CURRICULUM VITAE
Marni D. Boppart, Sc.D.

University of Illinois at Urbana-Champaign
Department of Health and Kinesiology
College of Applied Health Sciences
Beckman Institute for Advanced Science & Technology
405 North Mathews Avenue, Urbana, IL 61801
Email: mboppart@illinois.edu
Lab Website: http://mmp.beckman.illinois.edu

Updated April 2026

EDUCATION

2000 Sc.D., Boston University, Applied Anatomy and Physiology,
Mentors: Roger A. Fielding, Ph.D.; Laurie J. Goodyear, Ph.D.

1996 M.S., Creighton University, Cell Biology,
Mentor: Diane M. Cullen, Ph.D.

1992 B.S., University of New Hampshire, Molecular, Cellular and Developmental Biology,
Research Advisor: Gale B. Carey, Ph.D.

PROFESSIONAL EXPERIENCE

2024-present **Saul J. Morse and Anne B. Morgan Professor**
Department of Health and Kinesiology
Beckman Institute for Advanced Science and Technology
University of Illinois at Urbana-Champaign, IL

Affiliate, Department of Cell and Developmental Biology, 2019-present
Faculty, Carle Illinois College of Medicine, Director of Endocrinology, 2017-present
Affiliate, Institute for Genomic Biology, Regenerative Biology & Tissue Engineering Theme, 2010-present

2020-present **Professor**
Department of Health and Kinesiology
Beckman Institute for Advanced Science and Technology
University of Illinois at Urbana-Champaign, IL

2014-2020 **Associate Professor**
Department of Health and Kinesiology
Beckman Institute for Advanced Science and Technology
University of Illinois at Urbana-Champaign, IL

2007-2014 **Assistant Professor**
Department of Health and Kinesiology
Beckman Institute for Advanced Science and Technology
University of Illinois at Urbana-Champaign, IL

2006 **Research Assistant Professor**
Department of Cell and Developmental Biology
University of Illinois at Urbana-Champaign, IL

2000-2006 **Postdoctoral Research Associate (Full- and Part-Time Appointments)**
Department of Cell and Developmental Biology
University of Illinois at Urbana-Champaign, IL

Mentor: Stephen J. Kaufman, Ph.D.

2000 **Postdoctoral Research Associate**
Joslin Diabetes Center
Harvard Medical School, Boston, MA
Mentor: Laurie J. Goodyear, Ph.D.

1997-2000 **Predoctoral Research Associate**
Joslin Diabetes Center
Harvard Medical School, Boston, MA

1997-2000 **Teaching Fellow/Instructor**
Sargent College, Department of Health Sciences
Boston University, Boston, MA
Teaching Fellow, 1997
Head Teaching Fellow, 1997-1998
Part-time Instructor, 1998

1994-1996 **Research Assistant**
School of Medicine, Department of Biomedical Sciences, Osteoporosis Research Center
Creighton University, Omaha, NE

1992-1996 **United States Air Force Officer/Aerospace Physiologist**
Assistant to Major Command Supervisor, Randolph AFB, TX, 1992-1993
Aerospace Physiologist/Instructor, Brooks AFB, TX, 1992-1993
Assistant Unit Chief and Aerospace Physiologist, Offutt AFB, NE, 1993-96

ACADEMIC HONORS AND AWARDS

2025 Presidential Early Career Award for Scientists and Engineers (PECASE)
2024 Saul J. Morse and Anne B. Morgan Professor
2023 Allen Distinguished Investigator Award, Paul G. Allen Family Foundation
2021 Fellow, American Physiological Society
2020 Campus Distinguished Promotion Award
2020 Beckman Institute Vision and Spirit Award
2018 MVP Award, Associate Editor, Exercise in Sport Sciences Reviews (ESSR)
2018 Guiding Undergraduate Research Award, College of Applied Health Sciences, UIUC
2016 Excellence in Undergraduate Teaching, College of Applied Health Sciences, UIUC
2016 Arnold O. Beckman Award for Promising Research, UIUC
2016 Campus Award for Excellence in Undergraduate Teaching, UIUC
2014 Fellow, American College of Sports Medicine
2013 Guiding Undergraduate Research Award, College of Applied Health Sciences, UIUC
2009 New Scholar Award, Ellison Medical Foundation
2009- Listed Faculty Ranked as Excellent, multiple courses and semesters, UIUC
2008 Arnold O. Beckman Award for Promising Research, UIUC
2007 Selected Participant, NIA Summer Institute on Aging Research
2001 Graduate Student Scholarship, ACSM
1999 Most Outstanding Doctoral Student, New England ACSM
1999 Student Investigator Award, New England ACSM
1999 Graduate Student Research Competition, Dean's Award (1st prize), Boston University
1998 National Institutes of Health (NIH) Predoctoral Institutional National Research Service Award (NRSA), Joslin Diabetes Center, Harvard Medical School
1998 Graduate Student Scholarship, American College of Sports Medicine (ACSM)
1992 Stephen C. Decasare Award for Community Service, University of New Hampshire

1991 Oliver J. Hubbard Summer Research Fellowship, University of New Hampshire
1988 Selected University Honors Program, University of New Hampshire

TRAINING AND CERTIFICATIONS

Emergency Medical Technician (EMT) Certification, Mt. Holly, NJ, 1988
USAF Aerospace Physiology Certification, Brooks AFB, TX, 1992
USAF Human Centrifuge Training Course, Brooks AFB, TX, 1992
USAF Accident Investigation Course, Brooks AFB, TX, 1992
USAF Hyperbaric Medicine Certification, Brooks AFB, TX, 1992
USAF Academic Instructor Certification, Brooks AFB, TX, 1992
Life Science Equipment Course, Randolph AFB, TX, 1993
USAF Free Fall Parachuting, USAF Academy, CO 1994
National Board of Diving & Hyperbaric Medical Technology, 1994
Human Factors in Aviation Course, Holloman AFB, NM, 1995
NASA Fatigue Countermeasure Workshop, Moffett Field, CA, 1995

RESEARCH SUPPORT

Extramural

Army Research Office 04/01/2026-03/31/2029
ARL-BAA-0069
Label-Free Nonlinear Optical Imaging of Magnetic Bioeffects on Neuronal Activity and Circuit Connectivity
The goal of this project is to use label-free multi-modal nonlinear optical imaging of neuronal cultures to detect and quantify ROS-driven changes in lipid peroxidation and neuroferroptosis following magnetic field exposures that perturb neuronal activity and circuit connectivity.
$3,000,000

Allen Distinguished Investigator Award 10/31/23-10/30/27
392 PGA Family Foundation (MPI: M. Boppart, S. Boppart)
Real-Time Label-Free Dynamic Imaging of Extracellular Vesicles in Live Tissues
The goal of this project is to develop the next generation multimodal nonlinear optical microscopy to obtain real-time label-free dynamic images of EVs in living tissues and use this platform to identify a role for EVs in the progression of the aging phenotype.
$1,500,000

NASA, Translational Research Institute for Space Health (TRISH)
Cooperative Agreement NNX16AO69A (PI: M. Boppart) 07/01/23-06/30/25
Design of an Extracellular Vesicle Approach to Protect Human Health in Space
The goal of this project is to design a disruptive approach to preserve tissue mass and function in humans with extended exposure to space
$1,000,000

National Institutes of Health/NIAMS/NIA
R01 AR072735 (PI: M. Boppart) 07/01/18–06/30/24
Development of a cell-based therapy to improve recovery following immobilization
The goal of this project is to develop novel cell-based therapies to improve recovery of skeletal muscle mass and function in older adults following a period of disuse
$1,845,934

National Institutes of Health/NINDS
R21 NS104293 (MPI: M. Boppart and Rhodes) 01/15/18–5/31/22

Origins of exercise-brain interaction
The goal of this project is to identify the basis for exercise-induced improvements in neurogenesis and cognition (muscle-brain axis) for the purpose of developing novel therapies to prevent or treat age-related neurodegenerative diseases (Alzheimer's)
$402,880

National Institutes of Health/NHLBI
R21 HL131469 (PI: Kong, co-I: M. Boppart) 08/01/16-07/31/20
Development of a liposomal nanostimulator to improve stem cell-based revascularization therapies
The goal of this project is to develop a biomaterial that will improve stem/stromal cell viability post-transplantation
$428,484

Nordic Naturals, Inc.
C2344 (PI: M. Boppart) 04/16/17-11/30/17
Evaluation of EPA/DHA supplementation on the myopathic effects of cholesterol lowering agents
The goal of this project was to examine the impact of different ratios of EPA and DHA on mitigating statin-induced myopathy using in the $ApoE^{-/-}$ mouse model
$90,652

National Institutes of Health/NIAMS/NIA
R21 AR065578 (PI: M. Boppart) 07/01/14–06/30/17
Alpha7 integrin-mediated hypertrophic signaling and growth in skeletal muscle
The goal of this project was to establish the α7 integrin is an intrinsic regulator of skeletal muscle growth and determine the extent to which integrin signaling is defective with age
$422,583

Diabetic Complications Consortium Pilot and Feasibility Program
Seed Grant Program (PI: Dobrucki, co-I: M. Boppart) 07/01/13–06/30/14
Molecular imaging of stem cell induced reversal of vascular complications in diabetes mellitus
The goal of this project was to evaluate the capacity for muscle-derived mesenchymal stem cells to revitalize vascular structure and function in diabetic mice following ischemia
$159,518

National Institutes of Health/NIAMS
R21 AR06331 (PI: Harley, co-I: M. Boppart) 07/01/13–06/30/16
Patterning instructive biomolecular cues into collagen scaffolds for tendon insertion regeneration
The goal of this project was to utilize a prototype biphasic biomaterial to instruct mesenchymal stem cell differentiation in a murine model
$422,583

Center for Nutrition, Learning and Memory/Abbott Nutrition
CNLM ZA68 (PI: M. Boppart, co-I: Rhodes) 05/16/12–12/15/16
Nutritional enhancement of cognition through stem cells
The goal of this project was to examine the impact of the leucine metabolite HMB on healthspan in mice (skeletal muscle mass & function, cognition) and identify the cellular basis for benefits
$600,000

National Science Foundation
NSF CBET 10-33906 (PI: S. Boppart; co-I: M. Boppart) 09/01/10–08/31/13
Advanced optical imaging of 3-D cell dynamics in engineered skin
My role in this project was to isolate bone marrow-derived mesenchymal stem cells for the purpose of determining their role in process of skin healing
$600,000

National Science Foundation
IGERT (23 UIUC Faculty) 01/01/11–12/31/13
Cellular & Molecular Mechanics and Bio-Nanotechnology (CMMB)
This grant developed an Integrative Graduate Education and Research Traineeship (IGERT) program to support graduate students in the study of cellular mechanotransduction in collaboration with the University of Illinois Center for Cellular Biomechanics
$3,200,000

National Institutes of Health
S10 (PI: William O'Brien) 2009
High-resolution in vivo ultrasound imaging using VisualSonics VEVO2100 system
Role: Co-Investigator/Major User
$499,098

National Science Foundation
Major Instrumentation Grant (PI: S. Boppart, Major User: M. Boppart) 2009
Acquisition of a molecular imaging instrument for dynamic material and biological systems (PET)
$1,999,997

Ellison Medical Foundation New Scholar Award
AG-NS-0547-09 (PI: M. Boppart) 08/16/09–10/18/14
Utilization of α7 integrin-derived stem cells as therapy for the alleviation of sarcopenia
The goal of this project was to determine the extent to which muscle-derived mesenchymal stem cells alleviate age-related muscle pathology in mice.
$400,000

National Science Foundation
NSF CBET 08-52658 (PI: S. Boppart, co-I: M. Boppart) 08/15/09–07/31/12
3-D optical tracking of bone marrow derived skin stem cells
My role in this project was to isolate bone marrow-derived mesenchymal stem cells for the purpose of determining their role in process of skin healing
$300,000

Illinois Regenerative Medicine Institute
IDPH 63080016 (MPI: M. Boppart and Berry) 04/01/06-04/01/09
Therapeutic implementation of mesoangioblast stem cells in muscular dystrophy
The purpose of this project was to develop stem cell-based therapies for the alleviation of pathology in mice with muscular dystrophy
$367,750

Intramural

Beckman Institute, Seed Grant (PI: Dobrucki, co-PI: Boppart) 05/01/25–04/30/27
Revitalizing limb function: harnessing cold plasma-primed EVs for ischemia recovery

Beckman Institute, Outreach Grant (PI: Boppart)
2024

Beckman Institute, Outreach Grant (PI: Boppart)
2023

Beckman Institute Vision and Spirit Award (PI: Boppart) 2020

Beckman Institute for Advanced Science and Technology (PI: Boppart) 2020

Establishment of an Extracellular Vesicle Research Center to maximize cross-campus collaboration

Center on Health Aging and Disability Pilot Grant (PI: Boppart) 07/01/17–08/01/19
Development of an exosome therapy for optimal treatment of physical and cognitive disabilities

Arnold O. Beckman Award (PI: Boppart) 11/01/16–04/30/18
Development of a stem cell-based therapy to improve recovery following immobilization

UIUC OVCR Equipment Grant (PI: Madak-Ergogan) 2014
All-in-one plate reader/imager for high throughput screening

UIUC OVCR Equipment Grant (PI: S. Boppart) 2014
In vivo 3-D optical and x-ray CT imaging system

Biotechnology Center Fluidigm C1 Single Cell Genomics Grant (PI: Boppart) 2014
Characterization of two types of pericytes in adipose tissue using multicolor flow cytometry and single cell gene expression approaches

Center on Health, Aging and Disability Pilot Grant (PI: Boppart) 06/01/11–05/31/13
The impact of hypercholesterolemia and physical activity on statin-associated skeletal muscle myopathy

Arnold O. Beckman Award (PI: Boppart) 01/01/09-05/01/10
Utilization of a novel multipotent stem cell as therapy in the alleviation of sarcopenia

Mary Neer Jane Fund (PI: Boppart) 09/01/09-06/01/10
Utilization of a novel multipotent stem cell as therapy in the alleviation of muscular dystrophy

Beckman Foundation (PI: Boppart) 2008
Bio-Rad ChemiDoc XRS System for high resolution multicolor fluorescent imaging

REFEREED JOURNAL ARTICLES

Google Scholar H-index = 37, i10-index = 61, total citations = 7,410 (April 2026)

68. Fliflet AM, Tan Y, Barnes TM, Vijayan AN, Choi SJ, Deutz MT, Zupancic Z, Spradlin RA, Miller BF, Burd NA, Sweedler JV, **Boppart MD**. Human plasma extracellular vesicles as an exercise mimetic to preserve skeletal muscle plasticity during disuse. *npj Microgravity* 2026 Mar 6. Epub ahead of print.

67. Krawczynska N, Wang Y, Lim K, Das Gupta A, Lenczowski A, Abughazaleh M, Bendre SV, Kockaya LI, Schane CP, Fei Y, Hernandez AG, Drnevich J, Chan J, Dobrucki LW, **Boppart MD**, Ostrander J, Nelson ER. Neutrophils exposed to a cholesterol metabolite secrete extracellular vesicles that promote epithelial-mesenchymal transition and stemness in breast cancer cells. *Cancer Lett* 636: 218105, 2025.

66. Connolly MG, Fliflet AM, Ravi P, Rosu DI, **Boppart MD**, Rhodes JS. Exercise-induced plasma-derived extracellular vesicles increase adult hippocampal neurogenesis. *Brain Res* 150003, 2025.

65. Tan Y, Kao WC, **Boppart MD**, Sweedler JV. Plasma-derived extracellular vesicle proteomics. *J Proteome Res* 24: 4309-21, 2025.

64. Das Gupta A, Park J, Sorrells JE, Kim H, Krawczynska N, Pradeep D, Wang Y, Vidana Gamage HE, Nelczk AT, Boppart SA, **Boppart MD**, Nelson ER. 27-Hydroxycholesterol

enhances secretion of extracellular vesicles by ROS-induced dysregulation of lysosomes. *Endocrinology* 165: bqae127, 2024.

63. Welsh JA, et al., Minimal information for studies of extracellular vesicles (MISEV2022): From basic to advanced approaches. *J Extracellular Vesicles* 13: e12404, 2024.
62. Roberts MD, McCarthy JJ, Hornberger TA, Phillips SM, Mackey AL, Nader GA, **Boppart MD**, Kavazis AN, Reidy PT, Ogasawara R, Libardi CA, Ugrinowitsch C, Booth FW, Esser KA. Mechanisms of mechanical overload-induced skeletal muscle hypertrophy: current understanding and future directions. *Physiol Rev* 103: 2679-57, 2023.
61. Paulussen KJ, Barnes TM, Askow AT, Salvador AF, McKenna CF, Scaroni SE, Fliflet A, Ulanov AV, Li Z, West DW, Bauer LL, Paluska SA, Dilger RN, Moore DR, **Boppart MD**, Burd NA. Underpinning the food matrix regulation of postexercise myofibrillar protein synthesis by comparing salmon ingestion with sum of its isolated nutrients in healthy young adults. *J Nutr* 153: 1359-72, 2023.
60. Mavropalias G, **Boppart M**, Usher KM, Grounds MD, Nosaka K, Blazevich AJ. Exercise builds the scaffold of life: muscle extracellular matrix biomarkers in response to physical activity, inactivity and aging. *Biol Rev Camb Philos Soc* 98: 481-519, 2023.
59. Wu YF, Toba EA, Dvoretskiy S, Jung R, Kim N, Danels L, Romanova EV, Drnevich J, Sweedler JV, **Boppart MD**. Development of a cell-free strategy to recover aged skeletal muscle after disuse. *J Physiol* 601: 5011-31, 2023.
58. Wu YF, Lapp S, Dvoretskiy S, Garcia G, Kim M, Tannehill A, Daniels L, **Boppart MD**. Optimization of a pericyte therapy to improve muscle recovery after limb immobilization. *J Appl Physiol* 132: 1020-30, 2022.
57. Mavropalias G, Wu YF, Blazevich AJ, **Boppart MD**, Nosaka K. Changes in integrin-ILK-RICTOR proteins in vastus lateralis after eccentric cycling training. *Med Sci Sports Exerc* 54: 89-97, 2022.
56. Baek AE, Krawczynska N, Das Gupta A, Dvoretskiy SV, You S, Park J, Deng YH, Sorrells JE, Smith BP, Ma L, Nelson AT, McDowell HB, Sprenger A, Henn MA, Madak-Erdogan Z, Kong H, Boppart SA, **Boppart MD**, Nelson ER. The cholesterol metabolite 27HC increases secretion of extracellular vesicles which promote breast cancer progression. *Endocrinology* 162: bqab095, 2021.
55. Garg K, Mahmassani ZS, Dvoretskiy S, Valero MC, Huntsman HD, Lapp S, Wu YF, Hauschka SD, Burkin DJ, **Boppart MD**. Laminin-111 improves the anabolic response to mechanical load in aged skeletal muscle. *J Gerontol A Biol Sci Med Sci* 76: 586-90, 2021.
54. Gardner JC, Dvoretskiy SV, Yang Y, Venkataraman S, Lange DA, Li S, Boppart AL, Kim N, Rendeiro C, **Boppart MD**, Rhodes JS. Electrically stimulated hind limb muscle contractions increase adult hippocampal astrogliogenesis but not neurogenesis or behavioral performance in male C57BL/6J mice. *Sci Rep* 10: 19319, 2020.
53. Leong J, Hong YT, Wu YF, Ko E, Dvoretskiy S, Teo JY, Kim BS, Kim K, Jeon H, **Boppart M**, Yang YY, Hong H. Surface tethering of inflammation-modulatory nanostimulators to stem cells for ischemic muscle repair. *ACS Nano* 14: 5298-5313, 2020.
52. Munroe M, Mahmassani Z, Dvoretskiy S, Rhodes J, **Boppart MD**. Cognitive function is preserved in aged mice following long-term HMB supplementation. *Nutr Neurosci* 23: 170-182, 2020
51. Salvador AF, Askow AT, McKenna CF, Fang HY, Burke SK, Li Z, Ulanov AV, Paluska SA, Petruzzello SJ, **Boppart MD**, Oliver JM, Burd NA. Resistance exercise-induced regulation of muscle protein synthesis to intraset rest. *Med Sci Sports Exerc*, 52: 1022-1030, 2020.

50. Dvoretskiy S, Garg K, Munroe M, Pincu Y, Mahmassani ZS, Blackwell B, **Boppart MD**. The impact of skeletal muscle contraction on CD146+Lin- pericytes. *AJP-Cell Physiology* 317: C1011-1024, 2019.

49. **Boppart MD,** Mahmassani Z. Integrin signaling: linking mechanical stimulation to skeletal muscle hypertrophy. *AJP-Cell Physiology* 317: C629-41, 2019. ***Invited Review***

48. Munroe M, Dvoretskiy S, Lopez A, Leong J, Dyle MC, Kong H, Adams CM, **Boppart MD**. Pericyte transplantation improves skeletal muscle recovery following hindlimb immobilization. *FASEB J*, 33: 7694-7706, 2019. ***Chosen for Press Release by FASEB J***

47. Ko C, Seung-Jung YU, Mahmassani Z, Park J, Im SG, **Boppart MD**, Bashir R, Kong HJ. Matrix topography regulates synaptic transmission at the neuromuscular junction. *Adv Sci* 6: 1801521, 2019.

46. Huntsman HD, Rendeiro C, Merritt JR, Pincu Y, Cobert A, De Lisio M, Kolyvas E, Dvoretskiy S, Dobrucki IT, Kemkemer R, Jensen T, Dobrucki LW, Rhodes JS, **Boppart MD**. The impact of mechanically stimulated muscle-derived stromal cells on aged skeletal muscle. *Exp Gerontol* 103: 35-46, 2018.

45. Hedhli J, Konopka CJ, Schuh S, Bouvin H, Cole JA, Huntsman HD, Killian KA, Dobrucki IT, **Boppart MD**, Dobrucki LW. Multimodal assessment of mesenchymal stem cell therapy for diabetic vascular complications. *Theranostics* 7: 3876-88, 2017.

44. Rich MH, Lee MK, Balance WC, **Boppart M**, Kong H. Poly(ethylene glycol)-mediated collagen gel mechanics regulates cellular phenotypes in a microchanneled matrix. *Biomacromolecules* 18: 2315-23, 2017.

43. Bower AJ, Mahmassani Z, Zhao Y, Chaney EJ, Marjanovic M, Lee MK, Graf BW, De Lisio M, Kong H, **Boppart MD**, Boppart SA. *In vivo* assessment of engineered skin cell delivery with multimodal optical microscopy. *Tissue Eng Part C Methods* 23: 434-42, 2017.

42. Mahmassani ZS, Son K, Pincu Y, Munroe M, Drnevich J, Chen J, **Boppart MD**. $\alpha 7\beta 1$ Integrin regulation of gene transcription in skeletal muscle following an acute bout of eccentric exercise. *Am J Physiol Cell Physiol* 312: C638-50, 2017.

41. Munroe M, Pincu Y, Merritt J, Cobert A, Brander R, Jensen T, Rhodes J, and **Boppart MD**. Impact of β-hydroxy β-methylbutyrate (HMB) on age-related functional deficits in mice. *Exp Gerontol* 87: 57-66, 2017.

40. Chung HR, Vakil M, Munroe M, Parikh A, Meador BM, Wu PT, Jeong JH, Woods JA, Wilund KR, **Boppart MD**. The impact of exercise on statin-associated skeletal muscle myopathy. *PLoS One* 11: e0168065, 2016. ***F1000 Highlighted Article, Highlighted in the NY Times***

39. Garg K, **Boppart MD**. Influence of exercise and aging on extracellular matrix composition in the skeletal muscle stem cell niche. *J Appl Physiol* 121: 1053-58, 2016. ***Invited Review***

38. Li J, Pincu Y, Marjanovic M, Bower AJ, Chaney EJ, Jensen T, **Boppart MD**, Boppart SA. *In vivo* evaluation of adipose- and muscle-derived stem cells as a treatment for nonhealing diabetic wounds using multimodal microscopy. *J Biomed Opt* 21: 86006, 2016.

37. Pincu Y, Huntsman HD, Zou K, De Lisio M, Mahmassani ZS, Munroe MR, Garg K, Jensen T, **Boppart MD**. Diet-induced obesity regulates adipose-resident stromal cell quantity and extracellular matrix gene expression. *Stem Cell Res* 17: 181-90, 2016.

36. Rich MH, Lee MK, Marshall N, Clay N, Chen J, Mahmassani Z, **Boppart M**, Kong H. Water-hydrogel binding affinity modulates freeze-drying-induced micropore architecture and skeletal myotube formation. *Biomacromolecules* 16: 2255-64, 2015.

35. Farup J, De Lisio M, Rahbek SK, Bjerre J, Vendelbo MH, **Boppart MD**, Vissing K. Pericyte response to contraction mode-specific resistance exercise training in human skeletal muscle. *J Appl Physiol* 119: 1053-63, 2015.

34. De Lisio M, Farup J, Sukiennik RA, Clevenger N, Nallabelli J, Belson B, Ryan K, Rahbek SK, de Paoli F, Vissing K, **Boppart MD**. The acute response of pericytes to muscle-damaging eccentric contraction and protein supplementation in human skeletal muscle. *J Appl Physiol* 119: 900-7, 2015.

33. Pincu Y, Linden MA, Woods JA, Baynard T, **Boppart MD**. The effects of high fat diet and moderate exercise on TGFβ1 and collagen deposition in mouse skeletal muscle. *Cytokine* 73: 23-9, 2015.

32. Caliari SR, Weisgerber DW, Grier WK, Mahmassani Z, **Boppart MD**, Harley BAC. Collagen scaffolds incorporating coincident gradations of instructive structural and biochemical cues for osteotendinous junction engineering. *Adv Healthc Mater* 4: 831-7, 2015.

31. Lee MK, Rich MH, Shkumatov A, Liu SC, Jeong JH, LeyTheng L, **Boppart MD**, Gillette MU, Bashir J, Lee J, Kong H. Glacier moraine formation-mimicking colloidal particle assembly in microchanneled, bioactive hydrogel for vascular and neural patterning. *Adv Healthc Mater* 4: 195-201, 2015.

30. Zou K, Huntsman HD, Valero MC, Adams J, Skelton J, De Lisio M, Jensen T, **Boppart MD**. Mesenchymal stem cells augment the adaptive response to eccentric exercise. *Med Sci Sports Exerc* 47: 315-25, 2015.

29. Ogasawara R, Nakazato K, Sato K, **Boppart M**, Fujita S. Resistance exercise increases active MMP and β1-integrin protein expression in skeletal muscle. *Physiol Rep* 2: e12212, 2014.

28. Zhao Y, Marjanovic M, Chaney EJ, Graf BW, Mahmassani Z, **Boppart MD**, Boppart SA. Longitudinal label-free tracking of cell death dynamics in living engineered human skin tissue with a multimodal microscope. *Biomed Opt Express* 5: 3699-716, 2014.

27. Zou K*, De Lisio M*, Huntsman HD, Pincu Y, Mahmassani Z, Miller M, Olatunbosun D, Jensen T, **Boppart MD**. Laminin-111 improves skeletal muscle stem cell quantity and function following eccentric exercise. *Stem Cell Transl Med* 3: 1013-22, 2014. (*equal contribution as first author)

26. De Lisio M, Jensen T, Sukiennik AR, Huntsman HD, **Boppart MD**. Substrate and strain alter the muscle-derived mesenchymal stem cell secretome to promote myogenesis. *Stem Cell Res Ther*, 5: 74, 2014.

25. Graf BW, Bower AJ, Chaney EJ, Marjanovic M, Adie SG, De Lisio M, Valero MC, **Boppart MD**, Boppart SA. *In vivo* multimodal microscopy for detecting bone-marrow-derived cell contribution to skin regeneration. *J Biophotonics*, 7: 96-102, 2014. ***Featured on Cover***

24. **Boppart MD**, De Lisio M, Zou K, Huntsman HD. Defining a role for mesenchymal stem cells in muscle repair following exercise. *Front Physiol* 4: 310, 2013. ***Invited Review***

23. Graf BW, Chaney EJ, Marjanovic M, De Lisio M, Valero MC, **Boppart MD**, Boppart SA. *In vivo* imaging of immune cell dynamics in skin in response to zinc-oxide nanoparticle exposure. *Biomed Opt Express* 4: 1817-1828, 2013.

22. Graf BW, Chaney EJ, Marjanovic M, Adie SG, De Lisio M, Valero MC, **Boppart MD**, Boppart SA. Long-term time-lapse multimodal intravital imaging of wound healing and bone-marrow-derived cell dynamics in skin. *Technology*, 1: 8-19, 2013.

21. Huntsman HD, Zachwieja N, Zou K, Ripchik P, Valero MC, De Lisio M, **Boppart MD**. Mesenchymal stem cells contribute to vascular growth in skeletal muscle in response to eccentric exercise. *Am J Physiol Heart Circ Physiol* 304: H72-81, 2013.

20. Valero MC, Huntsman HD, Liu J, Zou K, **Boppart MD**. Eccentric exercise facilitates mesenchymal stem cell appearance in skeletal muscle. *PLoS One* 7(1): e29760, 2012.

19. Zhao Y, Graf BW, Chaney EJ, Mahmassani Z, Antoniadou E, Devolder R, Kong H, **Boppart MD**, Boppart SA. Integrated multimodal optical microscopy for structural and functional imaging of engineered and natural skin. *J Biophotonics* 5: 437-448, 2012.

18. Liu J, Milner DJ, **Boppart MD**, Ross RS, Kaufman SJ. β1D chain increases α7β1 integrin and laminin and protects against sarcolemmal damage in *mdx* mice. *Hum Mol Genet* 21: 1592-1603, 2012.

17. Zou K, Meador B, Johnson B, Huntsman HD, Valero MC, Huey K, **Boppart MD**. The α7β1 integrin increases muscle fiber hypertrophy following multiple bouts of eccentric exercise. *J Appl Physiol* 111: 1134-1141, 2011.

16. Lueders T, Zou K, Huntsman HD, Meador B, Abel M, Valero MC, Huey K, **Boppart MD**. The α7β1 integrin accelerates fiber hypertrophy and myogenesis following a single bout of eccentric exercise. *Am J Physiol Cell Physiol* 301: C938-946, 2011.

15. **Boppart MD**, Burkin DJ, Kaufman SJ. Activation of AKT signaling promotes cell growth and survival in α7β1 integrin-mediated alleviation of muscular dystrophy. *Biochimica et Biophysica Acta - Molecular Basis of Disease* 1812: 439-446, 2011.

14. Ding H, Wang Z, Nguyen F, Boppart SA, Millet LJ, Gillette MU, Liu J, **Boppart MD**, Popescu G. Fourier transform light scattering (FTLS) of cells and tissues. *J Comp Theo Nanosci* 7:2501-2511, 2010

13. Ding H, Bearl E, Wang Z, Millet LJ, Gillette MU, Liu J, **Boppart MD**, Popescu G. Fourier transform light scattering of biological structures and dynamics. *IEEE J Select Topics Quant Electronics* 16: 909-918, 2010.

12. Ge Y, Wu AL, Warnes C, Liu J, Zhang C, Kawasome H, Terada N, **Boppart MD**, Schoenherr CJ, Chen J. mTOR regulates skeletal muscle regeneration through kinase-dependent and kinase-independent mechanisms. *Am J Physiol Cell Physiol* 297: C1434-1444, 2009.

11. **Boppart MD**, Volker SE, Alexander N, Burkin DJ, Kaufman SJ. Exercise promotes α7 integrin gene transcription and protection in skeletal muscle. *Am J Physiol Regul Integr Comp Physiol* 295: R1623-1630, 2008.

10. Pasquesi JJ, Schlachter S, **Boppart MD**, Chaney EJ, Kaufman SJ, Boppart SA. *In vivo* detection of exercise-induced ultrastructural changes in genetically-altered murine skeletal muscle using polarization-sensitive optical coherence tomography. *Optics Express* 14: 1547-1556, 2006.

9. **Boppart MD**, Burkin DJ, Kaufman SJ. α7β1 Integrin inhibits mechanotransduction and prevents skeletal muscle injury *in vivo*. *Am J Physiol Cell Physiol* 290: C1660-1665, 2006.

8. Fujii N, **Boppart MD**, Dufresne SD, Crowley PF, Jozsi AC, Sakamoto K, Miyazaki H, Hirshman MF, Goodyear LJ. Overexpression or ablation of JNK in skeletal muscle has no effect on glycogen synthase activity. *Am J Physiol Cell Physiol* 287: C200-208, 2004.

7. **Boppart MD**, Hirshman MF, Fielding RA, Goodyear LJ. Static stretch markedly increases c-Jun NH_2-terminal kinase (JNK) activity and p38 phosphorylation in rat skeletal muscle. *Am J Physiol Cell Physiol* 280: C352-C358, 2001.

6. **Boppart MD**, Asp S, Wojtaszewski JFP, Fielding RA, Mohr T, Goodyear LJ. Marathon running transiently increases c-Jun NH_2-terminal kinase and p38 kinase activities in human skeletal muscle. *J Physiol* 526.3: 663-669, 2000.

5. **Boppart MD**, Aronson D, Bean J, Goodyear LJ, Fielding RA. Eccentric exercise markedly increases c-Jun NH_2-terminal kinase activity in human skeletal muscle. *J Appl Physiol* 87: 1668-1673, 1999.
4. Aronson D, **Boppart MD**, Dufresne SD, Fielding RA, Goodyear LJ. Exercise stimulates c-Jun NH_2 kinase activity and c-Jun transcriptional activity in human skeletal muscle. *Biochem Biophys Res Comm* 251: 106-110, 1998.
3. Napoli R, Gibson L, Hirshman MF, **Boppart MD**, Dufresne SD, Horton ES, Goodyear LJ. Epinephrine and insulin stimulate different mitogen-activated protein kinase signaling pathways in rat skeletal muscle. *Diabetes* 47: 1549-1554, 1998.
2. **Boppart MD**, Kimmel DB, Yee JA, Cullen DM. Time course of osteoblast appearance after *in vivo* mechanical loading. *Bone* 23(5): 409-15, 1998.
1. **Kvidera (Boppart) MD**, Carey GB. Glutamine synthetase in rat epididymal tissue. *Proc Soc Exp Biol Med* 206(4): 360-364, 1994.

BOOKS AUTHORED/CO-AUTHORED

Bartlit, F., Droullard, S., Boppart, M., Fielding RA (2018). *Choosing the StrongPath*. Austin, TX: Greenleaf Book Group Press.

BOOK CHAPTERS

4. Munroe M, Dvoretskiy S, **Boppart MD**. *Role for Pericytes in Skeletal Muscle Mass Following Use and Disuse.* In: Birbrair A, Ed. Stem Cell Biology and Regenerative Therapy. Springer Nature, 2021.
3. **Boppart MD**, De Lisio M, Witkowski S. *Exercise and Stem Cells.* In: Bouchard C, Ed. Progress in Molecular Biology and Translational Science. Volume 135: Molecular and Cellular Regulation of Adaptation to Exercise. Elsevier Inc., 2015, pp. 423-56.
2. Zhao Y, Bower AJ, Graf BW, **Boppart MD**, Boppart SA. *Imaging and Tracking of Bone-Marrow-Derived Immune and Stem Cells*. In: Turken K, Ed. Methods in Molecular Biology. Humana Press, 2013; pp. 1-20.
1. Hayashi T, Dufresne SD, Aronson DA, Sherwood DJ, Hirshman MF, **Boppart MD**, Fielding RA, Goodyear LJ. *Intracellular Signaling Pathways in Contracting Skeletal Muscle.* In: Hargreaves M, Thompson M, Eds. Biochemistry of Exercise X. Champaign, IL: Human Kinetics Publishers, 1999; pp. 19-34.

INVITED LECTURES AND CONFERENCE PRESENTATIONS

54. American Kinesiology Association, Leadership Pre-Workshop, Atlanta, GA, “Strategic Planning”, January 2026
53. American Physiology Summit, Baltimore, MA, “Impact of aging on skeletal muscle recovery after a period of disuse”, April 2025
52. Allen Frontiers Symposium, Seattle, WA, “Real-time label-free dynamic imaging of extracellular vesicles in live tissues”, March 2025
51. NASA Human Research Program Workshop, “Design of an extracellular vesicle therapy to protect human health in space”, January 2025
50. University of Illinois at Urbana-Champaign, University of Illinois Archives, Women in Science Lecture Series, “Development of interventions to recover skeletal muscle mass after disuse”, April 2024

49. York University, Muscle Health Research Centre, Seminar Series (Online), “Development of novel strategies to recover skeletal muscle after disuse”, March 2024
48. American Kinesiology Association, Leadership Workshop, Albuquerque, NM, “Steps to a productive, collaborative, and effective strategic planning process”, January 2024
47. Oklahoma Medical Research Foundation, Aging and Metabolism Research Program, Seminar Series, Oklahoma City, OK, “Development of novel strategies to recover skeletal muscle after disuse, December 2023
46. University of Iowa, Department of Health and Human Physiology, Carl V. Gisolfi Seminar Series, Iowa City, IA, “Extracellular vesicle approaches to recover skeletal muscle after disuse”, December 2023
45. American College of Sports Medicine Annual Meeting, World Congress on Basic Science of Exercise in Regenerative Medicine, Denver, CO, “EV approaches to recovery of skeletal muscle after immobilization”, June 2023
44. Integrative Physiology of Exercise Meeting, Baltimore, MD, α7β1 Integrin regulation of skeletal muscle growth, September 2022
43. Oklahoma Medical Research Foundation, “Development of extracellular vesicle strategies to recover muscle after disuse, July 2022
42. International Biochemistry of Exercise Meeting, Toronto, Canada, “Development of extracellular vesicle strategies to recover muscle after disuse”, May 2022
41. University of Arkansas, Exercise Science Research Center, “Development of a cell-free strategy to recover aged skeletal muscle”, March 2022
40. American College of Sports Medicine Annual Meeting, World Congress on Basic Science of Exercise in Regenerative Medicine, Virtual Conference, “Introduction and modulation of EV content by exercise”, June 2021
39. Muscle Forum Seminar Series, University of Kentucky, “Development of a pericyte therapy for recovery of skeletal muscle following disuse atrophy”, May 2021
38. Department of Health and Exercise Science Seminar, Colorado State University, “Development of novel therapies to recover aged skeletal muscle after disuse”, March 2021
37. Beckman Institute Director’s Seminar, University of Illinois at Urbana-Champaign, “Exercise and extracellular vesicles (ExerVs): identification of the molecular basis for health benefits”, November 2020
36. Department of Cell and Developmental Biology, University of Illinois at Urbana-Champaign, “Development of novel therapies to rejuvenate aged skeletal muscle”, November 2020
35. USDA Human Nutrition Research Center on Aging, Tufts University, “Development of a cell-based therapy to recover aged skeletal muscle”, June 2020
34. American College of Sports Medicine Annual Meeting, San Francisco, CA, “Exercise and extracellular vesicles (ExerVs): identification of the molecular basis for health benefits”, May 2020 – canceled due to COVID-19
33. Sports Science Section Seminar, School of Public Health, Aarhus University, Aarhus, Denmark, “Extrinsic and intrinsic factors that influence skeletal muscle growth in response to exercise”, March 2020
32. Brown Bag Seminar, Carle Illinois College of Medicine, “Extracellular vesicles as a means of cellular communication”, July 2019

31. Experimental Biology Annual Meeting, Orlando, FL, “The role of pericytes in repair of skeletal muscle damage”, April 2019
30. UIUC NSF IGERT: Miniature Brain Machinery Seminar Series, University of Illinois at Urbana-Champaign, “Perivascular stem/stromal cell regulation of muscle growth”, October 2018
29. ACSM Integrative Physiology of Exercise Meeting, San Diego, CA, “Integrin regulation of muscle growth”, September 2018
28. American College of Sports Medicine Annual Meeting, Minneapolis, MN, “Focusing outside the fiber: extracellular matrix and skeletal muscle plasticity”, June 2018
27. American College of Sports Medicine Annual Meeting, Minneapolis, MN, “Perivascular stem/stromal cell regulation of muscle growth”, May 2018
26. American College of Sports Medicine Annual Meeting, New England Chapter, Providence, RI, “Perivascular stem cells and skeletal muscle adaptation”, October 2016
25. American College of Sports Medicine Annual Meeting Tutorial, Boston, MA, “Pericytes as mediators of skeletal muscle adaptation”, June 2016
24. Advances in Skeletal Muscle Biology in Health and Disease, University of Florida, Gainesville, FL, “α7β1 Integrin regulation of skeletal muscle signaling and growth”, January 2016
23. Colorado State University, Health and Exercise Science Research Seminar Series, “Stem cells and skeletal muscle adaptation to exercise”, November 2015
22. Mayo Clinic, 4th Annual Symposium on Regenerative Rehabilitation, Rochester, MN, “Stem cell transplantation and exercise for muscle repair and adaptation”, September 2015
21. International Society of Sports Nutrition, Austin, TX, “Skeletal muscle repair”, June 2015
20. Texas A & M University, College Station, TX, Exercise Physiology Seminar Series, “Development of a stem cell-based strategy for the prevention of age-related disability”, April 2015
19. Associated Colleges of the Chicago Area (ACCA), Advances in Cell Biology Seminar Series, “Stem cells in skeletal muscle”, April 2015
18. National Institute on Aging, Intramural Research Program Seminar, Baltimore, MD, “Development of a stem cell-based strategy for the prevention of age-related disability”, November 2014
17. ACSM Integrative Physiology of Exercise Meeting, Miami, FL, “Role for non-satellite stem cells in muscle repair and adaptation post-exercise”, September 2014
16. American College of Sports Medicine Annual Meeting, World Congress on Inflammation, Orlando, FL, “Defining a role for mesenchymal stem cells in muscle repair following exercise”, May 2014
15. American College of Sports Medicine Annual Meeting Tutorial, Indianapolis, IN, “Development of stem cell strategies for the prevention of age-related muscle loss”, May 2013
14. American College of Sports Medicine Annual Meeting Symposium, Indianapolis, IN, “Sensing the tension: identification of mechanotransducers that contribute to muscle growth”, May 2013
13. UIUC National Science Foundation (NSF) IGERT: Training the Next Generation of Researchers in Cellular and Molecular Mechanics and BioNanotechnology Seminar, “Development of strategies for the prevention and/or treatment of age-related declines in skeletal muscle function”, April 2013

12. Beijing Sport University Research Symposium, Beijing, China, “Development of strategies for the prevention of age-related muscle loss: what we’ve learned from exercise research”, October 2012
11. Beijing Sport University, Third National Sports Science Laboratory Management and Development Forum, Beijing, China, “Impact of social dynamics on laboratory performance”, October 2012
10. Beckman Institute Director’s Seminar, University of Illinois at Urbana-Champaign, “Development of strategies for the prevention of age-related muscle loss: what we’ve learned from exercise research”, March 2012
9. American College of Sports Medicine Annual Meeting Tutorial, Denver, CO, “Role of stem cells in exercise-induced skeletal muscle adaptations”, June 2011
8. University of Illinois at Chicago, Department of Kinesiology and Nutrition Seminar, Chicago, IL, “Identification of stem cells in skeletal muscle that contribute to growth following exercise”, March 2011
7. American College of Sports Medicine Annual Meeting, Midwest Chapter, Indianapolis, IN, “Does a role exist for non-satellite stem cells in skeletal muscle growth following exercise?”, October 2010
6. Biophotonics Imaging Laboratory Seminar, Beckman Institute for Advanced Science and Technology, University of Illinois at Urbana-Champaign, “Basics of stem cell biology”, July 2009
5. University of Western Australia, School of Anatomy and Human Biology, Crawley, Australia, “α7 Integrin-mediated recruitment of muscle-derived stem cells”, June 2008
4. Department of Mechanical Engineering Seminar, University of Illinois at Urbana-Champaign, “A physiological approach to studying the role of the α7 integrin as a mechanotransducer in skeletal muscle”, November 2007
3. Center for Nanoscale Science and Technology & Center for Cellular Mechanics Summer School, University of Illinois at Urbana-Champaign, “Basics of extracellular matrix composition and exercise-induced changes in skeletal muscle ECM and linkage proteins, July 2007
2. Department of Chemical and Biomolecular Engineering Seminar, University of Illinois at Urbana-Champaign, “Role of the α7β1 integrin in preventing skeletal muscle injury: decreased mechanotransduction or increased adhesion?”, May 2007
1. Center for Cellular Mechanics Colloquium, University of Illinois at Urbana-Champaign, “The α7β1 integrin regulates mechanotransduction and prevents skeletal muscle injury *in vivo*”, March 2006

RESEARCH PRESENTATIONS – CONFERENCES

108. Choi SJ, Fliflet AM, Nishitha Vijayan A, Kao WC, Huang K, Sunde R, Kong H, **Boppart MD**. Evaluating a role of fibroadipogenic progenitors in muscle recovery after disuse. *Regenerative Rehabilitation: New Frontiers in Rehabilitation*, Chicago, IL, 2025. Selected for oral presentation.
107. Vijayan A, Choi SJ, Kao WC, **Boppart MD**. Evaluating a role of fibroadipogenic progenitors in muscle recovery after disuse. *Regenerative Rehabilitation: New Frontiers in Rehabilitation*, Chicago, IL, 2025. Selected for oral presentation.
106. Choi SJ, Kao WC, Vijayan A, Fliflet A, Drnevich J, **Boppart MD**. Evaluation of the skeletal muscle transcriptome during the remobilization phase after disuse. *Advances in Skeletal Muscle Biology*, Gainesville, FL, 2025.

105. Fliflet AM, Barnes T, Tan Y, Burd N, Sweedler J, **Boppart MD**. Development of a human extracellular vesicle therapy to recover skeletal muscle following disuse. *Advances in Skeletal Muscle Biology*, Gainesville, FL, 2025. Selected for oral presentation.
104. Park J, Kao WC, Fan H, Choi SJ, Aksamitience E, **Boppart MD**, Boppart SA. Real-time label-free dynamic imaging of extracellular vesicles in live tissues *Allen Frontiers Symposium*, Seattle, WA, 2025.
103. Fliflet AM, Barnes T, Tan Y, Burd N, Sweedler J, **Boppart MD**. Design of an extracellular vesicle therapy to protect human health in space. *NASA Human Research Program Investigators' Workshop*, Galveston, TX, 2025.
102. Connolly MG, Ravi P, Rosu D, Malan LR, Fliflet AM, **Boppart MD**, Rhodes JS. Effects of exercise-induced extracellular vesicles on adult neurogenesis, astrogliogenesis, and microvascular density in the hippocampus. *Society for Neuroscience Annual Meeting*, Chicago, IL, 2024.
101. Tan Y, Fliflet A, **Boppart MD**, Sweedler JV. Proteomics assessment of plasma-derived extracellular vesicles in exercised models by nanoLC-DDA-MS. *Wisconsin Human Proteomics Symposium*, Madison, WI, 2024.
100. Fliflet AM, Spradlin RA, Bludgen T, Meehan M, Burger J, Reddy M, **Boppart MD**. Development of an exercise-based EV therapy to improve skeletal muscle recovery after immobilization. *American Physiological Society (APS) Annual Meeting*, Long Beach, CA, 2024.
99. Kao WC, Tan Y, Choi S, Sweedler J, **Boppart MD**. Extracellular vesicles provide the basis for transmission of a pro-senescent phenotype in aged mice. *Tiny Packages with Big Impact: Workshop on Extracellular Vesicle Isolation and Characterization*, University of Virginia, VA, 2024.
98. Fliflet AM, Burd N, Kong HJ, Rhodes J, Saif T, Sweedler J, **Boppart MD**. Design of an extracellular vesicle approach to protect human health in space. *NASA Human Research Program Investigators' Workshop*, Houston, TX, 2024.
97. Connolly MG, Fliflet AM, Ravi P, Rosu D, Malan LR, **Boppart MD**, Rhodes JS. Exercise-induced exosomes increase adult hippocampal cell genesis. *Society for Neuroscience, Annual Meeting*, Washington DC, 2023.
96. Fliflet AM, Spradlin RA, Bludgen T, Meehan M, **Boppart MD**. Development of an exercise-based EV therapy to improve skeletal muscle recovery following immobilization. *International Society for Extracellular Vesicles*, Annual Meeting, 2023.
95. Zupancic Z, Fliflet A, Paulussen KJ, Barnes TM, Askow AT, Deutz MT, Paluska SA, Dilger RN, McKenna CF, Salvador AF, Moore DR, **Boppart MD**, Burd NA. Food matrix effects do not differentially phosphorylate rpS6 versus the sum of its parts. *American College of Sports Medicine*, Annual Meeting, 2023.
94. Wu YF, Jung R, Kim N, **Boppart MD**. Therapeutic potential of pericyte-derived EVs for skeletal muscle recovery following hindlimb immobilization in aged mice. *International Society for Extracellular Vesicles*, Annual Meeting, Virtual, 2021. ***Student Invited Oral Presentation***
93. Wu YF, Lapp S, Dvoretskiy S, Tannehill A, Garcia G, **Boppart MD**. Therapeutic potential of different pericyte populations in the recovery of skeletal muscle mass following disuse. *American College of Sports Medicine*, Annual Meeting, Virtual, 2021.
92. Dvoretskiy S, Wu YF, Garcia G, Konopka C, Garcia G, Jung E, Kalinowski M, Kim N, Dobrucki LW, **Boppart MD**. The impact of $CD146^{+/-}$ serum extracellular vesicles on recovery of skeletal muscle mass following hindlimb immobilization. *American College of Sports Medicine*, Annual Meeting, San Francisco, CA, 2020. Canceled due to COVID-19
91. Lapp S, Wu YF, Dvoretskiy S, Tannehill A, **Boppart MD**. Therapeutic potential of different pericyte populations in skeletal muscle recovery following disuse. *American College of Sports Medicine*, Annual Meeting, San Francisco, CA, 2020. Canceled due to COVID-19
90. Dvoretskiy S, Wu YF, Garcia G, Konopka C, Dobrucki LW, Jung E, Kalinowski M, Kim N, **Boppart MD**. The impact of mechanical strain and immobilization on the capacity for skeletal muscle-resident $CD146^{+}$ pericytes to secrete extracellular vesicles. *Ninth Annual Regenerative*

Rehabilitation Symposium, Charlottesville, VA, 2019. ***Travel Award and Student Invited Oral Presentation***

89. Gardner JC, Dvoretskiy SV, Yang Y, Lange DA, Venkataman S, Katwala A, Rendiero C, **Boppart MD**, Rhodes JS. Electrically stimulated hind-limb muscle contractions increase adult hippocampal neurogenesis in anesthetized mice. *Society for Neuroscience, Annual Meeting*, Chicago, IL, 2019.
88. Lapp S, Wu YF, Dvoretskiy S, Tannehill, **Boppart MD**. Therapeutic potential of different pericyte populations in skeletal muscle recovery following disuse. *American College of Sports Medicine, Midwest Chapter, Annual Meeting*, Chicago, IL, 2019.
87. Dvoretskiy S, **Boppart MD**. The impact of mechanical strain and immobilization on the capacity for skeletal muscle-resident $CD146^{+}$ pericytes to secrete extracellular vesicles. *American College of Sports Medicine, Midwest Chapter, Annual Meeting*, Chicago, IL, 2019.
86. Dvoretskiy S, Drnevich J, Rhodes J, **Boppart MD**. Skeletal muscle-resident perivascular stem/stromal cells synthesize immunomodulatory factors in response to contraction. *Advances in Skeletal Muscle Biology in Health and Disease*, University of Florida, Gainesville, FL, 2019. ***Student Invited Oral Presentation***
85. Garcia G, Dvoretskiy S, **Boppart MD**. Pericytes secrete paracrine factor in response to strain that increases myoblast differentiation. *Advances in Skeletal Muscle Biology in Health and Disease*, University of Florida, Gainesville, FL, 2019.
84. Dvoretskiy S, Garg K, Munroe M, Pincu Y, Mahmassani Z, Blackwell B, Garcia G, Waterstradt G, **Boppart MD**. Perivascular stem/stromal cell regulation of muscle growth. *Institute for Genomic Biology*, Urbana, IL, 2019.
83. Dvoretskiy S, Drnevich J, Rhodes, J, **Boppart MD**. Skeletal muscle-resident perivascular stem/stromal cells synthesize immunomodulatory factors in response to contraction. *T32 TiMe Day Symposium*, Urbana, IL, 2019.
82. Dvoretskiy S, Garg K, Munroe M, Pincu Y, Mahmassani Z, Blackwell B, Garcia G, Waterstradt G, **Boppart MD**. Perivascular stem/stromal cell regulation of muscle growth. *Institute for Genomic Biology*, Urbana, IL, 2018.
81. Munroe M, Dvoretskiy S, Lopez A, Jiayu EL, Kong H, **Boppart MD**. Pericyte transplantation improves skeletal muscle recovery following hindlimb immobilization. *Integrative Physiology of Exercise*, San Diego, CA, 2018.
80. Dvoretskiy S, Garg K, Munroe M, Pincu Y, Mahmassani Z, Blackwell B, Garcia G, Waterstradt G, **Boppart MD**. Perivascular stem/stromal cell regulation of muscle growth. *Integrative Physiology of Exercise*, San Diego, CA, 2018.
79. Dvoretskiy S, Garg K, Munroe M, Pincu Y, Mahmassani Z, Coombs C, Blackwell B, Waterstradt G, **Boppart MD**. Pericyte response to muscle contraction. *Annual Symposium on Regenerative Rehabilitation*, Pittsburgh, PA, 2017. ***Travel Award and Invited Oral Presentation***
78. Hedhli J, Konopka CJ, Minwoo K, Schuh S, Bouvin H, Cole JA, Huntsman H, Kilian KA, Dobrucki IT, **Boppart M**, Insana M, Dobrucki W. Stem cell-based therapy in PAD exerts multifaceted effects on the diabetic ischemic microenvironment. *American Heart Association Meeting*, Anaheim, CA, 2017.
77. Munroe MM, Mahmassani Z, Dvoretskiy S, Rhodes J, **Boppart MD**. Cognitive function is preserved in aged mice following long-term HMB supplementation. *American College of Sports Medicine*, Annual Meeting, Denver, CO, 2017.
76. Mahmassani Z, Son K, Chen J, **Boppart MD**. The α7β1 integrin directly regulates SLC7A5 (LAT1) amino acid transporter transcription in skeletal muscle. *Federation of American Societies for Experimental Biology,* Chicago, IL, 2017.
77. Munroe M, Dyle MC, Adams CM, **Boppart MD**. The impact of disuse muscle atrophy on perivascular stem cell quantity and function. *Federation of American Societies for Experimental Biology*, Chicago, IL, 2017.

76. Munroe MM, Mahmassani Z, Dvoretskiy S, Rhodes J, **Boppart MD**. Cognitive function is preserved in aged mice following long-term HMB supplementation. *Midwest Chapter American College of Sports Medicine*, Annual Meeting, 2016.
75. Dvoretskiy S, Garg K, Munroe M, Pincu Y, Mahmassani ZS, Blackwell B, **Boppart MD**. Skeletal muscle pericyte response to acute and chronic electrical stimulation. *Integrative Biology of Exercise*, Phoenix, AZ, 2016.
74. Mahmassani Z, Garg K, Munroe M, Dvoretskiy S, Hornberger TA, **Boppart MD**. Overexpression of the α7β1 integrin accelerates skeletal muscle hypertrophy following chronic overload. *Integrative Biology of Exercise*, Phoenix, AZ, 2016.
73. Ko E, Seung-Jung YU, Park J, Im SG, **Boppart M**, Bashir R, Kong H. Nanotopography-induced neuromuscular junction assembly. *Biomedical Engineering Society Annual Meeting*, Minneapolis, MN, 2016.
72. Mahmassani Z, Pincu Y, Munroe M, **Boppart MD**. Overexpression of the α7β1 integrin influences expression of genes which regulate the stress response, protein translation, and substrate utilization in mice. *Advances in Skeletal Muscle Biology in Health and Disease*, University of Florida, Gainesville, FL, 2016.
71. Mahmassani Z, Pincu Y, Munroe M, **Boppart MD**. Mechanistic basis for integrin-mediated skeletal muscle growth: a microarray analysis. *Midwest Chapter American College of Sports Medicine, Annual Meeting*, Ft. Wayne, IN, 2015.
70. Garg K, Mahmassani Z, Dvoretskiy S, Burkin D, **Boppart MD**. Laminin-111 supplementation suppresses inflammation and fibrosis in response to mechanical overload in aged skeletal muscle. *Fourth Annual Regenerative Rehabilitation Symposium*, Mayo Clinic, Rochester, MN, 2015.
69. Marjanovic M, Li J, Bower AJ, Pincu Y, Chaney EJ, **Boppart MD**, Boppart SA. Effect of pericytes on skin wound healing in diabetic (*db/db*) mice. *Biomedical Engineering Society Annual Meeting*, Tampa, FL, 2015.
68. Moy AS, Grier WK, Garg K, **Boppart MD**, Harley BA. Incorporation of laminin into collagen-GAG scaffolds for muscle tissue engineering. *Biomedical Engineering Society Annual Meeting*, Tampa, FL, 2015.
67. Hedhli J, Schuh S, Czerwinski A, Huntsman HD, Dobrucki IT, Slania S, **Boppart M**, Dobrucki LW. Molecular imaging of stem cell induced angiogenesis at the onset of microvascular complication in type-1 diabetes. *Society of Nuclear Medicine and Molecular Imaging*, Baltimore, MD, 2015.
66. Chung HR, Wu PT, Fitschen PJ, Kistler BM, Park H, Jeong JH, Wilund KR, Woods J, **Boppart M**. The impact of physical activity on statin-associated skeletal muscle myopathy. *American College of Sports Medicine, Annual Meeting*, San Diego, CA, 2015.
65. Ogasawara R, Sato K, Matsutani K, Hamaoka T, **Boppart M**, Fujita S. The effect of age and resistance training on α7β1 integrin expression and activation in human skeletal muscle. *American College of Sports Medicine, Annual Meeting*, San Diego, CA, 2015.
64. Sun Y, Pence B, Pishevar N, **Boppart M**, Woods JA. Acute eccentric or concentric exercise does not improve antibody responses to ovalbumin vaccination in mice. *Illinois Brain Behavior and Immunity Meeting*, 2015.
63. Munroe M, Merritt J, Pincu Y, Cobert A, Jensen T, Rhodes J, **Boppart MD**. β-hydroxy β-methylbutyrate (HMB) enhancement of mesenchymal stem cell function in aged skeletal muscle. *American College of Sports Medicine, Annual Meeting*, San Diego, CA, 2015.
62. Moy AS, Grier WK, Garg K, **Boppart M**, Harley B. Incorporation of laminin into collagen-GAG scaffolds for muscle tissue engineering. *UIUC Undergraduate Symposium*, 2015.
61. Grier W, Mozdzen L, Caliari S, Weisberber D, **Boppart MD**, Harley B. Spatial control of MSC fate using 3D multi-compartment scaffolds for engineering orthopedic interfaces. *Biomedical Engineering Society, Annual Meeting*, San Antonio, TX, 2014.
60. Pincu Y, Huntsman HD, Zou K, De Lisio M, Mahmassani ZS, Jensen T, **Boppart MD**. Evaluation of adipose- and muscle-resident mesenchymal stem cell adipogenic potential following high fat diet and exercise. *Integrative Physiology of Exercise*, Miami, FL, 2014.

59. Mahmassani ZS, Pincu Y, Jensen T, **Boppart MD**. IL-13 directs muscle-resident mesenchymal stem cell differentiation and function. *Integrative Physiology of Exercise*, Miami, FL, 2014.
58. De Lisio M, Farrup J, Sukiennik RA, Clevenger N, Nallabelli J, Nelson B, Ryan K, Vissing K, **Boppart M**. Pericyte response to eccentric exercise and protein supplementation in human skeletal muscle. *Integrative Physiology of Exercise*, Miami, FL, 2014
57. Zou K, De Lisio M, Huntsman HD, Mahmassani, Pincu Y, Jensen T, Miller M, Olatunbosun D, Zhang A, Samuel E, **Boppart MD**. Laminin-111 improves skeletal muscle repair following eccentric exercise-induced damage. *American College of Sports Medicine, Annual Meeting*, Orlando, FL, 2014.
56. De Lisio M, Jensen T, Sukiennik RA, **Boppart MD**. Substrate and stretch regulate muscle-resident mesenchymal stem cells to promote myoblast proliferation. *Federation of American Societies for Experimental Biology*, San Diego, CA, 2014.
55. Huntsman HD, De Lisio M, Kolyvas E, Merritt J, Bhattacharya T, Jensen T, Rhodes J, **Boppart MD**. Simultaneous reversal of age-related declines in muscle health and function with transplantation of preconditioned mesenchymal stem cells. *Federation of American Societies for Experimental Biology*, San Diego, CA, 2014.
54. Pincu Y, Huntsman HD, Zou K, De Lisio M, Mahmassani, **Boppart MD**. Evaluation of mesenchymal stem cell contribution to adipose health in the context of high fat diet and exercise. *Federation of American Societies for Experimental Biology*, San Diego, CA, 2014.
53. Pincu Y, Huntsman HD, Zou K, De Lisio M, Mahmassani, **Boppart MD**. High fat diet and exercise alter gene expression of mesenchymal stem cells derived from muscle and adipose. *6th D-Cure Symposium, New Frontiers in Diabetes Research*, Herzliya, Israel, 2013.
52. Huntsman HD, De Lisio M, Kolyvas E, Merritt J, Bhattacharya T, Rhodes J, **Boppart MD**. Simultaneous reversal of age-related declines in muscle health and function with transplantation of preconditioned mesenchymal stem cells. *Nathan Shock Center Conference on Aging, Stem Cells and Aging*, San Antonio, TX, 2013.
51. Huntsman HD, **Boppart MD**. Simultaneous reversal of age-related declines in muscle health and function with transplantation of preconditioned mesenchymal stem cells. *UIC-UIUC Stem Cell and Regenerative Medicine Workshop*, University of Illinois, Chicago, IL, 2013. ***Second Prize Winner, Student Oral Presentation***
50. Caliari SR, Grier WK, Hortensius RA, Mahmassani Z, **Boppart MD**, Harley BA. Multi-compartment collagen-GAG scaffolds to guide MSC differentiation for osteotendinous junction repair. *Biomedical Engineering Society, Annual Meeting*, Seattle, WA, 2013.
49. Ogasawara R, Nakazato K, Sato K, **Boppart M**, Fujita S. Continuous resistance training alters exercise-induced MMP activation and expression of ECM components. *American College of Sports Medicine, Annual Meeting*, Indianapolis, IN, 2013.
48. Chung HR, Wu PT, Fitschen PJ, Kistler BM, Park H, **Boppart MD**, Woods J, Wilund KR. The impact of hypercholesterolemia and physical activity on statin-associated skeletal muscle myopathy. *American College of Sports Medicine, Annual Meeting*, Indianapolis, IN, 2013.
47. Zou K, Huntsman HD, Mahmassani Z, De Lisio MD, **Boppart MD**. Skeletal muscle-derived mesenchymal stem cells secrete paracrine factors in response to mechanical strain that are important for regeneration and growth. *American College of Sports Medicine, Annual Meeting*, Indianapolis, IN, 2013.
46. Huntsman HD, Zachwieja, Khazoum E, Ryan K, Kolyvas EA, and **Boppart MD.** Stem cell preconditioning and transplantation as a therapeutic strategy to revitalize growth and function in aged skeletal muscle. *National Science Foundation IGERT Video and Poster Competition*, 2013. ***Selected UIUC Representative for National Competition***
45. Huntsman HD, Ozturk T, **Boppart MD**, and Kemkemer R. The effect of substrate stiffness on the apparent stress cells experience during cyclic strain. *IGERT and M-CNTC Annual Symposium*. UIUC, 2013. CNST Nanotechnology Workshop 2013 Best Poster Award
44. Huntsman HD, Ozturk T, **Boppart MD**, Kemkemer R. The effect of substrate stiffness on the apparent stress cells experience during cyclic strain. *Federation of American Societies for Experimental Biology*, Boston, MA, 2013.

43. Zou K, Huntsman HD, **Boppart MD**. Mesenchymal stem cells contribute to exercise-induced skeletal muscle hypertrophy and strength. *Integrative Biology of Exercise Meeting*, Westminster, CO, 2012.
42. Graf BW, Chaney EJ, DeLisio M, Marjanovic M, Adie SG, **Boppart MD**, Boppart SA. Time-lapse multi-modal microscopy of bone-marrow-derived cell dynamics during cutaneous wound healing and regeneration. *American Society for Photobiology*, Quebec, Canada, 2012.
41. Huntsman HD, Valero C, Zou K, Zachwieja N, **Boppart MD**. Mesenchymal stem cells contribute to vascular growth in skeletal muscle in response to eccentric exercise. *American College of Sports Medicine, Annual Meeting*, San Francisco, CA, *Medicine and Science in Sport and Exercise*, 44(5) S567, 2012.
40. Pincu Y, Linden MA, Woods JA, **Boppart MD**, Baynard T. The effects of high fat diet and moderate exercise on TGF-β signaling in mouse skeletal muscle. *American College of Sports Medicine, Annual Meeting*, San Francisco, CA, *Medicine and Science in Sport and Exercise*, 44(5) S126, 2012.
39. Mahmassani Z, Zou K, Herring R, **Boppart MD**. The $\alpha 7\beta 1$ integrin is an intrinsic regulator of mechanical strain-induced hypertrophic signaling in skeletal muscle. *American College of Sports Medicine, Annual Meeting*, San Francisco, CA, *Medicine and Science in Sport and Exercise*, 44(5) S126, 2012.
38. Zou K, Huntsman HD, Valero C, Skelton J, Adams J, Mahmassani ZS, **Boppart MD**. Muscle-derived mesenchymal stem cells contribute to exercise-induced skeletal muscle hypertrophy. *Federation of American Societies for Experimental Biology*, San Diego, CA 2012.
37. Zou K, Huntsman HD, Skelton J, Adams J, Mahmassani Z, **Boppart MD**. Muscle-derived mesenchymal stem cells secrete myokines that facilitate exercise-induced skeletal muscle growth. *Advances in Skeletal Muscle Biology in Health and Disease*, University of Florida, Gainesville, FL, 2012.
36. Zou K, Meador B, Johnson B, Huntsman H, Valero C, **Boppart MD**. The $\alpha 7\beta 1$ integrin promotes skeletal muscle hypertrophy following eccentric exercise. *American College of Sports Medicine, Annual Meeting*, Denver, CO, *Medicine and Science in Sport and Exercise*, 43(5) S282, 2011.
35. Huntsman HD, Valero C, Zou K, Lueders T, **Boppart MD**. Skeletal muscle mesenchymal stem cells facilitate exercise-induced myogenesis. *American College of Sports Medicine, Annual Meeting*, Denver, CO, *Medicine and Science in Sport and Exercise,* 43(5) S282, 2011.
34. Graf BW, Chaney EJ, Valero MC, Marjanovic M, **Boppart MD**, Boppart SA. Long-term, time-lapse, multi-modal microscopy for tracking cell dynamics in live tissue. *Society of Photo-Optical Instrumentation Engineers (SPIE) Annual Meeting,* San Jose, CA, 2011.
33. Zou K, Meador B, Johnson B, Huntsman HD, Valero MC, **Boppart MD**. The $\alpha 7\beta 1$ integrin promotes skeletal muscle hypertrophy following eccentric exercise. *American College of Sports Medicine, Midwest Chapter, Annual Meeting*, Indianapolis, IN, 2010.
32. Huntsman HD, Lueders T, Zou K, Valero MC, **Boppart MD**. Skeletal muscle mesenchymal stem cells facilitate exercise-induced myogenesis. *American College of Sports Medicine, Midwest Chapter, Annual Meeting*, Indianapolis, IN, 2010.
31. Graf BW, Chaney EJ, Valero MC, Marjanovic M, **Boppart MD**, Boppart SA. Time-lapse intravital-modal microscopy for studying dynamics of bone marrow derived cells in cutaneous wound healing. *UIC-UIUC Workshop on Regenerative Biology and Tissue Engineering*, University of Illinois, Urbana-Champaign, IL, 2010.
30. Huntsman HD, Valero C, Zou K, Lueders T, **Boppart MD**. Skeletal muscle mesenchymal stem cells facilitate exercise-mediated myogenesis. *UIC-UIUC Workshop on Regenerative Biology and Tissue Engineering*, University of Illinois, Urbana-Champaign, IL, 2010. ***Selected Best Abstract***
29. Lueders T, Meador B, Zou K, Valero MC, **Boppart MD**. Mesenchymal-like stem cells contribute to increases in muscle growth in alpha7 integrin transgenic mice following exercise. *American College of Sports Medicine, Annual Meeting*, Baltimore, MD. *Medicine and Science in Sport and Exercise,* 42(5) S126, 2010.

28. Valero MC, Liu J, Fecek C, **Boppart MD**. Muscle-specific overexpression of the alpha7beta1 integrin facilitates the appearance of mesenchymal stem cells in skeletal muscle following exercise. *Making Muscle in the Embryo and Adult*, Columbia University, New York, NY, 2009.
27. **Boppart MD**, SJ Kaufman. Transgenic overexpression of alpha7beta1 integrin stimulates p70S6K phosphorylation in mice with a severe form of muscular dystrophy. *Federation of American Societies for Experimental Biology*, New Orleans, LA, 2009.
26. Liu J, Valero MC, **Boppart MD**. Characterization of a Sca-$1^{+}$$CD45^{-}$ stem cell population preferentially recruited by the alpha7beta1 integrin in skeletal muscle following eccentric exercise. *Integrative Biology of Exercise Meeting*, Hilton Head Island, SC, 2008.
25. **Boppart MD**, Liu J, Alexander NM, Kaufman SJ. The alpha7beta1 integrin recruits a Sca-1^{+}/$CD45^{-}$ stem cell population in skeletal muscle following exercise-induced injury. *American College of Sports Medicine, Annual Meeting*, Indianapolis, IN. *Medicine and Science in Sport and Exercise,* 40(5) S33, 2008.
24. **Boppart MD**, Volker SE, Alexander NM, Burkin DJ, Kaufman SJ. Exercise-induced increase in skeletal muscle injury in α7 integrin knockout mice. *NIH-sponsored Symposium on Adult Skeletal Muscle*, Indianapolis, IN, 2007.
23. **Boppart MD**, Volker SE, Chaney EJ, Kaufman SJ. Mechanical induction of α7β1 integrin expression and its role in intracellular signaling in skeletal muscle *in vivo*. *University of Illinois Center for Nanoscale Science and Technology, Center for Intracellular Mechanics, Symposium on Cell Mechanics*, Urbana-Champaign, IL, 2006.
22. Alexander N, **Boppart MD,** Kaufman SJ. The role of the α7β1 integrin in muscle protection following a repeated bout of exercise. *Howard Hughes Medical Institute Undergraduate Research Fellow Research Symposium*, Urbana, IL, 2006.
21. Pasquesi JJ, **Boppart MD**, Kaufman SJ, Boppart SA. Detection of ultrastructural changes in genetically altered and exercised skeletal muscle using PS-OCT. *International Society for Optical Engineering Photonics West-Biomedical Optics*, San Jose, CA, 2006.
20. **Boppart MD**, Volker SE, Chaney EJ, Kaufman SJ. Eccentric exercise increases α7β1 integrin expression in skeletal muscle and subsequently protects against muscle damage. *American College of Sports Medicine, Midwest Chapter, Annual Meeting*, Muncie, IN, 2005.
19. Alexander N, **Boppart MD,** Kaufman SJ. The role of the α7β1 integrin in muscle protection following a repeated bout of exercise. *Howard Hughes Medical Institute Undergraduate Research Fellow Research Symposium*, Urbana, IL, 2005.
18. **Boppart MD**, Mulligan J, Chaney EJ, Kaufman SJ. α7β1 Integrin prevents injury in mouse skeletal muscle following downhill running. *Federation of American Societies for Experimental Biology*, San Diego, CA, 2005.
17. **Boppart MD**, Mulligan J, Chaney EJ, Kaufman SJ. α7β1 Integrin prevents injury in mouse skeletal muscle following downhill running. *Federation of American Societies for Experimental Biology*, San Diego, CA, 2005.
16. **Boppart MD**, Wallace GQ, Chaney EJ, Kaufman SJ. Inhibition of signaling in mouse skeletal muscle overexpressing the α7β1 integrin receptor immediately following downhill running. *American College of Sports Medicine, Annual Meeting*, Indianapolis, IN. *Medicine and Science in Sport and Exercise,* 36(5), 2004.
15. Wallace GQ, Burkin DJ, **Boppart MD**, Milner DJ, Kaufman SJ. α7β1 Integrin promotes muscle integrity, regeneration and hypertrophy in rescued dystrophic mice. *Molecular Biology of Muscle Development and Regeneration Conference*, Alberta, Canada, 2003.
14. Fujii N, Crowley PF, Sakamoto K, Jozsi AP, **Boppart MD**, Dufresne SD, Hirshman MF, Goodyear LJ. Overexpression of JNK into skeletal muscle by *in vivo* electroporation; Cross-talk with ERK and Akt signaling pathways. *Gordon Research Conference*, Meriden, NH, 2002.
13. Fujii N, Crowley PF, Sakamoto K, Jozsi AP, **Boppart MD**, Dufresne SD, Hirshman MF, Goodyear LJ. Overexpression of JNK in skeletal muscle suppresses ERK and Akt signaling pathways. *American Diabetes Association, Annual Meeting*, San Francisco, CA, 2002.

12. Fujii N, **Boppart MD**, Dufresne SD, Jozsi AP, Crowley PF, Hirshman MF, Goodyear LJ. Overexpression of JNK in skeletal muscle does not alter glycogen synthase activity. *Gordon Research Conference*, Meriden, NH, 2001.
11. **Boppart MD**, M Hirshman, RA Fielding, and LJ Goodyear. Regulation of focal adhesion proteins following contraction in rat skeletal muscle. *J Aging Phys Activ* 8(3): 260, 2000.
10. Fujii N, **Boppart MD**, Dufresne SD, Jozsi AP, Crowley PF, Hirshman MF, Goodyear LJ. Overexpression of JNK in skeletal muscle does not alter glycogen synthase activity. *American Diabetes Association, Annual Meeting*, Philadelphia, PA, 2001.
9. Fukuwatari T, **Boppart MD** (presenter), Hirshman MF, Goodyear LJ. Insulin does not increase p38 MAP kinase activity or phosphorylation in rat skeletal muscle. *American Diabetes Association, Annual Meeting*, San Antonio, TX. *Diabetes* 50(2) A276, 2000.
8. **Boppart MD**, Hirshman MF, Fielding RA, Goodyear LJ. Regulation of the focal adhesion proteins following contraction in rat skeletal muscle. *11th International Conference on the Biochemistry of Exercise: Molecular Aspects of Physical Activity and Aging*, Little Rock, AK. *J Aging Phys Activ* 8(3): 260, 2000.
7. **Boppart MD**, Hirshman MF, Sakamoto K, Fielding RA, Goodyear LJ. Effects of static stretch on c-Jun kinase (JNK) activity in rat skeletal muscle *in vitro*. *American College of Sports Medicine, Annual Meeting*, Indianapolis, IN. *Medicine and Science in Sport and Exercise,* 32(5) S210, 2000.
6. **Boppart MD**, Hirshman MF, Fielding RA, LJ Goodyear LJ. Static stretch markedly increases c-Jun kinase (JNK) activity in rat skeletal muscle *in vitro*. *American College of Sports Medicine, New England Chapter, Annual Meeting*, Providence, RI, 1999.
5. **Boppart MD**, Asp S, Wojtaszewski JFP, Fielding RA, Mohr T, Goodyear LJ. Marathon running transiently increases c-Jun kinase (JNK) and p38 kinase activities in human skeletal muscle. *American College of Sports Medicine Annual Meeting*, Seattle, WA. *Medicine and Science in Sport and Exercise,* 31(5) S171, 1999.
4. **Boppart MD**, Gibson L, Aronson D, Bean J, Goodyear LJ, Fielding RA. Effect of eccentric exercise on c-jun NH_2 terminal (JNK) signaling in human skeletal muscle. *American College of Sports Medicine, Annual Meeting*, Orlando, FL. *Medicine and Science in Sport and Exercise*, 30(5) S2, 1998.
3. **Boppart MD**, Gibson L, Aronson D, Goodyear LJ, Fielding RA. Eccentric exercise potently activates c-jun NH_2 terminal (JNK) signaling in human skeletal muscle. *American College of Sports Medicine, New England Chapter, Annual Meeting*, Providence, RI, 1997.
2. **Boppart MD**, Kimmel DB, Yee JA, Cullen DM. Time course for osteoblast appearance after *in vivo* mechanical loading. *American Society for Bone and Mineral Research Conference*, Seattle, WA. *Journal of Bone and Mineral Research*, 11(1) M340, 1996.
1. **Kvidera (Boppart) MD**, Carey GB. Glutamine synthetase in rat epididymal tissue. *Federation of American Societies for Experimental Biology Meeting*, Anaheim, CA, 1994.

COLLABORATORS

Justin Rhodes, UIUC, Psychology, Neuroscience Program
Hyunjoon Kong, UIUC, Chemical and Biomolecular Engineering
Jonathan Sweedler, UIUC, Chemistry
Stephen Boppart, UIUC, Electrical and Computer Engineering & Bioengineering
Wawrzyniec Dobrucki, UIUC, Bioengineering
Troy Hornberger, U Wisconsin-Madison, School of Veterinary Medicine, Comparative Biosciences
Jie Chen, UIUC, Cell and Developmental Biology
Benjamin Miller, Oklahoma Medical Research Center
Christopher Adams, University of Iowa, Molecular Physiology and Biophysics
Kristian Vissing, Aarhus University, Denmark, Department of Public Health-Sport Science

Brendan Harley, UIUC, Chemical and Biomolecular Engineering
Dean Burkin, University of Nevada, Reno, Pharmacology

TEACHING EXPERIENCE

UIUC Courses

- **KIN 450 Exercise Biochemistry,** Department of Kinesiology and Community Health, University of Illinois, Urbana-Champaign, IL

  2007-2009: Guest Lecturer, Exercise and Extracellular Matrix

- **KIN 494/470 Exercise Endocrinology,** Department of Kinesiology and Community Health, University of Illinois, Urbana-Champaign, IL

  2007-current: Director, new course development, ~20 students

- **KIN 591 Exercise Physiology Graduate Seminar,** Department of Kinesiology and Community Health, University of Illinois, Urbana-Champaign, IL

  2008, 2011, 2012: Director, 20 students

- **KIN 150 Biosciences of Human Movement (Exercise Physiology),** Department of Kinesiology and Community Health, University of Illinois, Urbana-Champaign, IL,

  2008-current: Director, course modernization/revision, 120 students/semester

- **KIN 594/552, Advanced Skeletal Muscle Physiology,** Department of Kinesiology and Community Health, University of Illinois, Urbana-Champaign, IL

  2010-current: Director, new course

- **KIN 594, Advanced Exercise Physiology Laboratory Methods,** Department of Kinesiology and Community Health, University of Illinois, Urbana-Champaign, IL

  2010-current: Co-Instructor, assisted new course development

- **KIN 565, Teaching in the Professoriate,** Department of Kinesiology and Community Health, University of Illinois, Urbana-Champaign, IL

  2009: Mentor for Melinda Flegel
  2010: Mentor for Melissa Linden
  2013: Mentor for Michael Munroe
  2020: Mentor for Alexis King
  2023: Mentor for Sung Jun Choi

- **KIN 365, Civic Engagement in Wellness,** Department of Kinesiology and Community Health, University of Illinois, Urbana-Champaign, IL

  2012: Guest Lecturer, Physical Wellness in Older Adults

- **KIN 451, Skeletal Muscle Physiology**, Department of Kinesiology and Community Health, University of Illinois, Urbana-Champaign, IL

  2016-current: Director, 20-30 students

Carle Illinois College of Medicine

- **Co-Director,** Musculoskeletal, 2016
- **Director,** Endocrinology, new course development, 2017-current

Courses Previously Taught

- **Undergraduate Teaching Assistant for General Biology**, Department of Biological Sciences, University of New Hampshire, Durham, NH, 1989

- **HS 574 Clinical Exercise Physiology** Department of Health Sciences, Sargent College, Boston University, Boston, MA

US Air Force Teaching Experience

- **Aerospace Physiology Instructor:** United States Air Force, Brooks AFB, San Antonio, TX, 1992-1993, topics: situational awareness, human factors, hypoxia, aircraft evacuation, parasail training.
- **Aerospace Physiology Instructor:** United States Air Force, Offutt AFB, Omaha, NE, 1993-1996; 10-40 military and civilian aviators/class; 2-3 classes/wk, topics: situational awareness, human factors, hypoxia, spatial disorientation, acceleration, G force protection, exercise, nutrition, visual illusions, fatigue, noise protection, thermal stress, hyperbarics.
- **Aerospace Physiology Lecturer:** United States Air Force, Aerospace Physiology Lecturer, 1992-1996; 40-300 military and civilian personnel/lecture, special topics: heat stress, fatigue, exercise, nutrition, visual illusions, fitness testing.

SUPERVISION OF STUDENT RESEARCH

Director of Research – Department of Kinesiology and Community Health

Postdoctoral Fellows and Medical Residents

1. **M. Carmen Valero**, Ph.D., Postdoctoral Fellow/Research Specialist, 2007-2011, conducted research on extracellular matrix interaction with muscle-derived mesenchymal stem cells following mechanical strain, currently employed as Biological Scientist, Center for NeuroGenetics, University of Florida
2. **Jianming Liu***,* Ph.D., Postdoctoral Fellow, 2007-2008, conducted research on role for α7 integrin in mesenchymal stem cell appearance in skeletal muscle, currently Instructor, Boston Children's Hospital, Harvard Medical School
3. **Nadia Nasreen**, M.D. Medical Resident, Carle Hospital, 2008-2010, conducted research on α7 integrin and inflammation, currently Internal Medicine Physician
4. **Michael De Lisio***,* Ph.D., Postdoctoral Fellow, 2012-2013, Project Title: Regulation of muscle-derived mesenchymal stem cell function in response to environmental cues, currently Associate Professor, Department of Kinesiology, University of Ottawa
5. **Koyal Garg**, Ph.D., Postdoctoral Fellow, 2014-2016, Project Title: Laminin-111-mediated rejuvenation of aged skeletal muscle, currently Associate Professor, Department of Biomedical Engineering, Saint Louis University
6. **Anujaianthi Ramakrishnan**, Ph.D., Postdoctoral Fellow, 2019, currently Product Specialist, Scientifica, Chicago, IL
7. **Ray Spradlin**, Ph.D., Postdoctoral Fellow, 2020-2023, currently Assistant Professor, College of Health and Wellness, Johnson and Wales University, Providence, RI
8. **Ane Vijayan**, Ph.D., Postdoctoral Fellow, 2023-current

Graduate Students

1. **Tara Lueders**, M.S., 2009-2010**, "**The $\alpha7\beta1$ integrin accelerates exercise-induced myogenesis", currently Orthodontist in Carmel, Indiana
2. **Kai Zou**, Ph.D., 2009-2013, "Development of novel strategies to improve skeletal muscle repair and adaptation following eccentric exercise", currently Associate Professor, University of Massachusetts at Boston
3. **Heather Huntsman**, Ph.D., 2010-2014, "Preconditioned muscle-derived mesenchymal stem cells revitalize muscle growth and function in aged skeletal muscle", currently Science Officer CDMRP for the Department of Defense
4. **Ziad Mahmassani**, M.S., 2010-2012, "Investigation of a role for the $\alpha7\beta1$ as a mechanotransducer of hypertrophic signaling in skeletal muscle"

5. **Ziad Mahmassani**, Ph.D., 2012-2017, "α7β1 Integrin regulation of skeletal muscle growth in response to mechanical stimulation", currently employed as a Senior Scientific Advisor at Eli Lilly, Boston, MA
6. **Yair Pincu**, Ph.D., 2011-2016, "Adipose-resident pericyte response to high fat diet and exercise", currently Lecturer, Department of Health and Exercise Science, University of Oklahoma
7. **Michael Munroe**, Ph.D., 2013-2017, "Development of a stem cell-based therapy for the recovery of skeletal muscle mass and function following immobilization", currently Scientist, Wugen, St Louis, MO
8. **Svyatoslav Dvoretskiy**, M.S., 2014-2016, "Skeletal muscle pericyte response to acute and chronic electrical stimulation"
9. **Svyatoslav Dvoretskiy**, Ph.D., 2016-2020, "Development of a pericyte-derived exosome therapy for the recovery of skeletal muscle mass following immobilization", currently employed as Senior Writer, Abvvie, Miami, FL
10. **Alif Tisha**, M.S., 2016-2018, "α7β1 Integrin regulation of skeletal muscle growth in response to mechanical stimulation"
11. **Yu-Fu Wu**, Ph.D., 2017-2021, "Development of a pericyte-based therapy for recovery of aged skeletal muscle following immobilization", currently Postdoctoral Fellow, Institute of Molecular Biology, Academia Sinica, Taiwan, Dr. Jun-An Chen
12. **Samuel Lapp**, M.S., 2018-2020, "Optimization of a pericyte therapy to improve muscle recovery following hindlimb immobilization", currently PhD candidate at Harvard School of Public Health
13. **Gabriela Garcia**, M.S., 2018-2020, "Contribution of muscle-resident pericytes to skeletal muscle repair post-injury"
14. **Zachary Griffith**, M.S. Non-Thesis, 2021-2024, currently completing sports residency in physical therapy at the University of Illinois, Chicago
15. **Matthew Phillip**, M.S. Non-Thesis, 2020-2021
16. **Laureen Daniels**, M.S. (Cell and Developmental Biology), 2020-2022, "Regulation of systemic aging by extracellular vesicles"
17. **Alexander Fliflet**, Ph.D., 2021-2025, "Development of an extracellular vesicle therapy to recover skeletal muscle after disuse"
18. **Sung Jun Choi**, M.S., 2021-2023, "Comprehensive analysis of cellular contribution to delayed skeletal muscle recovery after disuse"
19. **Wei-Chun Kao**, Ph.D. Candidate (Cell and Developmental Biology), 2021-current
20. **Sung Jun Choi**, Ph.D. Candidate, 2023-current
21. **Garrett Steele**, M.S. Candidate, 2026-current

International Visiting Scholars

1. **Ruirui Yang**, Visiting Ph.D. Candidate, Bejing Sport University, China, 2010-2011, "Inhibition of NF-κB signaling in skeletal muscle by overexpression of the α7β1 integrin"
2. **Michael De Lisio**, Visiting Ph.D. Candidate, McMaster University, Canada, 2011-2012, "Extracellular matrix regulation of mesenchymal stem cell function in skeletal muscle"
3. **Jean Farup**, Visiting Ph.D. Candidate, Aarhus University, Denmark, 2013, "Evaluation of mesenchymal stem cells in human skeletal muscle following exercise"
4. **Charlotte Coombs**, Visiting Ph.D. Candidate, University of Brighton, United Kingdom, 2017, "Assessment of pericyte mesodermal differentiation capacity"
5. **Georgios Mavropalias**, Visiting Ph.D. Candidate, Edith Cowan University, Australia, 2019, "Assessment of integrin response to eccentric exercise in human skeletal muscle"
6. **Sophie Krarup Hansen**, Visiting Ph.D. Candidate, University of Copenhagen, Denmark, 2023, "Assessment of integrin response to disuse in human skeletal muscle"

Trainee Awards

2011 **National Science Foundation IGERT-CMMB Graduate Student Fellowship** (Heather Huntsman)
2013 **Finalist in NSF IGERT Competition** (Heather Huntsman)
2013 **Caroline tum Suden/Frances Hellebrandt (APS) Award** (Heather Huntsman)
2012 **American College of Sports Medicine Foundation Grant** (Kai Zou)
2014 **American College of Sports Medicine Foundation Grant** (Yair Pincu)
2015 **Beckman Institute Postdoctoral Fellowship** (Michael De Lisio)
2016 **Finalist, Glenn/AFAR Scholarship** (Michael Munroe)
2017 **UIUC Dissertation Completion Award** (Michael Munroe)
2017 **Santander International Fellowship** (Charlotte Coombs)
2017 **Taiwan Ministry of Education Scholarship** (Yu-Fu Wu)
2018 **American College of Sports Medicine Foundation Grant/NASA Space Physiology** (Svyatoslav Dvoretskiy)
2018 **NIH T32, Tissue Microenvironment (TiMe) Training Program** (Svyatoslav Dvoretskiy)
2018 **School of Medical and Health Sciences Research Collaboration Travel Grant, Edith Cowan University, Australia** (Georgios Mavropalias)
2020 **Beckman Institute Postdoctoral Fellowship** (Anujaianthi Ramakrishna)
2020 **Finalist, NSF Graduate Fellowship** (Sam Lapp)
2023 **Beckman Institute Graduate Student Fellowship** (Alex Fliflet)

Undergraduate Students

Nicole Alexander, Kinesiology & Community Health (KCH), 2005-2007, **HHMI Fellowship**
Ryan McCombs, Molecular & Cellular Biology (MCB), 2007-2008
Dev Sethi, MCB, 2007-2008
Don Lambka, KCH, 2008-2009
Diana Panek, MCB, 2008-2009
Jordan Orr, KCH, 2008-2009
Lauren Reader, MCB, 2009-2010
Megan Abel, Material Science Engineering, 2009-2010
Michael Hagstrom, MCB, 2009-2010
Brian Johnson, KCH, 2009-2011
Cassie Drummond, MCB, 2009-2011
Dan Morgan, MCB, 2010-2011
Nicole Zachwieja, KCH, 2010-2012
Danielle Weech, KCH, 2010-2011
Max Woolf, KCH, 2010-2012
Pauline Ripchik, MCB, 2011-2012, **Senior Thesis** (**Honors**)
Joseph Adams, MCB, 2011-2012
Jack Skelton, KCH, 2011-2012, **Duke University Internship**
Bridget Jackson, KCH, 2011-2012
Cody Lindsey, KCH, 2011-2012
Ryan Herring, MCB, 2011-2013
Cameron Baldes, MCB, 2011-2013
Kelly Ryan, MCB, 2012-2013
Zak Kammer, Integrative Biology, 2012-2013, **Honors Program**
Anthony Zhang, KCH, 2012-2013
Eli Khazoum, KCH, 2012-2014
Paul Jung, KCH, 2012-2014, **James Scholar**
Adam Sukiennik, KCH, 2012-2013
Adam Joseph, KCH, 2012-2015, **James Scholar**
Justin Biondo, KCH, 2012-2013

Sabina Cashin, MCB, 2012-2014
Emily Kolyvas, MCB, 2012-2014, **Senior Thesis (High Honors)**
Urvi Khare, KCH, 2012-2014
Nicole Clevenger, MCB, 2013, **James Scholar**
Christopher Ng, Integrative Biology, 2013
Emily Samuel, MCB, 2013
Harsh Patel, Economics, 2013-2015
Monica Rossi, MCB, 2013-2014
Julian Nallabelli, MCB & FSHN (Nutrition), 2013
Sumin Kim, MCB, 2013
Shane Shafi, MCB, 2013-2015
Matt Miller, KCH, 2013-2014
Dami Olatunbosum, MCB, 2013-2014
Bianca Mulaikal, KCH, 2013-2014
Victoria Knauf, KCH, 2013-2015
Jamey Cooper, MCB, 2013-2014
Ryan Brander, KCH, 2014-2016
David Rossi, MCB, 2014-2016
Kelly Twohig, Chemistry, 2014-2015, **James Scholar, Mayo Clinic Research Fellow**
Shamil Shafi, Finance, 2014-2015
Mayand Vakil, MCB, 2014
Alay Parikh, MCB, 2014-2016, **Senior Thesis (High Honors)**
Brittany Cline, MCB, 2014-2015
Brent Blackwell, KCH, 2015-2018, **James Scholar**
Garret Waterstradt, KCH, 2016-2018, **James Scholar, Campus Honors Scholar, Mayo Clinic Research Fellow**
Nisha Karwal, MCB, 2016-2017, **James Scholar**
Sami Bourjas, KCH, 2016-2017
Amber Lopez, KCH, 2017-2020, **Mayo Clinic Summer Fellow, NIH Postbac IRTA Program**
Shail Aamir, Chemistry, 2017-2019
Noah Kim, KCH, 2017-2021
Eric Jung, KCH, 2017-2021, **James Scholar, Campus Honors Scholar**
Megan Kalinowski, KCH, 2018-2021, **Campus Honors Scholar**
Isaac Lee, KCH, 2018-2021
Amanda Tannehill, Integrative Biology, 2018-2020
Daniel Suh, KCH, 2019-2021
Michael Kim, MCB, 2019-2021
Maddie Subrain, MCB, 2020-2022
Aidan Jalloul, MCB, 2020-2022
Tejaswi Nunna, Biochemistry, 2021-2022
Maddie Meehan, MCB, 2020-2023, **James Scholar, SURF 2022, Senior Thesis**
Jacob Jones, KCH, 2020-2021, **SPARK Student**
Jayna Burger, KCH, 2021-current, **SPARK Student**
Ore Ajifolokun, KCH, 2021-2022
Tom Bludgen, Integrative Biology, 2021-2023, **Office of Undergraduate Research, Research Support Grant 2022, Senior Thesis**
Manasi Reddy, MCB, 2022-current, **SURF 2023, MCB Distinction**
Gabby Gorin, KCH, 2022
Michael Knipp, KCH, 2022-current, **SPARK Student**
Andrew Handzel, Chemistry, 2023-2024
Maks Samatov, Biochemistry, 2023-current, **SURF 2024**
Aaliyah Gaffey, Aerospace Engineering, 2023-2024
Faaris Hanif, MCB, 2024-current, **SURF 2025**

Sophia Bach, HK, 2024-current
Maia Rudofski, MCB, 2024-current
Brandt Henderson, HK, 2024
Katie McGovern, IB, 2025-current
Janson Phung, MCB, 2025-current
Kashyap Prasad, Bioengineering, 2026-current
Ainsley Battle, MCB, 2026-current

Research Staff

Dan Morgan, MCB Major, Research Technician, 2010-2011
Collin Kurtenbach, Bioengineering Major, Research Technician, 2011-2012
Kevin Urbain, Bioengineering Major, Research Technician, 2012-2013
Emily Kolyvas, MCB Major, Research Technician, 2013-2014
Victoria Knauf, KCH Major, Research Technician, 2014-2015
Brittany Cline, MCB Major, Research Technician, 2015-2016
Sabit Ejub, MCB Major, Research Technician, 2016-2018

Graduate Student Thesis Committee Service

1. **Cynthia Mann**, Ph.D., Department of Chemical and Biomolecular Engineering, UIUC, 2009, "Applications of traction force microscopy in measuring adhesion molecule dependent cell contractility"
2. **Ben Meador**, Ph.D., KCH, UIUC, 2010, "Statin-associated skeletal muscle damage and its interactions with novel or accustomed exercise: functional and mechanistic assessments"
3. **Yejing Ge**, Ph.D., Department of Cell and Developmental Biology, UIUC, 2011, "Regulation of myocyte fusion in skeletal muscle maturation"
4. **Brandt Pence**, Ph.D., KCH, UIUC, 2012, "Short-term exercise training: Implications for wound healing in obese mice"
5. **Benedikt Graf**, Ph.D., Department of Electrical and Computer Engineering, UIUC, 2012, "Multimodal intravital imaging of tissue structure and cell dynamics in skin using integrated optical coherence and multiphoton microscopy"
6. **Stephen Martin**, Ph.D., KCH, UIUC, 2013, "Effects of voluntary wheel running and forced treadmill running on inflammation-induced behavioral abnormalities in young and old mice"
7. **Marc Cook**, Ph.D., KCH, UIUC, 2013, "Moderate exercise training exacerbates inflammation and mortality in DSS-induced colitis in mice"
8. **Hae Ryong Chung**, Ph.D., KCH, UIUC, 2014, "The impact of hypercholesterolemia and physical activity on statin-associated skeletal muscle myopathy"
9. **Paula Poh**, Ph.D., KCH, UIUC, 2015, "Effects of different thermal stimuli during simulated hemorrhaging on various aspects of cognitive performance"
10. **Rebecca Hortensius**, Ph.D., Bioengineering, UIUC, 2016, "Bioinspired alterations of collagen-glycosaminoglycan scaffolds for tendon regeneration"
11. **William Grier**, Ph.D., Chemical and Biomolecular Engineering, UIUC, 2017, "Enhancement of spatially-controlled MSC responses in a multi-compartment CG scaffold for tendon-bone junction regeneration"
12. **Yi Sun**, Ph.D., KCH, UIUC, 2018, "Effects of exercise on age- and stress-related attenuation of vaccination responses in mice"
13. **Eunice Leong Jiayu**, Ph.D., Chemical and Biomolecular Engineering, UIUC, 2018, "Integrating inflammatory stimuli with macromolecules for sensing and therapy of vascular diseases"
14. **Jamila Hedhli**, Ph.D., Bioengineering, UIUC, 2018, "Non-invasive detection and treatment of diabetes-associated vascular complications"

15. **Joanne Li**, Ph.D., Bioengineering, UIUC, 2018, “Quantitative characterization of cellular dynamics in skin using multimodal multiphoton microscopy”
16. **Noel Naughton,** Ph.D., Mechanical Engineering, UIUC, 2020, “Diffusion-weighted MRI of skeletal muscle: estimation of microstructural parameters”
17. **Peter Sielijacks,** Ph.D., Department of Public Health, Aarhus University, Denmark, 2020, “Effect of blood flow restricted exercise on muscle accretion and function in healthy and clinical settings”
18. **Georgios Mavropalias**, Ph.D., Centre for Exercise and Sports Science Research, School of Medicine and Health Sciences, Edith Cowan University, Australia, 2020, “Comparison between high and low-intensity eccentric cycling of equal total volume for muscle and connective tissue damage and adaptations”
19. **Yu-Tong Hong**, Ph.D., Chemical and Biomolecular Engineering, UIUC, 2021, “Functional particles for controlled release and cell surface engineering”
20. **Amadeo Salvador,** Ph.D., KCH, UIUC, 2021, “Performance nutrition to support athletes and aging”
21. **Dongwook Kim**, Ph.D., Cell and Developmental Biology, UIUC, 2021, “Skeletal muscle-derived cytokines regulate myogenesis by modulating cell cycle withdrawal”
22. **Tori Barnhouse**, Ph.D., Chemical and Biomolecular Engineering, UIUC, 2022, “Developing a biomaterial model of the bone marrow perivascular niche for the study of hematopoietic stem cells”
23. **Colleen McKenna**, Ph.D., Division of Nutritional Sciences, UIUC, 2022, “Nutrition and exercise regulation of skeletal muscle function”
24. **Winter Jackson**, Ph.D., Bioengineering, UIUC, 2023, “Correction of Duchenne muscular dystrophy using in vivo base editing”
25. **Daniel Castro**, Ph.D., Chemistry, UIUC, 2023, “High-throughput matrix-assisted laser desorption/ionization mass spectrometry for single-cell and single-organelle measurements”
26. **Anasuya Das Gupta**, Ph.D., Molecular and Integrative Biology, UIUC, 2024 “Delineating the mechanisms by which 27-hydroxycholesterol increases secretion of cancer promoting extracellular vesicles”.
27. **Allison Boss-Kennedy**, Ph.D., Cell and Developmental Biology, UIUC, 2024, “Muscle cell-derived Ccl8: a negative regulator of muscle regeneration”.
28. **John Kim**, Ph.D., HK, UIUC, 2024, “The role of physical activity and exercise on cognition: exploring adiposity, novel cognitive metrics, and neuroprotective molecules”.
29. **Snigdha Mathure**, Ph.D. Candidate, Cell and Developmental Biology, UIUC, “Elucidating the kinase signaling dynamics: role of Btk29A and JNK during early regeneration in Drosophila”
30. **Joseph Tibbs,** Ph.D. Candidate, Bioengineering, UIUC, “Interferometric scattering for digital capture and counting of biological particles on photonic surfaces for innovative disease detection”.
31. **Neethu Babu,** Ph.D. Candidate, Cell and Developmental Biology, UIUC, “Characterizing the role of Hsp90 in aging”.
32. **Pallob Barai,** Ph.D. Candidate, Cell and Developmental Biology, UIUC, “Non-translational functions of threonyl-tRNA sythetase in signaling and cancer”.
33. **Aryaman Joshi**, Ph.D. Candidate, Chemical and Biomolecular Engineering, UIUC, Thesis TBD.

Served as James Scholar Mentor for >50 Additional Undergraduate Students (1-2/semester)

PROFESSIONAL ASSOCIATIONS

1997-current American College of Sports Medicine (ACSM)
1997-2001 New England Chapter, American College of Sports Medicine
1997-2002 American Diabetes Association
2005-current Midwest Chapter, American College of Sports Medicine

2008-current American Physiological Society
2008-current International Society for Stem Cell Research (ISSCR)
2017-current American Heart Association, Council on Peripheral Vascular Disease
2019-current International Society for Extracellular Vesicles (ISEV)
2022-current American Association for the Advancement of Science (AAAS)

SERVICE

Editorial Service

2012-2015 Exercise in Sport Sciences Reviews (ESSR), Assistant Editor
2013-2019 Frontiers in Exercise Physiology, Editorial Board Member
2015-current Exercise in Sport Sciences Reviews (ESSR), Associate Editor (MVP Award 2018)
2016-current Invited, H1 Connect (F1000 Faculty), Exercise Physiology
2017-2023 Journal of Applied Physiology, Associate Editor
2017-current Translational Sports Medicine, Editorial Board Member
2020-current Journal of Extracellular Vesicles, Editorial Board Member
2021-current American Journal of Physiology-Cell Physiology, Editorial Board Member

Professional Consultation

2008-2010 Consultant, New Permanent Exhibit, Museum of Science and Industry in Chicago
2010-2012 Consultant, NASA, ProOrbis, development of the National Laboratory for ISS
2018 Invited Participant, National Institutes of Health, Strategic Planning Meeting, NIAMS, Muscle Biology & Disease
2022-current StrongPath Digital Care Company, Advisory Board

Grant Review

2009 National Institutes of Health, Musculoskeletal, Oral and Skin Sciences (MOSS) IRG
2013 Veterans Administration, Aging & Neurodegenerative Diseases
2014 Telethon Foundation, Italy
2014 Veterans Administration, Aging & Neurodegenerative Diseases
2014 Veterans Administration, Aging & Neurodegenerative Diseases
2015 Veterans Administration, Aging & Neurodegenerative Diseases
2015 National Institutes of Health, MOSS IRG, SBIR/STTR, Ad hoc
2015 National Institutes of Health, SMEP (Skeletal Muscle and Exercise Physiology) Study Section, Ad hoc
2016 National Institutes of Health, SMEP Study Section, Ad hoc
2017 National Institutes of Health, SMEP Study Section, Ad hoc
2017 National Institutes of Health, MOSS IRG, Director's New Innovator Award, Ad hoc
2019 National Institutes of Health, CMAD (Cellular Mechanisms in Aging and Development) Study Section, Ad hoc
2020 National Institutes of Health, CMAD (Cellular Mechanisms in Aging and Development) Study Section, Regular Member, 2020-2024
2025 National Aeronautics and Space Administration (NASA), E.9 Space Biology Study Section, Precision Health-Muscle, Study Section Chair

Journal Review

EMBO Journal; American Journal of Physiology, Cell Physiology; American Journal of Physiology, Regulatory, Integrative and Comparative Physiology; Journal of Brain, Behavior, and Immunity; Journal of Applied Physiology; Medicine & Science in Sports and Exercise (MSSE); Journal of Aging Research; Molecular Cancer Therapeutics; Stem Cells; PLoS ONE; Frontiers in Physiology; Frontiers in Aging Neuroscience; Acta Physiologica; AGE; Journal of Physiology; FEBS Letters; Journal of American Aging Association; Experimental Gerontology; Biomaterials; Stem Cells Translational Medicine; Aging Cell; Calcified Tissue International; Analytical Chemistry; Stem

Cells; Science Advances; J Gerontology (Biological Sciences); Physiological Genomics; Molecular Metabolism; Journal of Cachexia, Sarcopenia and Muscle

Professional Society Service

2012-2015 Appointed Committee Member, ACSM Strategic Health Initiative (SHI), Aging
2013 Organized and Moderated Session, ACSM Annual Meeting, "Sensing the tension: identifying mechanotransducers that regulate muscle growth"
2015 Organized and Moderated Session on Behalf of the SHI on Aging, ACSM Annual Meeting, "Statin administration and exercise in older adults – what are the risks and benefits?"
2018 Organized and Moderated Session, ACSM Annual Meeting, "Focusing outside the fiber: extracellular matrix and skeletal muscle plasticity"
2020 Organized Session, ACSM Annual Meeting, "Exercise and extracellular vesicles (ExerVs): identification of the molecular basis for health benefits" (Canceled)
2021 Co-organized Highlighted Symposium for ACSM Annual Meeting, Basic Congress on Regenerative Medicine, "Exosomes and skeletal muscle intercellular communication"
2023 Co-organized Highlighted Symposium for ACSM Annual Meeting, "Beyond the Weight Room: The Importance of Skeletal Muscle in Health and Disease"
2025 Co-Chair, Advances in Skeletal Muscle Biology, session on Skeletal Muscle Regeneration and Growth

Public Service

Judge, Illinois Science Olympiad, 2007
Board member, National Institute of Personal Trainers, 2008-present
Consultant, New Permanent Exhibit, Chicago Museum of Science and Industry, 2008-2009
Education Commission (School Board), St Matthew Catholic School, 2008-2014
Osher Lifelong Learning Institute (OLLI) Citizen Scientist Program Mentor, 2010-2011
Consultant, NASA, ProOrbis, development of the National Laboratory for ISS, 2010
Consultant, ClearView Healthcare Partners, 2012
St Matthew Catholic School – Public lecture about stem cells, 2012
Illinois News Radio Network WJBC Interview, Exercise and stem cells, 2012
Canadian Broadcast Company Interview, Exercise and stem cells, 2012
WILL-AM News Radio Interview, "Exercise for Life", 2012
Illinois News Radio Network Interview, "Stem cells augment adaptive response to exercise", 2014
Beckman Institute Open House, "Stem cells across the lifespan", 2015
OLLI Guest Speaker, "Design of novel therapeutics to enhance skeletal muscle mass", 2020
WCIA, WQAD News TV Interviews, "NASA funds project", 2023
Consultant and Exhibitor, International Museum of Surgical Science, Health in Space, 2024

University Service

Medical Scholar Program, Interview Panel, 2008
Military Education Council, 2009-2017
Military Education Council, Faculty Review Sub-Committee Chair, 2012-2017
UIUC Campus Research Board, Proposal Reviewer, 2010, 2012, 2013, 2017, 2017
University Educational Policy Committee, 2010-2011
University Admissions Committee, 2012-2016
Elected, Committee on Committees, 2012-2013
NSF CMMB IGERT – Virtual Site Visit Representative, 2013
Faculty Advisory Committee, Biotechnology Center, UIUC, 2014-2020
Institutional Biosafety Committee, 2015-2016
Provost Mid-Career Advisory Committee, 2015-2018
University Admissions Committee, UIUC, Faculty Chair, 2016-2024

Provost Office, Group Facilitator, Pre-Tenure Faculty Workshop, 2016
Provost Office, Group Facilitator, New Faculty Orientation, 2017
Interdisciplinary Health Sciences Institute (IHSI), Invited Speaker, NIH Grant Writing Series, 2017, 2019, 2020
Committee on the Admission of Student Athletes (CASA), *Ex officio,* 2017-current
Search Committee, Director of Career Services, 2019
Organized and Hosted Annual Campus Workshop, "Campus Innovation in Extracellular Vesicle Biology and Technology", 2019-current
Provost Office, Undergraduate Enrollment Management Strategy Group, 2019-2021
Provost Office, Campus Budget Oversight Committee, 2019-2022
Provost Office, General Education Assessment Committee, 2022
OVCR and Provost Office, First-Year Experience Implementation Team, 2022
Provost Office, Program Review Committee, 2023-current
Search Committee, Director of Admissions, 2023-2024
Provost Office, Program Review Committee Chair, 2025-2026

College of Applied Health Sciences Service
Alleged Capricious Grading Committee, 2010-2012
Educational Policy Committee, 2012-2015
Search Committee, Associate Dean for Academic Affairs, 2013
Search Committee, Disability: Veterans Issues, 2014
Educational Policy Committee, 2016-2018
Panel Speaker, AHS Center on Health Aging and Disability (CHAD) Seminar, "Overcoming Barriers to Success", 2016
CHAD Senior Executive Committee, 2017-2020
CHAD Senior Executive Committee Chair, 2018-2020
Grievance Committee, advisory to AHS Dean, 2018-2020
Panel Speaker, AHS CHAD Seminar, "Campus Research Board Grants", 2018
Ad Hoc Committee, College Faculty Awards, 2019
Search Committee, Director of Career Services, 2019
Executive Committee, 2019-2021
AHS Strategic Planning Committee, 2019-2020
AHS Teaching Academy Retreat Speaker, "Lesson Planning & Active Learning", 2019
Panel Speaker, AHS, CHAD Seminar, "Writing a Competitive CHAD Pilot Grant", 2019
Panel Speaker, AHS, CHAD Seminar, "Advice for New Faculty", 2020
Chair, Executive Committee, 2020-2021
Panel Speaker, AHS, Alumni Series Presentation, 2021
Educational Policy Committee, 2022-2024
Promotion and Tenure Committee, 2022-2024
Dean's Fellow, 2024-2025
Strategic Planning Committee, 2025-2026

Department of Health and Kinesiology Service
Faculty Panel, KIN 594, Professional Development, 2008
Faculty Panel, KIN 125, Introduction to Kinesiology and Community Health, 2009, 2012, 2018
Faculty Senator, 2009-2011
Faculty Senator, 2012-2014
Ad hoc Committee, Department Vision Plan, 2010
Search Committee, KCH-Exercise Physiology, 2010
Search Committee, KCH-Exercise Physiology, 2011
Search Committee, KCH-Exercise Physiology, 2012
Student Conference Travel Grant Committee, 2010
Ad hoc Committee, Department Strategic Plan, State-of-the-Art Curricula and Instruction, 2011

Advisory Committee, 2012-2014
Host for Colloquium Speakers, 2008, 2011 (3 speakers), 2012, 2014, 2018
Advisory Committee, 2015-2017
Chair, Search Committee, KCH-Exercise Physiology, 2016
Advisory Committee, 2018-2020
Faculty Mentor to Assistant Professor Adam Konopka, 2018-2020
Faculty Mentor to Assistant Professors Jacob Allen and Sarah Geiger, 2020-current
Promotion and Tenure Committee, 2020-2022
Chair, Strategic Planning Committee, 2020-2021
Advisory Committee, 2021
Faculty Mentor to Associate Professor Sandraluz Lara-Cinisomo, 2021-current
Chair, Undergraduate Program Task Force, 2021-2023
Advisory Committee, 2022-current
Faculty Mentor to Assistant Professor Joshua Leonardis, 2022-current
Chair, Search Committee, KCH-Cardiovascular Physiology, 2022-2023
Director, Strategic Initiatives, 2023-current
Undergraduate Program Committee, 2023-current
Search Committee, KCH-Exercise Physiology, 2023-2024
Faculty Mentor to Assistant Professor Jack Senefeld, 2023-current
Faculty Mentor to Assistant Professor Gabie Dillon, 2024-current

Carle Illinois College of Medicine
Admissions Committee, Ad Hoc Subcommittee; Chair, 2017
Grievance and Appeals Committee, 2017-2021; Chair, 2019-2021
Admissions Committee, 2017-2018
Ad Hoc Committee on Brown Bag Lunches, 2018
Ad Hoc Committee on Course Sequence, 2020
Ad Hoc Committee on Threads, 2020
Executive Committee, Department of Biomedical and Translational Sciences, 2020-2023

Beckman Institute Service
Appointed, Program Advisory Committee, Beckman Institute, 2013-2016
Group Leader, Extracellular Vesicles Imaging and Therapy (EVIT) Working Group, 2017-current
Ad Hoc Committee, Revision of Research Fellowship Program, 2018
Appointed, Executive Committee, 2021-current
Integrative Imaging External Review, 2021
Search Committee, Beckman Director, 2023-2024
Strategic Planning Committee, 2025-2026