriction", Calorie Restriction Society Conference, Madison, Wisconsin, 2003
- "Insulin Signaling and Action in Skeletal Muscle: Effects of Exercise and Calorie Restriction", NIH of Japan, Tokyo, Japan, 2003
- "Overview of Signaling Pathways for Glucose Transport in Skeletal Muscle", Osaka Technical University, Osaka, Japan, 2003
- "Overview of Signaling Pathways for Glucose Transport in Skeletal Muscle", Nara University of Education, Nara, Japan, 2003

- "Insulin Signaling and Action in Skeletal Muscle: Effects of Calorie Restriction or Exercise", 2nd Annual Nathan W. Shock Symposium, sponsored by the National Institute on Aging, Towson, Maryland, 2004
- Skeletal Muscle Metabolism: Effects of Exercise, Aging, and Calorie Restriction", University of Texas-Austin Department of Kinesiology, Austin, Texas, 2004
- "Insulin Signaling and Action in Skeletal Muscle: Effects of Calorie Restriction", Department of Nutrition, Case Western Reserve University, Cleveland, Ohio, 2005.
- "Mechanisms for Altered Insulin Signaling and Action with Exercise or Calorie Restriction", SEACSM Lecture Tour, Department of Exercise Science, University of South Carolina, Columbia, South Carolina, 2005
- "Mechanisms for Altered Insulin Signaling and Action with Exercise or Calorie Restriction", SEACSM Lecture Tour, Department of Kinesiology and Division of Endocrinology and Metabolism, Endocrinology Seminar Series, University of Virginia, Charlottesville, Virginia, 2005.
- "Mechanisms for Altered Insulin Signaling and Action with Exercise or Calorie Restriction", SEACSM Lecture Tour, Department of Exercise Science, East Carolina University, Greenville, North Carolina, 2005
- "Can Exercise Prevent the Predicted Diabetes Disaster?", SEACSM Lecture Tour, Department of Health, Leisure & Exercise Science, Appalachian State University, Boone, North Carolina, 2005
- "Can Exercise Prevent the Predicted Diabetes Disaster?", SEACSM Lecture Tour, Department of Exercise and Sport Science, University of North Carolina-Greensboro, Greensboro, North Carolina, 2005
- "Effects of Exercise, Contractile Activity and Insulin on AS160 Phosphorylation in Skeletal Muscle", Exercise, Insulin Sensitivity and Diabetes – What is New? International Symposium, Copenhagen Muscle Research Center, Copenhagen, Denmark, 2006
- "AS160 A Link between Insulin and Contraction in Skeletal Muscle?" ACSM Conference on Integrative Physiology of Exercise, Indianapolis, Indiana, 2006
- "Effects of Exercise or Calorie Restriction on Skeletal Muscle Insulin Sensitivity and Action", Department of Pharmaceutical Sciences, Wayne State University, Detroit, MI, 2006
- "Do Insulin and Contraction Stimulated Signaling Converge at AS160 in Skeletal Muscle?", Department of Integrative Physiology, University of Colorado, Boulder, CO, 2007
- "Why is Skeletal Muscle Glucose Uptake Important for Health?", Nara University of Education, Nara, Japan, 2007
- "Do Insulin and Contraction Stimulated Signaling Converge at AS160 in Skeletal Muscle?", Kyoto University, Kyoto, Japan, 2007
- "Evidence that AS160 is at the Crossroads of Signaling by Exercise and Insulin", American College of Sports Medicine Meeting, Indianapolis, IN, 2008
- "New Insights into Exercise Effects on Skeletal Muscle Glucose Transport: Roles of AS160", Korean Alliance for Health, Physical Education, Recreation and Dance Meeting, Seoul, Korea, 2008
- "Regulation of AS160, TBC1D1 and Glucose Transport by Insulin, Exercise and Contractile Activity", Center for Exercise Science, University of Florida, Gainesville, FL, 2008
- "Effects of In Vivo Exercise and In Vitro Contractions on Insulin-stimulated Glucose Transport", Copenhagen University, Copenhagen, Denmark, 2009
- "Mechanisms for Increased Insulin-independent and Insulin-Dependent Glucose Transport after Exercise", Department of Physiology and Developmental Biology, Brigham Young University, Provo, UT, 2009
- "Exercise, Insulin Sensitivity and Glucose Homeostasis", Texas ACSM Meeting, Houston, TX, 2010
- "Glucose Transporter Proteins with Acute and Chronic Exercise," American College of Sports Medicine Meeting, Baltimore, MD, 2010

- "Mechanisms for Improved Insulin Sensitivity in Skeletal Muscle after Acute Exercise", Muscle Health Awareness Day Program, York University, Toronto, Canada, 2012
- "Mechanisms for Improved Insulin Sensitivity in Skeletal Muscle after Acute Exercise", Department of Human Health and Nutritional Sciences, University of Guelph, Guelph, Canada, 2012
- "The TBC1D1 and TBC1D4 Story", European Association for the Study of Diabetes, Barcelona, Spain, 2013
- "Mechanisms for Effects of Diet and Exercise on Skeletal Muscle Glucose Uptake in Rats", Department of Pharmaceutical Sciences, Wayne State University, Detroit, MI, 2013
- "Relationships between Exercise and Energy in Muscle", National Institutes of Health Staff Training in Extramural Programs Forum (Move: Physical Activity Benefits Everyone), Bethesda, MD, 2014
- "Mechanisms for Improved Insulin Sensitivity in Skeletal Muscle after Acute Exercise", Department of Pathobiology, Cleveland Clinic, Cleveland, OH, 2015
- "Novel, Single Muscle Fiber Analysis Reveals Exercise Effects on Glucose Uptake", American Diabetes Association 76th Scientific Sessions, New Orleans, LA, 2016
- "Improving Skeletal Muscle Insulin Sensitivity during Old Age", 17th Annual Rachmiel Levine-Arthur Riggs Diabetes Research Symposium, Orlando, FL, 2017
- "Mechanisms for Improved Insulin Sensitivity in Skeletal Muscle after Acute Exercise", Department of Physiology, The 13th Annual Piero P. Foa Endowed Lecture, Wayne State University, Detroit, MI, 2017
- "Mechanisms for the Independent and Combined Effects of Exercise and Calorie Restriction on Insulin-stimulated Glucose Uptake by Skeletal Muscle", Barshop Symposium on Aging, Bandera, Texas, 2018
- "Acute Exercise Effects on Muscle Fiber Type-selective Glucose Uptake and AS160 Phosphorylation", John O. Holloszy Memorial Symposium, St. Louis, MO, 2018
- "Muscle Fiber-type Selective Effects of Acute Exercise on AS160 Phosphorylation and Glucose Uptake", Advances in Skeletal Muscle Biology in Health and Disease Conference, Gainesville, FL, 2019
- "Scientific Legacy of John O. Holloszy: Exercise Effects on Glucose Transport in Skeletal Muscle of Animal Models", American College of Sports Medicine Meeting, Orlando, FL, 2019
- "Mechanisms Regulating Post-exercise Improvement in Insulin-stimulated Glucose Uptake by Skeletal Muscle", Gary R. Hunter Award Distinguished Lecture, UAB Center for Exercise Medicine, University of Alabama at Birmingham, Birmingham, AL, 2019
- "Muscle Fiber Type-selective Effects of Exercise on Insulin-stimulated Glucose Uptake and AS160 Phosphorylation", August Krogh Club Seminar, Copenhagen, Denmark, 2019
- "Muscle Fiber Type-selective Effects of Exercise on Insulin-stimulated Glucose Uptake and AS160 Phosphorylation", Pennington Biomedical Research Center, Baton Rouge, LA, 2019
- "Muscle Fiber Type-selective Effects of Exercise on Insulin-stimulated Glucose Uptake and AS160 Phosphorylation", Montoye-Nagle Lecture, Department of Kinesiology, University of Wisconsin-Madison, Madison, WI, 2019
- "Exercise, Insulin Sensitivity and Diabetes in Humans", Department of Kinesiology Seminar Series, University of Wisconsin-Madison, Madison, WI, 2019
- "Exercise and Diet Effects on Insulin Signaling and Glucose Uptake by Skeletal Muscle", FASEB Science Research Conference: The Nutrient Sensing and Metabolic Signaling Virtual Conference. 2020.
- "Fiber Type-selective Diet and Exercise Effects on Glucose Uptake in Insulin Resistant Rats", American College of Sports Medicine Virtual Meeting, 2021.
- "Using Animal Models to Understand Exercise Effects on Insulin-stimulated Glucose Uptake by Skeletal Muscle", Department of Physiology, Faculty of Medicine, Universitas Airlangga, Surabaya, East Java, Indonesia, Virtual Lecture, 2021, 2022, 2023.

- "The importance of AS160 expression and site-selective phosphorylation for the post-exercise increase in insulin-stimulated glucose uptake by skeletal muscle." International Biochemistry of Exercise Conference, Toronto, Canada, 2022.
- "Mechanisms for the Postexercise Increase in Insulin-stimulated Glucose Uptake by Skeletal Muscle." US Army Research Institute of Environmental Medicine, Natick, MA, Virtual Lecture, 2023.

University Service:

- School of Education Programs Committee, UW-Madison, 1990-1991
- Graduate School Animal Care Committee, UW-Madison, 1991-1995
- National Accreditation Review of Physical Therapy Program, Participant, UW-Madison, 1991
- Ad Hoc Committee for Amendment Process for Animal Care and Use, UW-Madison, 1992
- Summer Research Program for Minority Undergraduates Mentor, UW-Madison, 1994-1996
- Committee on Graduate Assistant Policies and Procedures, School of Education, UW-Madison, 1997-1999, Chair
- Interdepartmental Graduate Program in Nutritional Sciences Admissions Committee, UW-Madison, 1996-1998
- Department of Nutritional Sciences Faculty Search Committee, UW-Madison, 1996
- Selection Committee for NIH Training Grant on Biology of Aging and Age-Related Diseases, UW-Madison, 1998
- Department of Veteran's Affairs Merit Review Application, Reviewer, UW-Madison, 1998
- Academic Advisory Council for Physical Therapy Master's Degree, UW-Madison, 1998-1999
- Institute on Aging Steering Committee, UW-Madison, 1999-2003
- School of Education International Committee, UW-Madison, 1999-2001
- School of Education Academic Planning Council, UW-Madison, 2001-2003
- School of Education Administrative Council, UW-Madison, 1993-1996; 2001-2003
- School of Medicine, Mentor Committee for Assistant Professor Kurt Saupe, UW-Madison, 2002-2003
- Hatch Grant Reviewer for College of Agriculture & Life Sciences, UW-Madison, 2002
- Virginia Horne Henry Fund Grant Review Committee, UW-Madison, 2003
- Nathan Shock Center Internal Advisory Committee, Institute on Gerontology, University of Michigan, 2004-08
- Reviewer for Office of the Vice President for Research Faculty Grants and Awards, University of Michigan, 2007
- Reviewer for Older Americans Independence Center Research Career Development Core Grant, University of Michigan, 2008
- School of Kinesiology Dean Search Advisory Committee, University of Michigan, Chair, 2008-2009.
- American Diabetes Association Pathway Grants, Reviewer, University of Michigan, 2015-2017
- Michigan Nutrition Obesity Research Center (MNORC) Pilot and Feasibility Grants, Reviewer, University of Michigan, 2015-2018, 2020
- Michigan Diabetes Research Center Grants Program Advisory Committee, 2015-2020
- Research Administration Advisory Council (RAAC) Faculty Advisory Council, Member, 2015-2016
- University of Michigan Post-doctoral Advisory Group, Member 2015-2019
- NIH Bridges to the Doctorate (R25) Applications from the University of Michigan, Reviewer 2016
- University of Michigan Exercise & Sport Science Initiative Executive Board, Member 2016-2018
- University of Michigan School of Medicine Physician-Scientist Candidate Interview, 2017 and 2018
- Michigan Office of Research Faculty Grant, Reviewer 2018
- University of Michigan Center for Human Growth and Development Advisory Board, Member, 2019
- University of Michigan Medical Scientist Training Program Candidate Interview, 2018-2023

- Michigan Diabetes Research Center (MDRC) Grants Program Advisory Council, Member, 2019-2023
- Michigan Diabetes Research Center (MDRC) Animal Studies Core Advisory Committee, Member, 2014-2023
- CDI-MOD (Caswell Diabetes Center-Metabolism, Obesity & Diabetes) Symposium Poster Judge, 2023
- University of Michigan Research Cores Office Advisory Committee, Member, 2023-2024

Invited Lectures:

- "Regulation of Skeletal Muscle Glucose Transport", Department of Nutritional Sciences, UW-Madison, 1990
- "Age-related Effects on Skeletal Muscle Glucose Transport", Department of Medicine, Section of Endocrinology, UW-Madison, 1992
- "Age-related Effects on Muscle Glucose Transport", Institute on Aging, UW-Madison, 1992
- "Skeletal Muscle Insulin Resistance", Department of Psychology, UW-Madison, 1993
- "Growth Hormone Reduces Skeletal Muscle Glucose Transport but not GLUT-4 Glucose Transporter Protein in Adult, Middle-Aged and Old Rats", Institute on Aging and Adult Life Colloquium on Aging, UW-Madison, 1994
- "Regulation of Skeletal Muscle Glucose Transport by Insulin and Exercise", Summer Research Program for Minority Undergraduates, UW-Madison, 1994
- "Influence of Growth Hormone Administration on Skeletal Muscle of Young and Old Rats", Wisconsin Regional Primate Center, UW-Madison, 1995
- "Influence of Caloric Restriction on Muscle Carbohydrate Metabolism", Department of Nutritional Sciences, UW-Madison, 1996
- "Effect of Hypoxia on Muscle Glucose Transport", Department of Preventive Medicine, UW-Madison, 1996
- "Aging and Muscle Function", Departments of Neurology and Kinesiology (742-779), UW-Madison, 1997, 1998, 1999, 2000, 2001
- "Influence of Exercise on Sarcopenia (Age-Related Changes in Skeletal Muscle)", Department of Kinesiology, Motor Behavior Seminar, UW-Madison, 1998
- "Sarcopenia" and "Exercise and Aging (3 lectures)", Department of Pathology (Cell and Molecular Biology of Aging), UW-Madison, 1998, 1999, 2000
- "Diabetes and Exercise", Department of Kinesiology, Physical Activity and Health (742-521), UW-Madison, 2001
- "Glucoregulation and Insulin Action", Department of Nutritional Sciences, UW-Madison, 1998, 1999, 2000, 2001.
- "Insulin Signaling and Action in Skeletal Muscle: Effects of Age and Caloric Restriction", Endocrine and Reproductive Physiology Seminar, Department of Animal Science, UW-Madison, 2001.
- "Can Exercise Prevent or Delay Type 2 (Adult Onset) Diabetes?" Institute on Aging Advisory Board Meeting, UW-Madison, 2001
- "Can Exercise Prevent or Delay Type 2 (Adult Onset) Diabetes? Institute on Aging "On the Road" Program for UW-Madison Alumni, Minneapolis, MN, 2001
- "Insulin Signaling and Action in Skeletal Muscle: Effects of Age and Calorie Restriction", Gas Club, Department of Preventive Medicine, UW-Madison, 2001
- "Insulin Signaling and Action in Skeletal Muscle: Effects of Age and Calorie Restriction", Institute of Gerontology, University of Michigan, 2004
- "Effects of Aging and Calorie Restriction on Insulin Signaling and Action in Skeletal Muscle", 13th Annual Summer Training Course in the Biology of Aging, National Institute on Aging and University of Michigan Geriatrics Center, Ann Arbor, Michigan, 2005

- "Increased Phosphorylation of Akt Substrate of 160 kDa (AS160) in Rat Skeletal Muscle in Response to Insulin or Contractile Activity", Center for Exercise Research Seminar, Division of Kinesiology, University of Michigan, 2005
- "Insulin Signaling and Action in Skeletal Muscle: Effects of Calorie Restriction," Department of Physiology, University of Michigan, 2005
- "Insulin Signaling and Action in Skeletal Muscle: Effects of Age and Calorie Restriction", Richard Miller Laboratory, Geriatrics Center, University of Michigan, 2005
- "Mechanisms for Improved Insulin Signaling with Exercise or Calorie Restriction", Metabolism, Endocrinology & Diabetes Research Conference, University of Michigan Medical School, 2005.
- "Insulin Signaling and Action in Skeletal Muscle: Effects of Calorie Restriction", Biology of Aging Seminar Series, University of Michigan, 2006
- "Do Insulin and Contraction Stimulated Signaling Converge at AS160 in Skeletal Muscle?" Michigan Diabetes Research and Training Center Winter Symposium, University of Michigan, 2007
- "Aging and Calorie Restriction: Effects on Glucose Metabolism and Insulin Signaling", Biogerontology Seminar Series, University of Michigan, 2007
- "Role of Akt Substrate of 160 kDa in Insulin-stimulated and Contraction-stimulated Glucose Transport", Program in Biomedical Sciences Faculty Seminar, University of Michigan, 2007
- "Mechanisms for Increased Skeletal Muscle Glucose Transport after Exercise", Department of Molecular and Integrative Physiology, University of Michigan, 2007
- "AS160 and TBC1D1: Their Regulation and Roles in Glucose Transport of Skeletal Muscle", Metabolism and Endocrine Research Conference, University of Michigan School of Medicine, 2008
- "Effects of Aging on Skeletal Muscle Glucose Metabolism and Insulin Signaling", Biogerontology Seminar Series, University of Michigan, 2009
- "Mechanisms for Improved Insulin Sensitivity in Skeletal Muscle after Acute Exercise", Symposium on Exercise and Healthspan in Flies, Worms and Rodents, University of Michigan Geriatrics Center, 2012
- "Effects of Calorie Restriction on Skeletal Muscle Glucose Uptake and Insulin Signaling in Adult and Old Rats." Biogerontology Seminar Series, University of Michigan, 2012
- "Effects of Exercise and Diet on Muscle Glucose Uptake." MEND (Metabolism and Endocrine) Research Conference, University of Michigan, 2013
- "Effects of Aging, Exercise and Calorie Restriction on Skeletal Muscle Glucose Uptake", Biogerontology Seminar Series, University of Michigan, 2014
- "Mechanisms for Improved Insulin Sensitivity in Skeletal Muscle after Acute Exercise", Integrated Aspects of Diabetes, Obesity and Metabolism Club Seminar, University of Michigan, 2015
- "Mechanisms for Improved Insulin Sensitivity in Skeletal Muscle after Acute Exercise", School of Kinesiology Faculty Research Award Seminar, University of Michigan, 2015
- "Mechanisms for Increased Insulin Sensitivity in Skeletal Muscle after Acute Exercise", Integrated Aspects of Diabetes, Obesity and Metabolism Research Club Seminar, University of Michigan, 2017
- "Effects of Exercise and/or Calorie Restriction on Insulin-stimulated Glucose Uptake by Skeletal Muscle", Career Training in the Biology of Aging Seminar, University of Michigan, 2018
- "Muscle Fiber Type-specific Effects of Exercise on Insulin-stimulated Glucose Uptake and AS160 Phosphorylation", Integrative Aspects of Diabetes, Obesity and Metabolism Research Club, University of Michigan, 2019
- "Mechanisms for Exercise and Calorie Restriction Effects on Glucose Uptake by Skeletal Muscle", Career Training in the Biology of Aging Seminar, University of Michigan, 2021
- "Exercise and High Fat Diet Effects on Glucose Uptake by Skeletal Muscle in Rats", Preventive Cardiology, Hypertension, Vascular Medicine Lipids/Atherosclerosis Conference, University of Michigan, 2021

- "Mechanisms Regulating Post-exercise Improvement in Insulin-stimulated Glucose Uptake by Skeletal Muscle", Integrative Aspects of Diabetes, Obesity and Metabolism Research Club, University of Michigan, 2022
- The Role of AS160 in the Postexercise increase in insulin-stimulated Glucose Uptake by Skeletal Muscle, Career Training in the Biology of Aging Seminar, University of Michigan, 2023

Kinesiology Committee Memberships:

- Undergraduate Committee, UW-Madison, 1989-1995
- Merit Committee, UW-Madison, 1989, 1993, 1995 and 2001
- Student Grievance Committee, UW-Madison, 1989-1992 and 1994
- Future Directions Committee, UW-Madison, 1989
- Biomechanics Search Committee, UW-Madison, 1990
- Pedagogy Search Committee, UW-Madison, 1991
- Human Subjects Committee, Chair, UW-Madison, 1991-1993
- Faculty Associate Search Committee, Chair, UW-Madison, 1993
- Exercise Physiology Search Committee, UW-Madison, 1993
- Motor Control/Behavior Search Committee, UW-Madison, 1994
- Scholarship, Assistantship, and Student Affairs Committee, UW-Madison, 1994
- Mentor Committee for Assistant Professor Barbara Loitz, UW-Madison, 1995-1996
- Mentor Committee for Assistant Professor Kreg Gruben, Chair, UW-Madison, 1995-2001
- Faculty Workload Policies and Procedures Ad Hoc Committee, UW-Madison, 1995
- Physical Therapy Search Committee, UW-Madison, 1995
- Department of Kinesiology Mission Statement Ad Hoc Committee, UW-Madison, 1995
- Department of Kinesiology Laboratory Manager Search Committee, Chair, UW-Madison, 1995
- Graduate Program, Coordinator, UW-Madison, 1995-1997
- Graduate Committee, UW-Madison, 1998-2001
- Mentor Committee for Assistant Professor Barbara Morgan, Chair, UW-Madison, 1995-1997
- Teaching Assistant Ad Hoc Committee, UW-Madison, 1995-1997
- Mentor Committee Policies and Procedures Ad Hoc Committee, UW-Madison, 1995
- Mentor Committee for Assistant Professor Peter van Kan, Chair, UW-Madison, 1997-2001
- Physical Therapy Search Committee, UW-Madison, 1996
- Exercise Physiology Search Committee, Chair, 1997
- Mentor Committee for Assistant Professor Gary Diffee, UW-Madison, 1997-2001
- Space, Technology and Facilities Committee, Chair, UW-Madison, 1997-2001
- Division of Kinesiology Executive Committee, University of Michigan, 2004-2008
- Movement Science Department Chair, University of Michigan, 2005-2007
- Biomechanics Assistant/Associate Professor Search Committee, University of Michigan, 2005-2006
- Mentor for Assistant Professor Riann Palmieri, University of Michigan, 2005-2009
- Exercise Physiology Assistant/Associate Professor Search Committee, University of Michigan, Chair, 2006-2007
- Mentor for Assistant Professor Mark Palmer, University of Michigan, 2009-2014
- Physical Activity and Nutrition Assistant/Associate Professor Search Committee, University of Michigan, 2011
- HMRC Director Search Committee, University of Michigan, 2011-2012
- School of Kinesiology Executive Committee, University of Michigan, 2011-2013
- School of Kinesiology Executive Committee, University of Michigan, ex officio member, 2014-2023
- Exercise Physiology Assistant/Associate/Full Professor Search Committee, University of Michigan, Chair, 2014-2015

- School of Kinesiology Dean Search Advisory Committee, 2015-2016
- Exercise Physiology Assistant/Associate/Full Professor Search Committee, Chair, 2016-2017
- School of Kinesiology Space Committee, 2017-
- Co-Mentor for Assistant Professor Andrew Ludlow, University of Michigan, 2017-
- Research and Instructional Laboratory Coordinator Search Committee, Chair, 2019-2020

TEACHING:

M.S. Thesis

- Eric Kietzke, M.S., <u>Major Professor</u>, University of Wisconsin-Madison (Kinesiology)
- Carol Briggs-Tung, M.S., Major Professor, University of Wisconsin-Madison (Kinesiology)
- Thomas Wetter, M.S., <u>Major Professor</u>, University of Wisconsin-Madison (Kinesiology)
- Erika Bohn Goldbaum, M.S., <u>Major Professor</u>, University of Wisconsin-Madison (Kinesiology)
- Joel Chapman, M.S., <u>Major Professor</u>, University of Wisconsin-Madison (Kinesiology)
- Lisa Sanborn, M.S., Major Professor, University of Wisconsin-Madison (Kinesiology)
- Raquel Sancho-Solis, M.S., Major Professor, University of Wisconsin-Madison (Kinesiology)
- Matthew Bruss, M.S., Major Professor, University of Wisconsin-Madison (Kinesiology)
- Abbijit D. Bhat, M.S., Major Professor (Co-Chair), University of Michigan (Human Nutrition)
- Yilin Nie, <u>Major Professor</u>, M.S., University of Michigan (Kinesiology)
- Valerie Choy, M.S., University of Wisconsin-Madison (Kinesiology)
- Patricia Griffith, M.S., University of Wisconsin-Madison (Kinesiology)
- Laura Liedtke, M.S., University of Wisconsin-Madison (Kinesiology)
- Jennifer Hall, M.S., University of Wisconsin-Madison (Kinesiology)
- Kevin Smith, M.S., University of Wisconsin-Madison (Kinesiology)
- Taina Luhtala, M.S., University of Wisconsin-Madison (Nutritional Sciences)
- David Guhl, M.S., University of Wisconsin-Madison (Kinesiology)
- Cheryl Railing, M.S., University of Wisconsin-Madison (Kinesiology)
- Russell Fiebig, M.S., University of Wisconsin-Madison (Kinesiology)
- Gregory Rebella, M.S., University of Wisconsin-Madison (Kinesiology)
- Tiffany Rench, M.S., University of Wisconsin-Madison (Kinesiology)
- Jeffrey Bejma, M.S., University of Wisconsin-Madison (Kinesiology)
- Malani Trine, M.S., University of Wisconsin-Madison (Kinesiology)
- Julie Davis, M.S., University of Wisconsin-Madison (Nutritional Sciences)
- Eunhee Chung, M.S., University of Wisconsin-Madison (Kinesiology)

Ph.D. Preliminary Examination and Dissertation Committees

- David Dean, Ph.D., <u>Major Professor</u>, University of Wisconsin-Madison (Nutritional Sciences)
- Annie Gazdag, Ph.D., Major Professor, University of Wisconsin-Madison (Nutritional Sciences)
- Charles Dumke, Ph.D., Major Professor, University of Wisconsin-Madison (Kinesiology)
- Junghoon Kim, Ph.D., Major Professor, University of Wisconsin-Madison (Kinesiology)
- Carrie McCurdy, Ph.D., Major Professor, University of Wisconsin-Madison (Nutritional Sciences)
- Katsuhiko Funai, Ph.D., Major Professor, University of Michigan (Kinesiology)
- George Schweitzer, Ph.D., Major Professor, University of Michigan (Kinesiology)
- Donel Sequea, Ph.D., Major Professor, University of Michigan (Molecular & Integrative Physiology)
- James MacKrell, Ph.D., <u>Major Professor</u>, University of Michigan (Molecular & Integrative Physiology)
- Carlos Castorena, Ph.D., Major Professor, University of Michigan (Kinesiology)
- Mark Pataky, <u>Major Professor</u>, University of Michigan (Kinesiology)
- Seong Eun Kwak, <u>Major Professor</u>, current Ph.D. student, University of Michigan (Kinesiology)

- Kathleen McCormick, Ph.D., University of Wisconsin-Madison (Kinesiology)
- Daniel Martinez, Ph.D., University of Wisconsin-Madison (Kinesiology)
- Polly Hansen, Ph.D., University of Wisconsin-Madison (Kinesiology)
- Timothy Hacker, Ph.D., University of Wisconsin-Madison (Kinesiology)
- Oscar Suman, Ph.D., University of Wisconsin-Madison (Kinesiology)
- Steven McClaran, Ph.D., University of Wisconsin-Madison (Kinesiology)
- Ken Blemings, Ph.D., University of Wisconsin-Madison (Animal Science)
- Mark Tetrick, Ph.D., University of Wisconsin-Madison (Nutritional Sciences)
- Ann Garvin, Ph.D., University of Wisconsin-Madison (Kinesiology)
- Randell Gardiner, Ph.D., University of Wisconsin-Madison (Kinesiology)
- Lauren Aspnes, Ph.D., University of Wisconsin-Madison (Nutritional Sciences)
- John Swallow, Ph.D., University of Wisconsin-Madison (Zoology)
- Kevin Bonine, Ph.D., University of Wisconsin-Madison (Zoology)
- Theresa Gresl, Ph.D., University of Wisconsin-Madison (Nutritional Sciences)
- Sadeeka Al-Majid, Ph.D., University of Wisconsin-Madison (Nursing)
- Terri Gomez, Ph.D., University of Wisconsin-Madison (Nutritional Sciences)
- Samuel Nadler, Ph.D., University of Wisconsin-Madison (Biochemistry)
- Susanne Votruba, Ph.D., University of Wisconsin-Madison (Nutritional Sciences)
- Thomas Wetter, Ph.D., University of Wisconsin-Madison (Kinesiology)
- Justin Rhodes, Ph.D., University of Wisconsin-Madison (Zoology)
- Cynthia Bartok, Ph.D., University of Wisconsin-Madison (Nutritional Sciences)
- Karen Kritsch, Ph.D., University of Wisconsin-Madison (Nutritional Sciences)
- Xiao Mei Song, Ph.D., Karolinska Institute (Clinical Physiology)
- Entela Bua, Ph.D., University of Wisconsin-Madison (Animal Health and Biological Science)
- Joshua Rodman, Ph.D., University of Wisconsin-Madison (Kinesiology)
- Allen Herbst, Ph.D., University of Wisconsin-Madison (Animal Health and Biological Science)
- Emily Kircher, Ph.D., University of Wisconsin-Madison (Environmental Toxicology)
- Hans Haverkamp, Ph.D., University of Wisconsin-Madison (Kinesiology)
- Jordan Miller, Ph.D., University of Wisconsin-Madison (Kinesiology)
- David Morris, Ph.D., University of Michigan (Molecular & Integrative Physiology)
- Simon Schenk, Ph.D., University of Michigan (Kinesiology)
- Chris Herman, Ph.D., University of Michigan (Kinesiology)
- Jonas Thue Treebak, Ph.D., University of Copenhagen (Exercise and Sport Sciences)
- Jessica Gumerson, Ph.D., University of Michigan (Molecular & Integrative Physiology)
- Sean Newsom, Ph.D., University of Michigan (Kinesiology)
- Rachael Weese Nelson, Ph.D., University of Michigan (Kinesiology)
- Katherine Overmyer, Ph.D., University of Michigan (Molecular & Integrative Physiology)
- Xiaoya Ma, Ph.D., University of Michigan (Kinesiology)
- Rasmus Kjøbsted, Ph.D., University of Copenhagen (Nutrition, Exercise and Sports)
- Nashwa J. Cheema, Ph.D., University of Alberta (Biological Sciences)
- Douglas Van Pelt, Ph.D., University of Michigan (Kinesiology)
- Justin Kang, Ph.D., University of Michigan (Kinesiology)
- Chanisa Thonusin, Ph.D., University of Michigan (Molecular & Integrative Physiology)
- Alexander Munk, Ph.D., University of Copenhagen (Health and Medical Sciences)
- Dorte Enggaard Steenberg, University of Copenhagen (Nutrition, Exercise and Sports)
- Alison Ludzki, University of Michigan (Kinesiology)
- Michael Schleh, University of Michigan (Kinesiology)
- Edwin Miranda, University of Michigan (Kinesiology)

- Shailee Jani, York University, Toronto, Canada (Kinesiology and Health Science)
- Chiwoon (Chris) Ahn, University of Michigan (Kinesiology)
- Jeongjin Kim, University of Michigan (Kinesiology)
- Tao Zhang, current Ph.D. student, University of Michigan (Kinesiology)

Post-doctoral Trainees

- Edward B. Arias, Ph.D.
- Robert T. Davidson, Ph.D.
- Taku Hamada, Ph.D.
- Naveen Sharma, Ph.D.
- Yuanyuan Xiao, Ph.D.
- Swati Agrawal, Ph.D.
- Pragya Sharma, Ph.D.
- Kentaro Oki, Ph.D.
- Haiyan Wang, Ph.D.

University Courses Taught:

- Graduate Physiology (PT-503), Washington University School of Medicine Program in Physical Therapy
- Exercise, Nutrition and Health (740-100), University of Wisconsin-Madison
- Physiology of Exercise (742-314), University of Wisconsin-Madison
- Physical Activity and Health (742-521), University of Wisconsin-Madison
- Biological Factors Influencing Exercise Performance (742-614), University of Wisconsin-Madison
- Laboratory Techniques in Exercise Physiology (742-615), University of Wisconsin-Madison
- Metabolic Responses to Exercise and Environmental Stress (742-774), University of Wisconsin-Madison
- Nutritional Sciences Seminar (694-931), University of Wisconsin-Madison
- Human Biodynamics Seminar (742-953), University of Wisconsin-Madison
- Graduate Seminar: Movement Science (KINSLGY-600), University of Michigan
- Metabolic Responses to Exercise (KINSLGY/PHYSIOL-545), University of Michigan
- Exercise Adaptations in Health and Disease (KINSLGY-511), University of Michigan
- Biological and Behavioral Bases for Human Movement (MOVESCI-110), University of Michigan
- Professional Skills for Research Scientists (KINSLGY-616), University of Michigan

PUBLICATIONS:

Primary Research Publications:

- 1. Johnston, C.S., G.D. Cartee and B.E. Haskell. Effect of ascorbic acid nutriture on protein-bound hydroxyproline in guinea pig plasma. *J. Nutr.* 115:1089-1093, 1985.
- 2. Young, D.A., J.J. Uhl, G.D. Cartee and J.O. Holloszy. Activation of glucose transport in muscle by prolonged exposure to insulin. *J. Biol. Chem.* 261(34):16049-16053, 1986.
- 3. Cartee, G.D. and R.P. Farrar. Muscle respiratory capacity and VO₂max in identically trained young and old rats. *J. Appl. Physiol.* 63:257-261, 1987.
- 4. Macrae, P.G., W.W. Spirduso, G.D. Cartee, R.P. Farrar and R.E. Wilcox. Endurance training effects on striatal D2 dopamine receptor binding and striatal dopamine metabolite levels. *Neurosci. Letters*. 79:138-144, 1987.
- 5. Cartee, G.D. and R.P. Farrar. Exercise training induces glycogen sparing during exercise by old rats. *J. Appl. Physiol.* 64:259-265, 1988.

- 6. Klip, A., T. Ramlal, A.G. Douen, E. Burdett, D. Young, G.D. Cartee, and J.O. Holloszy. Insulininduced decrease in 5'nucleotidase activity in skeletal muscle membranes. *Fed. Euro. Biochem. Soc.* 238:419-423, 1988.
- 7. S.H. Constable, R.J. Favier, G.D. Cartee, D.A. Young and J.O. Holloszy. Muscle glucose transport: interactions of in vitro contractions, insulin, and exercise. *J. Appl. Physiol.* 64:2329-2332, 1988.
- 8. Farrar, R.P., J.W. Starnes, G.D. Cartee, P.Y. Oh and H.L. Sweeney. Effects of exercise on cardiac myosin isozyme composition during the aging process. *J. Appl. Physiol.* 64:880-883, 1988.
- 9. Cartee, G.D., D.A. Young, M.D. Sleeper, J. Zierath, H. Wallberg-Henriksson and J.O. Holloszy. Prolonged increase in insulin-stimulated muscle glucose transport after exercise. *Am. J. Physiol.* 256 (*Endocrinol. Metab.* 19): E494-E499, 1989.
- 10. Douen, A.G., T. Ramlal, A. Klip, D.A. Young, G.D. Cartee and J.O. Holloszy. Exercise-induced increase in glucose transporters in plasma membranes of rat skeletal muscle. *Endocrinology*. 124:449-454, 1989.
- 11. Lawrence, J.C., J. Colvin, G.D. Cartee and J.O. Holloszy. Effects of aging and exercise on insulin action in rat adipocytes are correlated with changes in fat cell volume. *J. Geront.: Biol. Sci.* 44:B88-92, 1989.
- 12. Cartee, G.D. and J.O. Holloszy. Exercise increases susceptibility of muscle glucose transport to activation by various stimuli. *Am. J. Physiol.* 258 (Endocrinol. Metab. 21): E390-E393, 1990.
- 13. Klip, A., T. Ramlal, G.D. Cartee, E.A. Gulve and J.O. Holloszy. Insulin-induced recruitment of glucose transporters to the plasma membrane in skeletal muscle from diabetic rats. *Biochem. Biophys. Res. Comm.* 172: 728-736, 1990.
- Douen, A.G., T. Ramlal, S. Rastogi, P.J. Bilan, G.D. Cartee, M. Vranic, J.O. Holloszy and A. Klip. Exercise induces recruitment of the "insulin responsive glucose transporter". *J. Biol. Chem.* 265:13427-13430, 1990.
- 15. Douen, A.G., T. Ramlal, G.D. Cartee and A. Klip. Exercise modulates the insulin-induced translocation of glucose transporters in rat skeletal muscle. *FEBS Letters*. 261: 256-260, 1990.
- Gulve, E.A., G.D. Cartee, J.R. Zierath, V.M. Corpus and J.O. Holloszy. Reversal of enhanced muscle glucose transport after exercise: roles of insulin and exercise. *Am. J. Physiol.* 259 (*Endocrinol. Metab.* 22): E331-E335, 1990.
- 17. Cartee, G.D., A.G. Douen, T. Ramlal, A. Klip and J.O Holloszy. Glucose transport in skeletal muscle: stimulation by hypoxia. *J. Appl. Physiol.* 70: 1593-1600, 1991.
- 18. Gulve, E.A., G.D. Cartee, J.H. Youn and J.O. Holloszy. Prolonged incubation of skeletal muscle increases system A amino acid transport. *Am. J. Physiol.* 260 (*Cell Physiol.* 29): C88-C95, 1991.
- 19. Gulve, E.A., G.D. Cartee, and J.O. Holloszy. Prolonged incubation of skeletal muscle in vitro: Prevention of increases in glucose transport. *Am. J. Physiol.* 261 (*Cell Physiol.* 30): C154-C160, 1991.
- 20. Holloszy, J.O., M. Chen, G.D. Cartee, and J.C. Young. Atrophy of skeletal muscle in old rats: Differential changes in the three fiber types. *Mech. Ageing Develop.* 60: 199-213, 1991.
- 21. Ren, J., E.A. Gulve, G.D. Cartee, and J.O. Holloszy. Hypoxia causes glycogenolysis without an increase in percentage phosphorylase a in rat skeletal muscle. *Am. J. Physiol.* 263 (*Endocrinol. Metab.* 26): E1086-E1091, 1992.
- 22. Cartee, G.D., C. Briggs-Tung, and J.O. Holloszy. Diverse effects of calcium channel blockers on skeletal muscle glucose transport. *Am. J. Physiol.* 263 (*Regulatory Integrative Comp. Physiol.* 32): R70-R75, 1992.
- 23. Cartee, G.D. Age-related decline in myocardial GLUT-4 glucose transporter protein levels of rats. *J. Geront.: Biol. Sci.* 48: B168-B170, 1993.
- 24. Cartee, G.D., C. Briggs-Tung, and E.W. Kietzke. Persistent effect of exercise on glucose transport across the lifespan. *J. Appl. Physiol.* 75(2): 972-978, 1993.
- 25. Stanley, W.C., J.L. Hall, K.R. Smith, G.D. Cartee, T.A. Hacker, and J.A. Wisneski. Myocardial glucose transporters and glycolytic metabolism in hyperglycemic diabetic swine. *Metabolism.* 43 (1): 61-69, 1994.

- Hall, J.L., R.S. Mazzeo, D.A. Podolin, G.D. Cartee, and W.C. Stanley. Exercise training does not compensate for an age-related decrease in myocardial GLUT-4 concentration. *J. Appl. Physiol.* 76(1): 104-111, 1994.
- 27. Cartee, G.D., E.W. Kietzke, and C. Briggs-Tung. Adaptation of muscle glucose transport with caloric restriction in adult, middle-aged and old rats. *Am. J. Physiol.* 266 (Regulatory Integrative Comp. Physiol. 35): R1443-R1447, 1994.
- 28. Cartee, G.D. and D.J. Dean. Glucose transport with brief dietary restriction: Heterogenous responses in muscles. *Am. J. Physiol.* 266 (*Endocrinol. Metab.* 29): E946-E952, 1994.
- 29. Cartee, G.D. and E.E. Bohn. Growth hormone reduces glucose transport but not GLUT1 or GLUT4 in adult and old rats. *Am. J. Physiol.* 268 (*Endocrinol. Metab.* 31): E902-E909, 1995.
- Cartee, G.D., E.E. Bohn, B.T. Gibson, and R.P. Farrar. Growth hormone supplementation increases skeletal muscle mass of old male Fischer 344/Brown Norway rats. *J. Geront.: Biol. Sci.* 51A (3): B214-B219, 1996.
- 31. Dean, D.J. and G.D. Cartee. Brief dietary restriction increases skeletal muscle glucose transport in old Fischer 344 rats. *J. Geront.: Biol. Sci.* 51A (3): B209-B213, 1996.
- 32. Kohles, S.S., G.D. Cartee and R. Vanderby, Jr. Cortical elasticity in aging rats with and without growth hormone treatments. *J. Med. Engineering Tech.* 20: 157-163, 1996.
- 33. Cartee, G.D., T.J. Wetter, A.N. Guerra and T.N. Cox. Decline in muscle insulin-dependent and independent glucose uptake but not GLUT-4 in 21- vs. 28-day-old rats. *Am. J. Physiol. (Endocrinol. Metab.* 29). 272: E446-E452, 1997.
- 34. Ranheim, T., Dumke, C., Schueler, K.L, Cartee, G.D., and Attie, A.D. Interaction between BTBR and C57BL/6J genomes produces an insulin resistance syndrome in (BTBR x C57BL/6J) F1 mice. *Arterioscler. Thromb. Vasc. Biol.* 17(11): 3286-3293, 1997.
- 35. Dean, D.J., A.C. Gazdag, T.J. Wetter, and G.D. Cartee. Comparison of the effects of 20 days and 15 months of calorie restriction on male Fischer 344 rats. *Aging: Clin. Exper. Res.* 10(4): 303-307, 1998.
- 36. Dean, D.J., J.T. Brozinick, Jr., S.W. Cushman, and G.D. Cartee. Calorie restriction increases cell surface GLUT4 in insulin-stimulated skeletal muscle. *Am. J. Physiol. (Endocrinol. Metab.* 38). 275: E957-E964, 1998.
- 37. Gazdag, A.C., M.Z. Tucker, L.P. Turcotte, D.J. Dean, and G.D. Cartee. Effect of extracellular palmitate on 2-deoxy-D-glucose uptake in muscles from ad libitum fed and calorie restricted rats. *Biochem. Biophys. Res. Comm.* 252: 733-737, 1998.
- 38. Brozinick, Jr., J.T., T.H. Reynolds, D.J. Dean, G.D. Cartee, and S.W. Cushman. KN-62, an inhibitor of calcium dependent calmodulin kinase II, inhibits both insulin and hypoxia-stimulated glucose transport in skeletal muscle. *Biochem. J.* 339(Part 3): 533-540, 1999.
- 39. Wetter, T.J., A.C. Gazdag, D.J. Dean, and G.D. Cartee. Effect of calorie restriction on *in vivo* glucose metabolism by individual tissues in rats. *Am. J. Physiol.*(*Endocrinol. Metab.*39).276:E728-E738, 1999.
- 40. Gazdag, A.C., C.L. Dumke, C.R. Kahn, and G.D. Cartee. Calorie restriction increases insulin stimulated glucose transport in skeletal muscle from IRS-1 knockout mice. *Diabetes*. 48:1930-1936, 1999.
- 41. Gazdag, A.C., S. Sullivan, J.W. Kemnitz, and G.D. Cartee. Effect of long-term calorie restriction on GLUT4, phosphatidylinositol-3 kinase p85 subunit, and insulin receptor substrate-1 protein levels in rhesus monkey skeletal muscle. *J. Geront.: Biol. Sci.* 55A: 44-46, 2000.
- 42. Gazdag, A.C., T.J. Wetter, R.T. Davidson, K.A. Robinson, M.G. Buse, A.J. Yee, L.P. Turcotte, and G.D. Cartee. Lower calorie intake enhances muscle insulin action and reduces hexosamine levels. *Am. J. Physiol. Regulatory, Integrative Comp. Physiol.* 278: R504-R512, 2000.
- 43. Dean, D.J. and G.D. Cartee. Calorie restriction increases insulin-stimulated tyrosine phosphorylation of insulin receptor and insulin receptor substrate-1 in rat skeletal muscle. *Acta Physiol. Scand.* 169: 133-140, 2000.

- 44. Dumke, C.L., J.S. Rhodes, T. Garland, Jr., E. Maslowski, J.G. Swallow, A.C. Gazdag, and G.D. Cartee. Genetic selection of mice for high voluntary wheel-running: Effect on skeletal muscle glucose uptake. *J. Appl. Physiol.* 91: 1289-1297, 2001.
- 45. Arias, E.B., L.E. Gosselin, and G.D. Cartee. Exercise training eliminates age-related differences in skeletal muscle insulin receptor and IRS-1 abundance in rats. *J. Geront.: Biol. Sci.* 56A: B1-B7, 2001.
- 46. Dumke, C.L., A.C. Wetter, E.B. Arias, C.R. Kahn, and G.D. Cartee. Absence of insulin receptor substrate-1 expression does not alter GLUT1 or GLUT4 abundance or contraction-stimulated glucose uptake by mouse skeletal muscle. *Hormone Metab. Research.* 33: 696-700, 2001.
- 47. Davidson, R.T., E.B. Arias, and G.D. Cartee. Calorie restriction increases muscle insulin action, but not IRS-1-, IRS-2- or phosphotyrosine-PI3-kinase. *Am. J. Physiol. Endocrinol. Metab.* 282: E270-E276, 2002.
- 48. Dumke, C.L., J. Kim, E.B. Arias, and G.D. Cartee. Role of kallikrein-kininogen system in insulinstimulated glucose transport after muscle contractions. *J. Appl. Physiol.* 92: 657-664, 2002.
- 49. Chapman, J., A.W. Garvin, A. Ward, G.D. Cartee. Unaltered insulin sensitivity after resistance exercise bout by postmenopausal women. *Med. Sci. Sports Exerc.* 34:936-941, 2002.
- 50. Al-Khalili, L., G.D. Cartee, and A. Krook. RNA interference-mediated reduction in GLUT1 inhibits serum-induced glucose transport in primary human skeletal muscle cells. *Biochem. Biophys. Res. Comm.* 307: 127-132, 2003.
- McCurdy, C.E., R.T. Davidson, and G.D. Cartee. Brief calorie restriction increases Akt2 phosphorylation in insulin-stimulated rat skeletal muscle. *Am. J. Physiol.* (*Endocrinol. Metab.*) 285: E693-E700, 2003.
- 52. Kim, J., R.S. Solis, E.B. Arias, and G.D. Cartee. Post-contraction insulin sensitivity: Relationship with contraction protocol, glycogen concentration and 5'AMP-activated protein kinase phosphorylation. *J. Appl. Physiol.* 96: 575-583, 2004.
- 53. Arias, E.B., J. Kim, and G.D. Cartee. Prolonged incubation in PUGNAC results in increased protein O-linked glycosylation and insulin resistance in rat skeletal muscle. *Diabetes*. 53: 921-930, 2004.
- 54. Al-Khalili, L., A. Krook, J.R. Zierath, and G.D. Cartee. Prior serum and AICAR-induced AMPK activation in primary human myocytes does not lead to subsequent increase insulin-stimulated glucose uptake. *Am. J. Physiol.(Endocrinol. Metab.)*, 287: E553-E557, 2004.
- 55. Bruss, M.D., E.B. Arias, G.E. Lienhard, and G.D. Cartee. Increased phosphorylation of Akt substrate of 160 kDa (AS160) in rat skeletal muscle in response to insulin or contractile activity. *Diabetes*. 54: 41-50, 2005.
- 56. Sancho, R., J. Kim and G.D. Cartee. Decreased contraction-stimulated glucose transport in isolated epitrochlearis muscles of pregnant rats. *J. Appl. Physiol.* 98: 1021-1027, 2005.
- 57. McCurdy, C.E, R.T. Davidson and G.D. Cartee. Calorie restriction increases the ratio of phosphatidylinositol 3-kinase catalytic to regulatory subunits in rat skeletal muscle. *Am. J. Physiol.(Endocrinol. Metab.).* 288: E996-E1001, 2005.
- 58. Arias, E.B. and G.D. Cartee. Relationship between protein O-linked glycosylation and insulinstimulated glucose transport in rat skeletal muscle following calorie restriction or PUGNAc exposure. *Acta Physiol. Scand.* 183: 281-289, 2005.
- 59. McCurdy, C.E. and G.D. Cartee. Akt2 is essential for the full effect of calorie restriction on insulinstimulated glucose uptake in skeletal muscle. *Diabetes*. 54: 1349-1356, 2005.
- 60. Hamada, T., E.B. Arias and G.D. Cartee. Increased submaximal insulin-stimulated glucose uptake in mouse skeletal muscle after treadmill exercise. *J. Appl. Physiol.* 101: 1368-1376, 2006.
- 61. Kim, J., E.B. Arias and G.D. Cartee. Effects of prior swim exercise on glucose uptake in isolated skeletal muscles from mice. *J. Physiol. Sci.* 56: 305-312, 2006.
- 62. Arias, E.B., J. Kim, K. Funai and G.D. Cartee. Prior exercise increases Akt Substrate of 160 kDa phosphorylation in rat skeletal muscle. *Am. J. Physiol. (Endocrinol. Metab.)* 292: E1191-E1200, 2007. PMC17179389.

- 63. Arias, E.B and G.D. Cartee. In vitro simulation of calorie restriction-induced decline in glucose and insulin leads to increased insulin-stimulated glucose transport in rat skeletal muscle. *Am. J. Physiol.* (*Endocrinol. Metab.*) 293: E1782-E1788, 2007. PMC17925453.
- 64. Barger, J.L., T. Kayo, J.M. Vann, E.B. Arias, J. Wang, T.A. Hacker, Y. Wang, D. Raederstorff, J.D. Morrow, C. Leeuwenburgh, D.B. Allison, K.W. Saupe, G.D. Cartee, R. Weindruch, and T.A. Prolla. A low dose of dietary resveratrol partially mimics caloric restriction and retards aging parameters in mice. *PLoS ONE*. 3(6): e2264, 2008. PMC2386967.
- 65. Funai, K. and G.D. Cartee. Contraction-stimulated glucose transport in rat skeletal muscle is sustained despite reversal of increased PAS-phosphorylation of AS160 and TBC1D1. *J. Appl. Physiol.* 105: 1788-1795, 2008. PMC2612461.
- 66. Funai, K. and G.D. Cartee. Inhibition of contraction-stimulated AMPK inhibits contractionstimulated increases in PAS-TBC1D1 and glucose transport without altering PAS-AS160 in rat skeletal muscle. *Diabetes*. 58(5): 1096-104, 2009. PMC2671042.
- 67. Blair, D.R., K. Funai, G.G. Schweitzer, E.B. Arias and G.D. Cartee. A myosin II ATPase inhibitor reduces force production, glucose transport and phosphorylation of AMPK and TBC1D1 in electrically stimulated rat skeletal muscle. *Am. J. Physiol. (Endocrinol. Metab.)* 296(5): E993-E1002, 2009. PMC2681314.
- 68. Funai, K., G.G. Schweitzer, N. Sharma, M. Kanzaki and G.D. Cartee. Increased AS160 phosphorylation, but not TBC1D1 phosphorylation, with increased post-exercise insulin sensitivity in rat skeletal muscle. *Am. J. Physiol. (Endocrinol. Metab.)* 297(1):E242-51, 2009. PMC2711658.
- 69. Sharma, N., E.B. Arias and G.D. Cartee. Rapid reversal of insulin-stimulated AS160 phosphorylation in rat skeletal muscle after insulin exposure. *Physiol. Res.* 59: 71-78, 2010. PMC19249902.
- 70. Funai, K., G.G. Schweitzer, C.M. Castorena, M. Kanzaki and G.D. Cartee. In vivo exercise followed by in vitro contraction additively elevates subsequent insulin-stimulated glucose transport by rat skeletal muscle. *Am. J. Physiol. (Endocrinol. Metab.).* 298: E999-1010, 2010. PMC2867374.
- 71. Sharma, N., E.B. Arias, M.P. Sajan, J.G. MacKrell, A.D. Bhat, R.V. Farese and G.D. Cartee. Insulin resistance for glucose uptake and Akt2 phosphorylation in the soleus, but not epitrochlearis muscles of old versus adult rats. *J. Appl. Physiol.* 108: 1631-40, 2010. PMC2886681.
- 72. Schweitzer, G.G. and G.D. Cartee. Post-exercise skeletal muscle glucose transport is normal in kininogen deficient rats. *Med. Sci. Sports Exer.* 43(7): 1148-53, 2011. PMC3542765.
- 73. Sharma, N., E.B. Arias, A.D. Bhat, D.A. Sequea, S. Ho, K.K. Croff, M.P. Sajan, J.G. MacKrell, R.V. Farese and G.D. Cartee. Mechanisms for increased insulin-stimulated Akt phosphorylation and glucose uptake in fast- and slow-twitch skeletal muscles of calorie restricted rats. *Am. J. Physiol.* (*Endocrinol. Metab.*) 300(6):E966-78, 2011. PMC3118592.
- 74. Schweitzer, G.G., Castorena, C.M., Hamada, T., Funai, K., Arias, E.B. and Cartee, G.D. The B2 receptor of bradykinin is not essential for the post-exercise increase in glucose transport by insulinstimulated mouse skeletal muscle. *Physiol. Res.* 60: 511-519, 2011. PMC3535296.
- 75. Castorena, C.M., J.G. MacKrell, J.S. Bogan, M. Kanzaki and G.D. Cartee. Clustering of GLUT4, TUG and RUVBL2 protein levels correlate with myosin heavy chain isoform pattern in skeletal muscles, but AS160 and TBC1D1 levels do not. *J. Appl. Physiol.* 111(4):1106-17, 2011. PMC3191788.
- 76. Sharma, N., A.D. Bhat, A.D. Kassa, Y. Xiao, E.B. Arias and G.D. Cartee. Improved insulin sensitivity with calorie restriction does not require reduced JNK1/2, p38 or ERK1/2 phosphorylation in skeletal muscle of 9 month-old rats. *Am. J. Physiol. (Regul. Integr. Comp.)* 302(1):R126-36, 2012. PMC3349379.
- 77. MacKrell, J.G. and G.D. Cartee. A novel method to measure glucose uptake and myosin heavy chain isoform expression of single fibers from rat skeletal muscle. *Diabetes*. 61(5):995-1003, 2012. PMC3331778.
- 78. Sequea, D.A., N. Sharma, E.B. Arias, and G.D. Cartee. Calorie restriction enhances insulinstimulated glucose uptake and Akt phosphorylation in both fast-twitch and slow-twitch skeletal

muscle of 24 month-old rats. J. Gerontol A Biol. Sci. Med Sci. 67(12):1279-85, 2012. PMC3502057.

- 79. Sharma, N., C.M. Castorena, and G.D. Cartee. Tissue-specific responses of IGF-1/insulin and mTOR signaling in calorie restricted rats. *PLoS ONE*. 7: e38835, epub 2012, June 6. PMC3368930.
- Sharma, N., E.B. Arias, D.A. Sequea and G.D. Cartee. Preventing the calorie restriction-induced increase in insulin-stimulated Akt2 phosphorylation eliminates calorie restriction's effect on glucose uptake in skeletal muscle. *BBA - Molecular Basis of Disease*. 1822(11):1735-1740, 2012. PMC3444632.
- 81. MacKrell, J.G., E.B. Arias, and G.D. Cartee. Fiber type-specific differences in glucose uptake by single fibers from skeletal muscles of 9 and 25 month-old rats. *J. Gerontol A Biol. Sci. Med Sci.* 67(12):1286-94, 2012. PMC3502059.
- Schweitzer, G.G., E.B. Arias, and G.D. Cartee. Sustained post-exercise increases in AS160 Thr⁶⁴² and Ser⁵⁸⁸ phosphorylation in skeletal muscle without sustained increases in kinase phosphorylation. *J. Appl. Physiol.* 13(12):1852-61, 2012. PMC3544494.
- 83. Sharma, N., C.M. Castorena, and G.D. Cartee. Greater insulin sensitivity in calorie restricted rats occurs with unaltered circulating levels of several important myokines and cytokines. *Nutr. & Metab.* 9(1):90, 2012. PMC3541154.
- Sharma, N., D.A. Sequea, E.B. Arias, and G.D. Cartee. Greater insulin-mediated Akt phosphorylation concomitant with heterogeneous effects on phosphorylation of Akt substrates in soleus of calorie restricted rats. *Am. J. Physiol. (Regul. Integr. Comp.)* 303(12):R1261-7, 2012. PMC3532588.
- 85. Xiao, Y., N. Sharma, E.B. Arias, C.M. Castorena, and G.D. Cartee. A persistent increase in insulinstimulated glucose uptake by both fast-twitch and slow-twitch skeletal muscles after a single exercise session by old rats. *AGE*. (Dordr). 34(3): 573-82, 2013. PMC3636414.
- Sequea, D.A., N. Sharma, E.B. Arias, and G.D. Cartee. Greater filamin C, GSK3α, and GSK3β serine phosphorylation in insulin-stimulated isolated skeletal muscles of calorie restricted 24 monthold rats. *Mech. Ageing Develop.* 134(1-2):60-3, 2013. PMC3558636.
- 87. Sharma, N., D.A. Sequea, C.M. Castorena, E.B. Arias, N.R. Qi, and G.D. Cartee. Heterogeneous effects of calorie restriction on in vivo glucose uptake and insulin signaling of individual rat skeletal muscles. *PLoS ONE*. 2013 Jun 3;8(6):e65118. doi: 10.1371/journal.pone.0065118. PMC3670927.
- Ikonomov, O.C, D., Sbrissa, K. Delvecchio, H.-Z. Feng, G.D. Cartee, J.-P. Jin, A. Shisheva Muscle-specific Pikfyve gene disruption causes glucose intolerance, insulin resistance, adiposity and hyperinsulinemia but not muscle fiber-type switching. *Am. J. Physiol. (Endocrinol. Metab.)* 305(1):E119-31, 2013. doi: 10.1152/ajpendo.00030.2013. PMC3725567.
- Löffler, M.G., A.L. Birkenfeld, K.M. Philbrick, K.M., J.P. Belman, E.N. Habtemichael, C.J. Booth, C.M. Castorena, C.S. Choi, F.R. Jornayvaz, B.M. Gassaway, H.-Y. Lee, G.D. Cartee, W. Philbrick, G.I. Shulman, V.T. Samuel, and J.S. Bogan. Enhanced fasting glucose turnover in mice with disrupted action of TUG protein in skeletal muscle. *J. Biol. Chem.* 288(28):20135-50, 2013. doi: 10.1074/jbc.M113.458075. PMC3711282.
- Castorena, C.M., E.B. Arias, N. Sharma, and G.D. Cartee. Post-exercise improvement in insulinstimulated glucose uptake occurs concomitant with greater AS160 phosphorylation in muscle from normal and insulin resistant rats. *Diabetes*. 63(7):2297-308, 2014. doi: 10.2337/db13-1686. PMC4066340.
- Castorena, C.M., E.B. Arias, N. Sharma, and G.D. Cartee. Effects of brief high fat diet and acute exercise on the mTORC1 and IKK/NF-κB pathways in rat skeletal muscle. *Appl. Physiol. Nutr. Metab.* 40(3):251-62, 2015. doi: 10.1139/apnm-2014-0412. PMC5024348.
- Castorena, C.M., E.B. Arias, N. Sharma, J.S. Bogan and G.D. Cartee. Fiber type effects on contraction-stimulated glucose uptake and GLUT4 abundance in single fibers from rat skeletal muscle. *Am. J. Physiol. (Endocrinol. Metab.).* 308(3):E223-30, 2015. 2014 Dec 9:ajpendo.00466.2014. doi: 10.1152/ajpendo.00466.2014. PMC4312834.

- 93. Sharma, N., H. Wang, E.B. Arias, C.M. Castorena, and G.D. Cartee. Mechanisms for independent and combined effects of calorie restriction and acute exercise on insulin-stimulated glucose uptake by skeletal muscle of old rats. *Am. J. Physiol. (Endocrinol. Metab.)*. 308(7):E603-12, 2015. (Epub ahead of print February 10, 2015). doi:10.1152/ajpendo.00618.2014. PMC4385876
- 94. Wang, H., N. Sharma, E.B. Arias, and G.D. Cartee. Insulin signaling and glucose uptake in the soleus muscle of 30 month-old rats after calorie restriction with or without acute exercise. *J. Gerontol. A Biol. Sci. Med. Sci.* 71(3):323-32, 2016. doi: 10.1093/gerona/glv142. PMID: 26341783.
- 95. Wang, H., E.B. Arias, and G.D. Cartee. Calorie restriction leads to greater Akt2 activity and glucose uptake by insulin-stimulated skeletal muscle from old rats. *Am. J. Physiol. (Regul. Integr. Comp.).* 310(5):R449-58, 2016. doi: 10.1152/ajpregu.00449.2015. PMC4796740.
- 96. Sharma, P., E.B. Arias, and G.D. Cartee. Protein phosphatase 1α regulates AS160 Ser⁵⁸⁸ and Thr⁶⁴² dephosphorylation in skeletal muscle. *Diabetes*. 65(9):2606-17, 2016. pii: db150867. PMC5001182.
- 97. Sharma, N., E.B. Arias, and G.D. Cartee. Inhibition of Akt2 phosphorylation abolishes the calorie restriction-induced improvement in insulin-stimulated glucose uptake by rat soleus muscle. *Appl. Physiol. Nutr. Metab.* 41(11):1208-1211, 2016. doi: 10.1139/apnm-2016-0326. PMC5228618.
- 98. Cartee, G.D., E.B. Arias, C.S. Yu and M.W. Pataky. Novel single skeletal muscle fiber analysis reveals a fiber type selective effect of acute exercise on glucose uptake. *Am. J. Physiol. (Endocrinol. Metab.).* 311(5):E818-E824, 2016. doi: 10.1152/ajpendo.00289.2016. PMC5130359
- Zheng, X. and G.D. Cartee. Insulin-induced Effects on the Subcellular Localization of AKT1, AKT2 and AS160 in Rat Skeletal Muscle. *Scientific Reports.* 2016 Dec 14;6:39230. doi: 10.1038/srep39230. PMC5155274.
- 100. Dion, F., C. Dumayne, N. Henley, S. Beauchemin, E.B. Arias, F.A. Leblond, S. Lesage, S. Lefrançois, G.D. Cartee and V. Pichette. Mechanism of insulin resistance in a rat model of kidney disease and the risk of developing type 2 diabetes. *PLoS One*. 2017 May 1;12(5):e0176650. doi: 10.1371/journal.pone.0176650. eCollection 2017. DOI: 10.1371/journal.pone.0176650. PMC5411038.
- 101. Wang, H., E.B. Arias, C.S. Yu, A.R.P. Verkerke and G.D. Cartee. Effects of calorie restriction and fiber type on glucose uptake and abundance of electron transport and oxidative phosphorylation proteins in single fibers from old rats. *J. Gerontol. A Biol. Sci. Med. Sci.* 72(12):1638-1646, 2017 doi: 10.1093/gerona/glx099. PMC5411038.
- 102. Arias, E.B., H. Wang and G.D. Cartee. Akt Substrate of 160 kDa dephosphorylation rate is reduced in insulin-stimulated rat skeletal muscle after acute exercise. *Physiol. Res.* 67: 143-147, 2018. PMID: 29137480.
- 103. Pataky, M.W., H. Wang, C.S. Yu, E.B. Arias, R.J. Ploutz-Snyder, X. Zheng and G.D. Cartee. Highfat diet-induced insulin resistance in single skeletal muscle fibers is fiber type selective. *Scientific Reports*. 7(1):13642, Oct 20, 2017. doi: 10.1038/s41598-017-12682-z. PMC5651812.
- 104. Ludzki, A.C., M.W. Pataky, G.D. Cartee and J.F. Horowitz. Acute endurance exercise increases *Vegfa* mRNA expression in adipose tissue of rats during the early stages of weight gain. *Appl. Physiol. Nutr. Metab.* 43(7):751-754, 2018. doi: 10.1139/apnm-2017-0434. PMID: 29486133
- 105. Oki, K., E.B. Arias, M. Kanzaki and G.D. Cartee. Prior treatment with the AMPK activator AICAR induces subsequently enhanced glucose uptake in isolated skeletal muscles from 24 month-old rats. *Appl. Physiol. Nutr. Metab.* 43(8):795-805, 2018. doi: 10.1139/apnm-2017-0858. PMID: 29518344
- 106. Wang, H., E.B. Arias, M.W. Pataky, L.J. Goodyear and G.D. Cartee. Postexercise improvement in glucose uptake occurs concomitant with greater γ3-AMPK activation and AS160 phosphorylation in rat skeletal muscle. Am. J. Physiol. (Endocrinol. Metab.). 315(5):E859-E871, 2018. doi: 10.1152/ajpendo.00020.2018. PMID: 30130149
- 107. Pataky, M.W., C.S. Yu, Y. Nie, E.B. Arias, M. Singh, C.L. Mendias, R. J. Ploutz-Snyder and G.D. Cartee. Skeletal muscle fiber type-selective effects of acute exercise on insulin-stimulated glucose

uptake in insulin resistant, high fat-fed rats. Am. J. Physiol. (Endocrinol. Metab.). 316(5):E695-E706, 2019. doi: 10.1152/ajpendo.00482.2018. PMID: 30753114

- 108. Wang, H., E.B. Arias, K. Oki, M.W. Pataky, J.A. Almallouhi and G.D. Cartee. Fiber Type-selective Exercise Effects on AS160 Phosphorylation. Am. J. Physiol. (Endocrinol. Metab.). 316(5):E837-E851, 2019. doi: 10.1152/ajpendo.00528.2018. PMID: 30835507
- 109. Arias, E.B., X. Zheng, S. Agrawal, and G.D. Cartee. Whole body glucoregulation and tissue-specific glucose uptake in a novel Akt Substrate of 160 kDa knockout rat model. *PLoS One*. 2019 Apr 29;14(4):e0216236. doi: 10.1371/journal.pone.0216236. eCollection 2019
- 110. Kazyken, D., B. Magnuson, C. Bodur, H.A. Acosta-Jaquez, D. Zhang, X. Tong, T.M. Barnes, G.K. Steinl, N.E. Patterson, C.H. Altheim, N. Sharma, K. Inoki, G.D. Cartee, D. Bridges, L. Yin, S.M. Riddle, and D.C. Fingar. AMPK activates mTORC2 to promote cell survival during acute energetic stress. *Science Signaling*. 2019 Jun 11;12(585). pii: eaav3249. doi: 10.1126/scisignal.aav3249. PMID: 31186373
- 111. Pataky, M.W., S.L. Van Acker, R. Dhingra, M.M. Freeburg, E.B. Arias, K. Oki, H. Wang, J.T. Treebak, and G.D. Cartee. Fiber type-specific effects of acute exercise on insulin-stimulated AS160 phosphorylation in insulin-resistant rat skeletal muscle. *Am. J. Physiol. (Endocrinol. Metab.).* 317(6):E984-E998, 2019. doi: 10.1152/ajpendo.00304.2019. PMID: 31573845
- 112. *Oki, K., E.B. Arias, M. Kanzaki and G.D. Cartee. Effects of acute exercise combined with calorie restriction initiated late-in-life on insulin signaling, lipids and glucose uptake in skeletal muscle from old rats. J. Gerontol. A Biol. Sci. Med. Sci. 75(2):207-217, 2020. doi: 10.1093/gerona/gly222.
 *Selected as Editor's Choice for February 2020 Issue of the *J Geront A Biol Sci Med Sci*.
- 113. Pataky, M.W., E.B. Arias, H. Wang, X. Zheng, and G.D. Cartee. Exercise effects on γ3-AMPK activity, phosphorylation of Akt2 and AS160, and insulin-stimulated glucose uptake in insulin-resistant rat skeletal muscle. *J. Appl. Physiol.* 128(2):410-421, 2020. doi: 10.1152/japplphysiol.00428.2019. [Epub ahead of print]. PMID: 31944891
- 114. Zheng, X., E.B. Arias, N.R. Qi, T.L. Saunders, and G.D. Cartee. In vivo glucoregulation and tissuespecific glucose uptake in female Akt substrate 160 kDa knockout rats. *PLoS One*. 2020 Feb 13;15(2):e0223340. doi: 10.1371/journal.pone.0223340. eCollection 2020.
- 115. Wang, H., E.B. Arias, and G.D. Cartee. Reduced membrane cholesterol content in skeletal muscle is not essential for greater insulin-stimulated glucose uptake after acute exercise by rats. *Appl. Physiol. Nutr. Metab.* 46(6):685-689, 2021. doi: 10.1139/apnm-2021-0130. PMID: 33765397
- 116. Zheng, A., E.B. Arias, H. Wang, S.E. Kwak, X. Pan, D. Duan, and G.D. Cartee. The exerciseinduced improvement in insulin-stimulated glucose uptake by rat skeletal muscle is absent in male AS160-knockout rats, partially restored by muscle expression of phosphomutated AS160, and fully restored by muscle expression of wildtype AS160. *Diabetes*. 2021 Nov 9:db210601. Online ahead of print. *Diabetes*. 71(2):219-232, 2022. PMCID: PMC8914290 doi: 10.2337/db21-0601.
- 117. Wang, H., E.B. Arias, J.T. Treebak, and G.D. Cartee. Exercise effects on γ3-AMPK activity, Akt substrate of 160 kDa phosphorylation, and glucose uptake in muscle of female rats fed either low fat or high fat diet. *J. Appl. Physiol.* 132(1):140-153, 2022. doi: 10.1152/japplphysiol.00533.2021. PMID: 34882030
- 118. Wang, H., A. Zheng, E.B. Arias, and G.D. Cartee. Prior AICAR induces elevated glucose uptake concomitant with greater γ3-AMPK activation and reduced membrane cholesterol in skeletal muscle from 26 month-old rats. *FACETS*. 7:774-791, 2022. Doi: 10.1139/facets-2021-0166.
- 119. *Zheng, A., S.E. Kwak, J.B. Birk., E.B. Arias, D.Thorley, J.F.P. Wojtaszewski, and G.D. Cartee. Greater phosphorylation of AMPK and multiple AMPK substrates in the skeletal muscle of 24 month-old calorie restricted compared to ad libitum fed male rats. *J. Gerontol. A Biol. Sci. Med. Sci.* 78(2):177-185, 2023. doi: 10.1093/gerona/glac218. *Selected as Editor's Choice for February 2023 Issue of the *J Geront A Biol Sci Med Sci.*
- 120. Zheng, A., H. Wang, E.B. Arias, G. Dong, J. Zhao, and G.D. Cartee. Akt substrate of 160 kDa is essential for the calorie restriction-induced increase in insulin-stimulated glucose uptake by skeletal

muscle of female rats. *Appl. Physiol. Nutr. Metab.* 48(3):283-92, 2023. http://dx.doi.org/10.1139/apnm-2022-0414

- 121. Wang, H., A. Zheng, E.B. Arias, S.E. Kwak, X. Pan, D. Duan, and G.D. Cartee. AS160 expression, but not AS160 Serine-588, Threonine-642, and Serine-704 phosphorylation, is essential for elevated insulin-stimulated glucose uptake by skeletal muscle from female rats after acute exercise. *FASEB J*. 37(7):e23021, 2023. PMID: 37289137 <u>https://doi.org/10.1096/fj.202300282rr</u>
- 122. Kwak, S.E., A. Zheng, H. Wang, E.B. Arias, X. Pan, Y. Yue, D. Duan, and G.D. Cartee. A novel genetic model provides a unique perspective on the relationship between postexercise glycogen concentration and increases in the abundance of key metabolic proteins after acute exercise. *PLoS One*. 2024 Jan 30;19(1):e0295964. doi: 10.1371/journal.pone.0295964. eCollection 2024.
- 123. Wang, H., A. Zheng, D. Thorley, E.B. Arias, and G.D. Cartee. Independent and combined effects of calorie restriction and AICAR on glucose uptake and insulin signaling in skeletal muscles from 24month-old female and male rats. *Appl. Physiol. Nutr. Metab.* 49(5):614-625, 2024. PMID: 38181403. doi: 10.1139/apnm-2023-0522.
- 124. Wang, H., S.E. Kwak, A. Zheng, E.B. Arias, X. Pan, D. Duan, and G.D. Cartee. Phosphorylation of AS160-Serine 704 is not essential for exercise-increase in insulin-stimulated glucose uptake by skeletal muscles from female or male rats. *Am. J. Physiol. (Endocrinol. Metab.)*. 1;326(6):E807-E818, 2024. PMID: 38656130. doi: https://doi.org/10.1152/ajpendo.00010.2024

Invited Reviews, Book Chapters, Commentaries, and Perspectives:

- 125. Cartee, G.D. Aging skeletal muscle: Response to exercise. Exerc. Sports Sci. Rev. 22: 91-120, 1994.
- 126. Cartee, G.D. Influence of age on skeletal muscle glucose transport and glycogen metabolism. *Med. Sci. Sports Exerc.* 26 (5): 577-585, 1994.
- 127. Cartee, G.D. What insights into age-related changes in skeletal muscle are provided by animal models? *J. Geront.: Biol. Sci.* 50: 137-141, 1995.
- 128. Cartee, G.D. Carbohydrate Metabolism. In: The Encyclopedia of Aging: A Comprehensive Resource in Gerontology and Geriatrics, third edition. G. Maddox, Editor-in-Chief. R.C. Atchley, J.G. Evans, R. Hudson, R. Kane, E. Masoro, M.D. Mezey, L. Poon, and I. Siegler, Associate Editors. Springer Publishing Company: New York. p. 144-145. 2001.
- 129. Cartee, G.D. Effects of aging on glucose homeostasis: Cellular approaches. In: Muscle Metabolism. Frontiers in Animal Diabetes Research. H. Wallberg-Henriksson and J.R. Zierath, Editors. Taylor & Francis, New York, pp 373-391, 2002.
- 130. Cartee, G.D. and J.F. Wojtaszewski. Role of Akt Substrate of 160 kDa in insulin-stimulated and contraction-stimulated glucose transport. *Appl. Physiol. Nutr. Metab.* 32: 557-566, 2007. PMC17510697.
- 131. Cartee, G.D. Exercise and calorie restriction use different mechanisms to improve insulin sensitivity. In: Physical Activity and Type 2 Diabetes: Therapeutic Effects and Mechanisms of Action. J.A. Hawley and J.R. Zierath, Editors. Human Kinetics, Champaign, IL. p. 119-134. 2008.
- 132. Cartee, G.D. and K. Funai. Exercise and insulin: Convergence or divergence at AS160 and TBC1D1? *Exerc. Sports Sci. Rev.* 37: 188-195, 2009. PMC2789346.
- 133. Cartee, G.D. Of mice and men: filling gaps in the TBC1D1 story. *J. Physiol.* 588.22: 4331-2, 2010. PMC3008837.
- 134. Cartee, G.D. Let's get real about the regulation of TBC1D1 and TBC1D4 phosphorylation in skeletal muscle. *J. Physiol.* 592.2: 253–25, 2014. doi: 10.1113/jphysiol.2013.269092. PMC3922487
- 135. Cartee, G.D. Roles of TBC1D1 and TBC1D4 in insulin-stimulated and exercise-stimulated glucose transport of skeletal muscle. *Diabetologia*. 58 (1): 19-30, 2015. doi: 10.1007/-014-3395-5. PMC4258142.
- 136. Cartee, G.D. AMPK-TBC1D4-dependent mechanism for increasing insulin sensitivity in skeletal muscle. *Diabetes*. 64(6):1901-3, 2015. doi: 10.2337/db15-0010. PMC4439559
- Cartee, G.D. Mechanisms for greater insulin-stimulated glucose uptake in normal and insulin resistant skeletal muscle after acute exercise. *Am. J. Physiol. (Endocrinol. Metab.).* 309(12):E949-59, 2015. doi: 10.1152/ajpendo.00416.2015. PMC4816200

- 138. Cartee, G.D., R.T. Hepple, M.M. Bamman, and J.R. Zierath. Exercise promotes healthy aging of skeletal muscle. *Cell Metabolism*. 23(6): 1034–1047, 2016. doi: 10.1016/j.cmet.2016.05.007. PMC5045036
- 139. Cartee, G.D. Once is enough for acute exercise benefits on insulin sensitivity. *J. Physiol.* 597(1): 7-8, 2019-Jan. doi: 10.1113/JP277302. PMID: 30394533
- 140. Pataky, M.W., E.B. Arias, and G.D. Cartee. Measuring both glucose uptake and myosin heavy chain isoform expression in single rat skeletal muscle fibers. *Methods in Molecular Biology*. 1889:283-300, 2019. doi: 10.1007/978-1-4939-8897-6_17. PMID: 30367421
- 141. Hagberg J.M., E.F. Coyle, K.M. Baldwin, G.D Cartee, L. Fontana, M.J. Joyner, J.P. Kirwan, D.R. Seals, and E.P. Weiss. The historical context and scientific legacy of John O. Holloszy. J. Appl. Physiol. 127(2):277-305, 2019. doi: 10.1152/japplphysiol.00669.2018. PMID: 30730811
- 142. Cartee, G.D. Sexual dimorphic effects of exercise training on subcutaneous white adipose tissue of mice. *Diabetes*. 70(6):1242-1243, 2021. doi: 10.2337/dbi21-0014. PMID: 34016599

ABSTRACTS and PRESENTATIONS AT PROFESSIONAL MEETINGS:

- 1. Haymes, E.M., G.D. Cartee, S.M. Rape, E.S. Garcia and T.E. Temples. Thermal and metabolic responses of men and women during exercise in cold and neutral environments. *Med. Sci. Sports Exerc.* 14(2) Supplement: 126, 1982.
- 2. Cartee, C.S. Johnston, C.M. Ardies, G.S. Morris and R.P. Farrar. The effects of endurance training and chronic ethanol ingestion on skeletal muscle carnitine in rats. *Med. Sci. Sports Exerc.* 15(2) Supplement: 127, 1983.
- 3. Cartee, G.D., C.S. Johnston and B.E. Haskell. Effect of graded doses of ascorbic acid on muscle carnitine in the guinea pig. *Fed. Proc.* 43:4324, 1984.
- 4. Farrar, R.P., G.D. Cartee, C. Johnston and W.W. Spirduso. The interaction of aging and exercise upon skeletal muscle enzyme activity and carnitine content. *Fed. Proc.* 43:890, 1984.
- 5. Johnston, C.S., G.D. Cartee and B.E. Haskell. Effect of ascorbic acid nutriture on plasma C1Q levels in the guinea pig. *Fed. Proc.* 43: 890, 1984.
- 6. Wilcox, R.E., M.Limb, J.A. Severson, G.D. Cartee, W.W. Spirduso, J. Fineg and R.P. Farrar. Beta norepinephrine receptors in sensorymotor cortex of the Fischer 344 rat: Changes as a function of age and chronic cardiovascular exercise. *Soc. Neurosci. Abstracts.* 11:728, 1985.
- Farrar, R.P., T.J. Walters, G.D. Cartee and H.L. Sweeney. Interaction of aging and endurance exercise upon skeletal muscle of predominantly different fiber types. *Soc. Neurosci. Abstracts.* 11:732, 1985.
- 8. Farrar, R.P., G.D. Cartee, T.J. Walters and C. Seibert. The effect of chronic ethanol consumption upon maximum whole body oxygen consumption. *Pharmacologist*. 27, 1985.
- 9. Cartee, G.D. and R.P. Farrar. An endurance running program reverses the age-related decline in peak oxygen consumption. *Fed. Proc.* 45:402, 1986.
- 10. Cartee, G.D. and R.P. Farrar. The effect of an identical endurance training protocol on glycogen utilization during exercise by young and old rats. *Med. Sci. Sports Exerc.* 18(2) Supplement 2:S52, 1986.
- 11. Farrar, R.P., T.J. Walters, G.D. Cartee and H.L. Sweeney. Declines in peak oxygen consumption due to both aging and chronic ethanol consumption. *Fed. Proc.* 45:570, 1986.
- 12. Cartee, G.D., D.A. Young, M.D. Sleeper, J. Zierath, H. Wallberg-Henriksson and J.O. Holloszy. Carbohydrate feeding speeds reversal of enhanced muscle insulin sensitivity after exercise. *Med. Sci. Sports Exerc.* 20(2) Supplement: S45, 1988.
- 13. Gulve, E.A., G.D. Cartee and J.O. Holloszy. In vitro measurement of exercise-induced glucose transport: roles of insulin and glucose. *Med. Sci. Sports Exerc.* 20(2) Supplement: S29, 1988.
- 14. Kanter, M.M., G.D. Cartee, M.M. Chen and J.O. Holloszy. The effects of exercise and dietary manipulation on catalase activity and muscle mass of aging rats. *Med. Sci. Sports Exerc.* 20(2) Supplement 2:S63, 1988.

- 15. Douen, A.G., T. Ramlal, A. Klip, D. Young, G.D. Cartee and J.O. Holloszy. Exercise induces recruitment of glucose transporters to the plasma membrane from an insulin-independent intracellular site. *Soc. General Physiol. Abstracts.* 1988.
- 16. Cartee, G.D. and J.O. Holloszy. Effect of hypoxia on glucose transport in rat epitrochlearis muscle. *FASEB J.* 3:540A, 1989.
- Cartee, G.D. and J.O. Holloszy. Persistent enhancement of vanadate and hydrogen peroxide stimulated glucose transport in muscle following exercise. *Med. Sci. Sports Exerc.* 21(2) Supplement 2: S29, 1989.
- 18. Cartee, G.D. and J.O. Holloszy. Prior exercise increases susceptibility of muscle glucose transport for insulin-independent activation. *Med. Sci. Sports Exerc.* 22(4) Supplement: S39, 1990.
- 19. Gulve, E.A., G.D. Cartee and J.O. Holloszy. The effects of prolonged incubation of rat epitrochlearis muscles on basal and insulin-stimulated MeAIB transport. *Diabetes*. 39 (Supplement 1):148A, 1990.
- Klip, A., T. Ramlal, D. Dimitrakoudis, P.J. Bilan, G. Cartee, E. Gulve, J.O. Holloszy. The subcellular distribution of glucose transporters (GTS) in normal and diabetic rat skeletal muscle is regulated by hyperglycemia and insulin. *Endocrine Soc.*, Abstract #89, p 47, 1990.
- 21. Cartee, G.D. and J.O. Holloszy. Divergence of vanadate and insulin action in isolated rat epitrochlearis muscle. *Diabetes*. 40 (Supplement): 183A, 1991.
- 22. Cartee, G.D., C. Briggs-Tung, and J.O. Holloszy. Inhibition of glucose transport by verapamil is not a stereoselective property of the drug or limited to insulin-stimulated glucose transport. *FASEB J*. 5: A1745, 1991.
- Gulve, E.A., G.D. Cartee, K.J. Rodnick and J.O. Holloszy. Prolonged incubation of skeletal muscle in vitro enhances insulin-stimulated, but not hypoxia-stimulated glucose transport. *Diabetes*. 40(Supplement): 23A, 1991.
- 24. Ren, J.M., E.A. Gulve, G.D. Cartee and J.O. Holloszy. Muscle hypoxia causes glycogen breakdown without phosphorylase b to a transformation. *Med. Sci. Sports Exerc.* 23(4) Supplement 4: S153, 1991.
- 25. Cartee, G.D., C.A. Briggs-Tung, and E.W. Kietzke. Glucose transport activity after exercise in young, adult and old rats. *Am. Physiol. Soc. Conference: Integrative Biol. Exerc.* 1992.
- 26. Hall, J.L., G.D. Cartee, K.R. Smith, and W.C. Stanley. Myocardial glucose transporter content is decreased in diabetic swine. *Am. Heart Assoc.* 1992.
- 27. Cartee, G.D., E.W. Kietzke, J-P. Motamedi, and C.A. Briggs-Tung. Adaptive response of muscle glucose and amino acid transport to fasting in adult and old rats. *FASEB J.* 7: A392, 1993.
- Hall, J.L., D.A. Podolin, G.D. Cartee, W.C. Stanley, R.S. Mazzeo. Exercise training does not compensate for an age-related decrease in myocardial GLUT 4 concentration. *Med. Sci. Sports Exerc.* 25(5) Supplement: S143, 1993.
- 29. Hall, J.L., T.A. Hacker, G.D. Cartee, and W.C. Stanley. Myocardial GLUT 4 concentration is reduced in Yucatan miniswine with 3 months of diabetes. *FASEB J*. 7: A846, 1993.
- 30. Bohn, E.E., N.L. Nucatola, M.W. Mathisen, and G.D. Cartee. Influence of age on growth-promoting and metabolic effects of growth hormone in rats. *Med. Sci. Sports Exerc.* 26(5) Supplement:S135, 1994.
- Dean, D.J., E.G. Heberlein, and G.D. Cartee. No effect of indomethacin on the exercise-induced increase in insulin-stimulated glucose transport. *Med. Sci. Sports Exerc.* 27 (5) Supplement 5: S214, 1995.
- 32. Wetter, T.J., D.J. Dean, and G.D. Cartee. Insulin- and hypoxia-stimulated muscle glucose transport: Developmental adaptation. *Med. Sci. Sports Exerc.* 27(5) Supplement: 215, 1995.
- 33. B. Gibson, H. Park, E.E. Bohn, G.D. Cartee, and R.P. Farrar. Effects of administration of growth hormone on histochemistry and biochemistry of skeletal muscle across different ages. *FASEB J.* 9 (4): A657, 1995.
- Dean, D.J., C. Smith, M. Huiting, and G.D. Cartee. Glycogen levels are increased in some muscles of calorie restricted rats: Implications for exercise and weight loss. *Med. Sci. Sports Exerc.* 28(5) Supplement: 42, 1996.

- 35. Wetter, T.J., A.N. Guerra, and G.D. Cartee. The age-related decline in muscle glucose transport occurs despite no decline in GLUT-4. *Med. Sci. Sports Exerc.* 28 (5) Supplement: 97, 1996.
- 36. Ranheim, T., C. Dumke, K.L. Schueler, G.D. Cartee, and A.D. Attie. A mouse genetic model of dietinduced insulin resistance. *Diabetes*. 45(Supplement 2): 293A, 1996.
- 37. Kohles, S.S., G.D. Cartee and R. Vanderby, Jr. Cortical elasticity in aging rats with and without growth hormone treatments. *Proc. Am. Soc. Biomechanics*, 1996.
- 38. Dean, D.J. and G.D. Cartee. Calorie restriction modifies the insulin signalling system of skeletal muscle. *Diabetes*. 45(Supplement 2): 103A, 1996.
- Dean, D., J. Brozinick, T. Reynolds, S.W. Cushman, and G.D. Cartee. Calorie restriction increases skeletal muscle cell surface GLUT4 content and insulin signalling activity. *Diabetes*. 46(Supplement 1): 257A, 1997.
- 40. Gresl, T., G. Cartee, A. Gazdag, E. Roecker, R. Colman, S. Baum, L. Mason and J. Kemnitz. Dietary restriction protects against the development of type 2 diabetes in rhesus monkeys. *FASEB J.* 12 (4): A254, 1998.
- 41. Wetter, T.J., A.C. Gazdag, D. Dean, and G.D. Cartee. Effects of chronic calorie restriction on glucose utilization in rats. *FASEB J.* 12 (4): A255, 1998.
- 42. Gazdag, A.C., C.L. Dumke, C.R. Kahn and G.D. Cartee. Decreased insulin-stimulated glucose transport in skeletal muscle of adult, but not young, IRS-1 (+/-) mice. *FASEB J.* 12 (4): A257, 1998.
- Tucker, M.Z., G.D. Cartee, A.C. Gazdag, D.J. Dean, and L.P. Turcotte. FABP_{PM} content decreases with 20 day caloric restriction in muscle of young Fischer 344 rats. *Med. Sci. Sports Exerc.* 30 (5) Supplement: 137, 1998.
- Dumke, C.L., A.C. Gazdag, C.R. Kahn, and G.D. Cartee. Contraction-induced glucose transport and glycogen depletion in muscles from mice heterozygous for IRS-1 protein. *Med. Sci. Sports Exerc.* 30 (5) Supplement: S246, 1998.
- 45. Gazdag, A.C., C.L. Dumke, C.R. Kahn, and G.D. Cartee. Insulin sensitizing effect of calorie restriction on skeletal muscle glucose transport is undiminished in IRS-1 deficient mice. *FASEB J*. 13(4): A54, 1999.
- Dumke, C.L., J.G. Swallow, J.S. Rhodes, T. Garland, E. Maslowski, A.C. Gazdag, and G.D. Cartee. Effects of genetic selection and voluntary wheel running on glucose transport in mice. *Med. Sci. Sports Exerc.* 31(5) Supplement: S127, 1999.
- 47. Davidson, R.T., E.B. Arias, and G.D. Cartee. Use of longitudinally-split epitrochlearis muscle for glucose transport determination in the adult rat. *FASEB J.* 14(4):A90, 2000.
- Dumke, C.L., A.C. Gazdag, K. Fechner, Y. Park, M.W. Pariza, and G.D. Cartee. Skeletal muscle glucose transport in conjugated linoleic acid (CLA) fed mice. *Med. Sci. Sports Exerc.* 32(5) Supplement: S226, 2000.
- 49. Davidson, R.T., E.B. Arias, J. Kim, and G.D. Cartee. Dietary restriction induces enhanced insulinstimulated glucose transport in skeletal muscle without altering IRS-1 and IRS-2 associated PI3kinase activity. *FASEB J.* 15(5):A752, 2001.
- 50. Arias, E.B., L.E. Gosselin, and G.D. Cartee. Effects of age and exercise training on insulin signaling protein levels in skeletal muscle. *Med. Sci. Sports Exerc.* 33(5) Supplement 1: S68, 2001.
- 51. Dumke, C.L., J.G. Swallow, J.S. Rhodes, T. Garland, E. Maslowski, A.C. Gazdag, and G.D. Cartee. Possible role for kallikrein-kininogen system in the increase in insulin sensitivity after muscle contractions. *Med. Sci. Sports Exerc.* 33(5) Supplement 1: S3, 2001.
- 52. Chapman, J., A. Garvin, A. Ward, and G.D. Cartee. Effect of acute resistance exercise on insulin sensitivity in untrained postmenopausal women. *Med. Sci. Sports Exerc.* 33(5) Supplement 1: S290, 2001.
- 53. Kim, J., E.B. Arias, R.M. Sancho-Solis, and G.D. Cartee. Dose response for post-contraction increase in insulin-stimulated glucose transport of skeletal muscle. *Med. Sci. Sports Exerc.* 34(5) Supplement 1: S283, 2002.

- 54. Cartee, G.D., C.E. McCurdy, R.T. Davidson, and E.B. Arias. Brief calorie restriction leads to enhanced insulin signaling in skeletal muscle. *The Purina Pet Institute Symposium: Advancing Life through Diet Restriction*. p65, 2002.
- 55. Kim, J., R.S. Solis, and G.D. Cartee. The role of glycogen and 5'AMP-activated protein kinase in post- contraction insulin-stimulated glucose transport. *Med. Sci. Sports Exerc.* 35(5) Supplement 1: S148, 2003.
- 56. McCurdy, C.E., R.T. Davidson, and G.D. Cartee. Brief calorie restriction increases insulinstimulated phosphorylation of Akt2, but not Akt1. *Diabetes*. 52 (Supplement 1): A308, 2003.
- 57. Kim, J., E.B. Arias, and G.D. Cartee. Effects of gender and prior exercise on glucose transport in isolated skeletal muscle from mice. *Med. Sci. Sports Exerc.* 36(5) Supplement: S327, 2004.
- 58. Solis, R.S., J. Kim, and G.D. Cartee. The effect of pregnancy on tension development by electrically stimulated rat epitrochlearis muscles. *Med. Sci. Sports Exerc.* 36(5) Supplement: S34, 2004.
- 59. Ward, A., L. Sanborn, C. Burt, and G. Cartee. Physical activity and physical fitness levels of breast cancer survivors. *Med. Sci. Sports Exerc.* 36(5) Supplement: S98, 2004.
- 60. McCurdy, C.E., R.T. Davidson, and G.D. Cartee. Calorie restriction alters the molecular balance of phosphoinositide 3-kinase regulatory and catalytic subunits in rat skeletal muscle. *FASEB J.* 18: Abstract #4563, 2004.
- McCurdy, C.E., M.J. Birnbaum, and G.D. Cartee. Akt2 plays a key role in the calorie restrictioninduced improvement in insulin-stimulated glucose uptake by skeletal muscle. *Diabetes*. 53 (Suppl. 2): A304, 2004.
- 62. Bruss, M.D., E.B. Arias, G.E. Lienhard, and G.D. Cartee. Insulin stimulates the phosphorylation of Akt substrate of 160kD (AS160) in rat skeletal muscle. *Diabetes*. 53(Supplement 2): A325, 2004.
- Arias, E.B., M.D. Bruss, G.E. Lienhard, and G.D. Cartee. Effect of insulin or in vitro contraction on AS160 phosphorylation in rat skeletal muscle. *Med. Sci. Sports Exerc.* 37(5) Supplement: S204, 2005.
- 64. Hamada, T., E.B. Arias, R.E. Odzark, and G.D. Cartee. Increased submaximal insulin-stimulated glucose uptake in mouse skeletal muscles post-exercise." *Diabetes*. 55 (Supplement 1): A235, 2006.
- 65. Funai, K., J. Kim, E.B. Arias, and G.D. Cartee. Effects of prior exercise on insulin-stimulated AS160 phosphorylation and glucose transport in rat skeletal muscle. *Med. Sci. Sports Exerc.* 38 (11: Supplement 1): S8, 2006.
- 66. Arias, E.B. and G.D. Cartee. Prolonged incubation of isolated rat skeletal muscle under conditions of simulated calorie restriction (reduced glucose and insulin) induces increased insulin-stimulated glucose transport. *Diabetes.* 56 (Supplement 1): A661, 2007.
- 67. Funai, K. and G.D. Cartee. Contraction-stimulated phosphorylation of AS160 is temporally coupled with phosphorylation of CaMKII, but not AMPK or Akt. *Diabetes*. 56 (Supplement 1A): 8, 2007.
- Funai, K. and G.D. Cartee. Roles of AMPK, CaMKII and Akt in contraction-stimulated AS160 phosphorylation in isolated rat skeletal muscle. *Med. Sci. Sports. Exerc.* 40 (5: Supplement 1): S37, 2008.
- Blair, D.R., E.B. Arias, K. Funai, and G.D. Cartee. A Type II myosin ATPase inhibitor reduces contraction-stimulated glucose transport in rat skeletal muscle. *Med. Sci. Sports. Exerc.* 40 (5: Supplement 1): S37, 2008.
- Schweitzer, G.G., C.M. Castorena, T. Hamada, E.B. Arias, and G.D. Cartee. The B2 receptor of bradykinin is not essential for the increase in insulin-stimulated glucose uptake following acute exercise. *Diabetes*. 57 (Supplement 1A): LB11, 2008.
- 71. Funai, K., J.G. MacKrell, and G.D. Cartee. Inhibition of contraction-stimulated AMPK partially inhibits the contraction-stimulated increase in glucose transport and PAS-150kD without altering PAS-160kD in rat skeletal muscle. *Diabetes*. 57 (Supplement 1A): LB11, 2008.
- 72. Funai, K., G.G. Schweitzer, and G.D. Cartee. Evidence for a consistent association between the effects of prior exercise on AS160 phosphorylation and insulin-stimulated glucose transport in rat skeletal muscle. *Diabetes.* 57 (Supplement 1A): LB10, 2008.

- 73. Funai, K., G.G. Schweitzer, N. Sharma, M. Kanzaki, and G.D. Cartee. TBC1D1 phosphorylation and insulin-independent glucose transport are increased immediately post-exercise in rat skeletal muscle, but TBC1D1 phosphorylation is reversed at 3h post-exercise when insulin sensitivity is increased. *Diabetes.* 58 (Supplement 1A): LB10, 2009.
- 74. MacKrell, J.G., E.B. Arias, and G.D. Cartee. A novel method to measure insulin-stimulation of glucose uptake by single fibers from rat skeletal muscle. *Diabetes*. 58 (Supplement 1): A329, 2009.
- 75. Sharma, N., E.B. Arias, M.P. Sajan, J.G. MacKrell, A.D. Bhat, R.V. Farese and G.D. Cartee. Old vs adult rats are characterized by a distinctive fiber-type specific insulin resistance in slow twitch muscle attributable to reduced Akt2 phosphorylation. *Diabetes*. 58 (Supplement 1): A330, 2009.
- 76. Sharma, N., E.B. Arias, A.D. Bhat and G.D. Cartee. Enhanced insulin-stimulated glucose transport in skeletal muscle of calorie restricted rats by an Akt2-mediated mechanism with unaltered AS160 Thr⁶⁴² phosphorylation. *Diabetes*. 59 (Supplement 1): A366, 2010.
- 77. Sequea, D.A., and G.D. Cartee. Relationship between phosphorylation of Akt and AS160 on key regulatory sites and insulin-stimulated glucose uptake in rat skeletal muscle. *Diabetes*. 59 (Supplement 1A): LB68, 2010.
- 78. MacKrell, J.G. and G.D. Cartee. Fiber type heterogeneity for glucose uptake by single IIa, IIb and IIb/x fibers from rat epitrochlearis muscle. *Diabetes*. 59 (Supplement 1A): LB67, 2010.
- 79. Schweitzer, G.G., and G.D. Cartee. The persistent effect of prior exercise on insulin-stimulated glucose transport in rat skeletal muscle is accompanied by sustained and simultaneously increased phosphorylation of AS160 on two key regulatory sites. *Diabetes*. 59 (Supplement 1A): LB50, 2010.
- Schweitzer, G.G., E.B. Arias, and G.D. Cartee. The increased insulin-stimulated glucose transport in skeletal muscle post-exercise is undiminished in kininogen deficient rats. *Med. Sci. Sports. Exerc.* 42 (10: Supplement 2): 55-56, 2010.
- Castorena, C.M., J.G. MacKrell, M. Kanzaki, J.S. Bogan, and G.D. Cartee. GLUT4, TBC1D1, TBC1D4, TUG and RUVBL2: Relationships with each other and rat muscle fiber type. *Med. Sci. Sports & Exerc.* 42 (10: Supplement 2): 12-13, 2010.
- 82. Sequea, D.A., N. Sharma, C.M. Castorena, N. Qi, and G.D. Cartee. Calorie restriction increases in vivo glucose uptake and insulin signaling in rat skeletal muscle. *FASEB J.* 25: lb591, 2011.
- 83. MacKrell, J., and G.D. Cartee. Fiber type heterogeneity for glucose uptake by single IIA, IIB, IIX and IIB/X fibers from rat epitrochlearis muscle. *FASEB J.* 25: lb585, 2011.
- 84. Sequea, D.A., N. Sharma, E. Arias, and G.D. Cartee. The effects of calorie restriction on skeletal muscle glucose uptake and insulin signaling in 24 mo-old rats. *FASEB J.* 26:1077.1, 2012.
- 85. Castorena, C.M., E.B. Arias, Y. Xiao, and G.D. Cartee. Acute Exercise Improves Insulin-Induced Glucose Uptake in Chow Fed and High Fat Fed Rats, with Differing Effects on Akt Phosphorylation *FASEB J.* 26:lb738, 2012.
- 86. MacKrell, J.G. and G.D. Cartee. A Novel Method to Measure Glucose Uptake by Single Skeletal Muscle Fibers Reveals a Similar Level of Insulin Resistance for Type IIA, IIB, IIX and IIB/X Fibers from Obese Zucker Rat Epitrochlearis Muscle. *FASEB J.* 26:1078.8, 2012.
- Castorena, C.M., E.B. Arias, Y. Xiao, and G.D. Cartee. Post-exercise Values for Muscle AS160 Phosphorylation and Insulin-stimulated Glucose Uptake Are Greater for Chow-fed vs. High Fat Fed Rats. APS Intersociety Meeting: Integrative Biology of Exercise VI. *The Physiologist*. 55(6): C-66-7, 2012.
- Wang, H., N. Sharma, E.B. Arias, and G.D. Cartee. Independent and Combined Effects of Calorie Restriction and Exercise on Insulin-stimulated Glucose Uptake and Insulin Signaling in the Soleus of Old, Insulin-Resistant Rats. *Diabetes*. 64 (Suppl. 1A): LB61, 2015.
- Sharma, P. and G.D. Cartee. Identification of PP1α as an S/T-Phosphatase that Regulates AS160 Dephosphorylation in Skeletal Muscle. *Diabetes*. 64 (Suppl. 1A): LB62, 2015.
- 90. Zheng, X. and G.D. Cartee. A novel method enabling the use of small muscle samples to identify insulin effects on Akt2 and AS160 subcellular localization. *Diabetes*. 65 (Suppl. 1A): LB65, 2016.

- 91. Caruso, M., E. Arias, N. Shah, Y. Qi, D. Ma, D. Damacharla, Z. Zhang, G. Cartee, and Z. Yi. Phosphoproteomic analysis of exercise- and insulin-stimulated rat skeletal muscle. *Diabetes* (Suppl. 1): A4, 2016.
- 92. Pataky, M., E. Arias, C. Yu, Y. Nie, K. Dent, and G. Cartee. A novel method reveals a fiber type selective effect of acute exercise on glucose uptake by single skeletal muscle fibers. *The Physiologist*. 60(1):10.2. 2017. 2016 APS Intersociety Meeting: The Integrative Biology of Exercise VII. <u>http://www.the-aps.org/mm/Conferences/APS-Conferences/2016-Conferences/Exercise/Official-Meeting-Program-Book.pdf</u>
- 93. Wang, H., E.B. Arias, C.S. Yu, A.R.P. Verkerke and G.D. Cartee. Effects of calorie restriction and fiber type on glucose uptake in single fibers from old rats. *The FASEB Journal* 31 (1 Supplement), 2017. lb722-lb722
- Oki, K., E.B. Arias and G.D. Cartee. Prior treatment with the AMPK activator AICAR induces subsequently enhanced glucose uptake in isolated skeletal muscles from old rats. *The FASEB Journal* 31 (1 Supplement), 2017. lb726-lb726
- 95. Ludzki, A.C., M.W. Pataky, G.D. Cartee and J.F. Horowitz. Effects of acute exercise and high-fat diet on angiogenic signaling in adipose tissue of rats. *Diabetes*. 66 (Suppl. 1): A192-A192, 2017.
- 96. Pataky, M.W., C.S. Yu, Y. Nie, E. Arias, M. Singh, R. Ploutz-Snyder, C. Mendias, G. Cartee. Acute Exercise by Insulin Resistant Rats Induces Muscle Fiber Type-selective Improvement in Insulinstimulated Glucose Uptake. *Med. Sci. Sports & Exerc.* 50 (Issue 5S), 249, 2018. doi: 10.1249/01.mss.0000535905.56541.aa
- 97. Pataky, M.W., E.B. Arias, H. Wang, X. Zheng, and G.D. Cartee. Post-exercise Enhancement of Insulin-stimulated Glucose Uptake in Insulin-Resistant Rat Skeletal Muscle Concomitant with Greater γ3-AMPK Activity and Insulin-stimulated AS160 Phosphorylation on Key Regulatory Phosphosites. *Diabetes* 2019 Jun; 68(Supplement 1): <u>https://doi.org/10.2337/db19-718-P</u>
- 98. Wang, H., E.B. Arias, and G.D. Cartee. Is Reduced Plasma Membrane Cholesterol in Skeletal Muscle Essential for Greater Insulin-stimulated Glucose Uptake after Acute Exercise? FASEB Science Research Conference: The Nutrient Sensing and Metabolic Signaling Conference. 2020.
- 99. Zheng, X., E.B. Arias, H. Wang, and G.D. Cartee. Prior acute exercise leads to increased insulinstimulated glucose uptake concomitant with greater γ3-AMPK activation and AS160 phosphorylation in skeletal muscle from female rats. FASEB Science Research Conference: The Nutrient Sensing and Metabolic Signaling Conference. 2020.
- 100. Wang, H., E.B. Arias, X. Zheng, and G.D. Cartee. AS160 is Essential for Greater Insulin-stimulated Glucose Uptake in Isolated Rat Skeletal Muscles after AICAR Stimulation. American Physiological Society Conference: Integrative Physiology of Exercise. Abstract #166. 2020.
- 101. Wang, H., E.B. Arias, Amy Zheng, S.E. Kwak, G. Dong, J. Zhao, and G.D. Cartee. Exercise effects on γ3-AMPK activity, Akt substrate of 160 kDa phosphorylation, and glucose uptake in muscle of normal and insulin-resistant female rats. American Diabetes Association Virtual 81st Scientific Sessions. *Diabetes* 2021;70(Supplement_1):29-LB. <u>https://doi.org/10.2337/db21-29-LB</u>
- 102. Varshney, Pallavi, Michael W. Schleh, Cheehoon Ahn, Amy Zheng, Edward B. Arias, Gregory D. Cartee, Jeffrey F. Horowitz. Caloric Restriction Modified Factors Regulating Lipid Storage and Apoptosis in Inguinal but Not Epididymal Adipose Tissue of 24-month-old Male Rats. American Diabetes Association Virtual 81st Scientific Sessions. 2021.
- 103. Kwak, Seong Eun, Amy Zheng, Edward Arias, Haiyan Wang, Yongping Yue, Dongsheng Duan, and Gregory Cartee. A novel genetic model to reduce glycogen synthase 1 abundance in rat skeletal muscle. International Biochemistry of Exercise Conference, 2022.
- 104. Kwak, Seonguen, Amy Zheng, Edward B. Arias, Haiyan Wang, Xiufang Pan, Dongsheng Duan, Yongping Yue, and G.D. Cartee. Probing the Role of Muscle Glycogen Resynthesis on Postexercise AMPK Activation and Metabolic Protein Abundance Using a Novel Genetic Model. American Diabetes Association 83rd Scientific Sessions. *Diabetes* 2023;72(Supplement_1):588-P. <u>https://doi.org/10.2337/db23-588-P</u>.

105. Wang, Haiyan, Amy Zheng, Edward B. Arias, Seongeun Kwak, Xiufang Pan, Dongsheng Duan, Yongping Yue, and Gregory D. Cartee. AS160 Expression, but not AS160 Serine-588, Threonine-642, and Serine-704 Phosphorylation, is Essential for Elevated Insulin-stimulated Glucose Uptake by Skeletal Muscle from Female Rats after Acute Exercise. American Diabetes Association 83rd Scientific Sessions. *Diabetes* 2023;72(Supplement_1):587-P. <u>https://doi.org/10.2337/db23-587-P</u>