

SEAN C. FORBES, Ph.D.

Department of Physical Therapy
 2216 Clinical and Translational Research Building
 Gainesville, Florida 32611
 University of Florida
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EDUCATION

Date	Degree	School/Location	Department/Specialization
2001- 2006	Ph.D.	The University of Western Ontario London, Ontario, Canada	School of Kinesiology. <i>Concentration:</i> Magnetic Resonance and Muscle Metabolism. Advisor: Greg D. Marsh, Ph.D.
1993- 1997	B.P.E <i>with distinction</i>	University of Alberta Edmonton, Alberta, Canada	Department of Physical Education and Recreation. <i>Concentration:</i> Exercise Physiology

PROFESSIONAL TRAINING AND ACADEMIC APPOINTMENTS

Date	Position	School/Location	Department
2018- present	Associate Professor	University of Florida Gainesville, Florida	Department of Physical Therapy
2011- 2018	Research Assistant Professor	University of Florida Gainesville, Florida	Department of Physical Therapy
2009- 2011	Post-doctoral Associate	University of Florida Gainesville, Florida	Department of Physical Therapy/ Department of Physiology and Functional Genomics. Advisors: Krista Vandenborne, PT, PhD and Glenn Walter, PhD
2007	Lecturer	Michigan State University East Lansing, Michigan	Department of Kinesiology
2007- 2008	Post-doctoral Fellow	Michigan State University East Lansing, Michigan	Department of Physiology Advisor: Ron Meyer, PhD

PROFESSIONAL SOCIETIES

2011-present	American Physiological Society
2007-present	International Society for Magnetic Resonance in Medicine (ISMRM)
2001-present	American College of Sports Medicine (ACSM)
2007-2009	American College of Sports Medicine, Midwest Chapter
2005-2009	ACSM Noninvasive interest group
2011-2016	American Heart Association
2012-2013	Society for Cardiac Magnetic Resonance (SCMR)
2011-2013	World Muscle Society
1998-2006	Canadian Society for Exercise Physiology (CSEP)

HONORS AND AWARDS

2023	NIH Scientific Review (ad hoc reviewer), V02 Clinical Trial Readiness Review Meeting
2021-2022	Department of Defense (ad hoc reviewer/co-chair) Congressionally Directed Medical Research Programs, Duchenne Muscular Dystrophy Research Program: Idea Development Award
2020-2022	NIH Scientific Review (ad hoc reviewer/co-chair), F10B fellowship and Research Enhancement Award (R15 mechanism): musculoskeletal, rehabilitation, dental and skin sciences.
2019, 2023	NIH/NINDS Scientific Review (ad hoc reviewer), R35 applications, Special Emphasis Panel ZNS1 SRB-H (12)
2019	NIH Scientific Review (ad hoc reviewer), Small Business: Orthopedic and Skeletal Biology study section
2017-2018	NIH Scientific Review (ad hoc reviewer), Skeletal muscle biology and exercise physiology (SMEP) study section
2015	NIH Scientific Review (ad hoc reviewer), Imaging study section Special Emphasis Panel/Scientific Review Group 2015/05 ZRG1 DTCS-A (81) S meeting (Clinical and Translational Imaging Applications)
2011	ISMRM, Educational Stipend. ISMRM 19 th Scientific Meeting & Exhibition in Montreal, Canada
2010	ISMRM Educational Stipend. ISMRM 18 th Scientific Meeting & Exhibition in Stockholm, Sweden
2008	Cochrane Dementia and Cognitive Improvement Group (Oxford University, London, England). Travel award for the International Conference on Alzheimer's Disease (ICAD), Chicago, Illinois
2008	ISMRM, Educational Stipend. ISMRM 16 th Scientific Meeting & Exhibition in Toronto, Ontario, Canada
2006-2007	Ontario Graduate Scholarship (OGS) (declined)
2005-2006	Ontario Graduate Scholarship in Science and Technology (OGSST)
2004-2005	Ontario Graduate Scholarship in Science and Technology (OGSST)
2003-2004	Graduate Student Teaching Award Nominee, The University of Western Ontario
2003-2004	Special University Scholarship (SUS): Graduate Tuition award, The University of Western Ontario
2002-2003	University Students' Council (USC) Teaching Honor Roll: Award of Excellence, The University of Western Ontario

RESEARCH SUPPORT

Ongoing Research Support:

R21AR077231 PI: Pozzi/Forbes 09/01/2021-08/31/2024
NIH/NIAMS

Magnetic resonance spectroscopy biomarkers of muscle degeneration in patients with rotator cuff tears

The goal of this project is to examine muscle energetics and microvascular function using MRI/MRS in those with rotator cuff injury.

R01 AR056973 PI: Vandenborne 05/01/2021-08/31/2025
NIH/NIAMS

Magnetic Resonance Imaging and Biomarkers for Muscular Dystrophy

This project is focused on testing the potential of MRI to be used as a noninvasive biomarker to characterize disease progression in muscular dystrophy, including measures of T2 and fatty tissue infiltration.

Role: Co-investigator

U54 AR052646 PI: Sweeney 08/01/2021-07/30/2026
NIH: Wellstone Muscular Dystrophy Cooperative Center

Understanding and Improving Therapies for the Muscular Dystrophies

The goal of this Wellstone Muscular Dystrophy Specialized Research Center is to identify emerging therapeutic targets and therapeutics, as well as to develop imaging tools to monitor the efficacy of therapies, that control inflammation, fibrosis, and disease progression in a number of muscular dystrophies.

Role: Co-investigator

MD180023 PI: Taivassalo 07/01/2019-06/30/2023
Department of Defense

Impact and Interplay of Corticosteroid Regimen and Exercise Training on DMD Muscle Function

The goal of this project is to evaluate two different corticosteroid regimens in combination with aerobic exercise training in DMD using magnetic resonance imaging and spectroscopy.

Role: Co-investigator

Pending

R21 AR079755-01A1 PI: Taivassalo 06/01/2023-05/31/2026
NIH

Countering Sympathetic Vasoconstriction

This exploratory clinical trial study seeks proof of concept that tadalafil (a potent vasodilator drug) in combination with structured aerobic exercise will fill this therapeutic void by targeting both the vascular and muscle-based impairments, thereby improving exertional fatigue and function and allowing boys with DMD to live a more active lifestyle safely.

Completed Research Support

R01 AR070101
NIH/NIAMS

PI: Forbes

9/20/2016 – 7/31/2022

MR Assessment of Bioenergetics and Microvascular Function in Dystrophic Muscle

The overall objective of this project is to evaluate the potential of novel magnetic resonance imaging (MRI) and localized ³¹phosphorus-magnetic resonance spectroscopy (³¹P-MRS) measures of bioenergetics and microvascular function to monitor disease progression and treatment in dystrophic muscle.

R01 AR056973
NIH/NIAMS

PI: Vandenborne

04/01/2010-04/30/2020

Magnetic Resonance Imaging and Biomarkers for Muscular Dystrophy

This project is focused on testing the potential of MRI to be used as a noninvasive biomarker to characterize disease progression in muscular dystrophy, including measures of T2 and fatty tissue infiltration.

Role: Co-investigator

Summit Therapeutics, Inc.

PI: Vandenborne

02/01/2016-1/31/2021

A Phase 2 Clinical Study to Assess the Activity and Safety of Utrophin Modulation

The purpose of this study is to perform magnetic resonance imaging and spectroscopy measures of the lower and upper leg in pediatric patients with Duchenne muscular dystrophy to evaluate the activity and safety of utrophin modulation with SMT C1100.

Role: Co-investigator

CAT-1004-201 Parts B/C
Catabasis Pharmaceuticals

PI: Vandenborne

03/15/2016 – 12/31/2020

A Phase 1/2 Study of CAT-1004 in Pediatric Patients

The objective is to evaluate the safety and tolerability of escalating single doses of CAT-1004 relative to placebo, the PK of escalating single doses of CAT-1004 and the effect of a high-fat meal on single doses of CAT-1004. This is an expansion of the previous study to include establishment, training, monitoring, and data analysis for multiple MR Sites.

Role: Co-investigator

ITF-DSC48

PI: Vandenborne

07/28/2016 – 12/31/2020

ImagingDMD for Givinostat Phase 3 Clinical Trial

The objective is to evaluate the efficacy of Givinostat in pediatric patients with Duchenne Muscular Dystrophy through use of MRI across multiple international sites.

Role: Co-investigator

Myotonic Dystrophic Foundation

06/01/2016-05/31/2017

Magnetic Resonance as a Biomarker for DM

This project is focused on testing the potential of MRI to be used as a noninvasive biomarker to characterize disease progression in myotonic muscular dystrophy.

Role: Co-investigator (PI: Lott)

Opportunity Seed Fund, University of Florida

06/01/2014-11/30/2016

MRI Evaluation of Skeletal Muscle Vascular Function in Patients with Nonalcoholic Fatty Liver Disease.

The goal of this project is to validate blood oxygenation level dependent (BOLD) and arterial spin labeling (ASL) MRI measures of microvascular function and perfusion and to examine whether there is a relationship between microvascular measures and fatty liver content in NAFLD.

Role: Principal Investigator

The Obesity Society

11/02/2015-11/01/2016

Role of Hepatic Mitochondrial Dysfunction in the Development of NAFLD in Obesity

This project evaluated the effects of mitochondria function in obese individuals with non-alcoholic fatty liver disease.

Role: Co-investigator (PI: Brill)

MD110050

07/01/2012-06/30/2016

Department of Defense

Optical Imaging of Dystrophic and Damaged Muscle

The goal of this project is to test the potential of optical imaging to evaluate muscle damage and involvement in muscular dystrophy.

Role: Co-investigator (PI: Walter)

MDA Development Grant

07/01/2010-06/30/2013

MRI/MRS assessment of perfusion and metabolism in dystrophic muscle

The goal of this project is to develop methods to assess microvascular function (using BOLD and ASL) and energetics (using ³¹P-MRS) in murine models of muscular dystrophy.

Role: Principal Investigator

AHA Postdoctoral Fellowship

07/01/2010-06/30/2012

MRI assessment of cardiac structure and function in muscular dystrophies

The goal of this project was to evaluate MR measures of cardiac function in murine and canine models of muscular dystrophy.

Role: Principal Investigator

JOURNAL REVIEWER

Acta Physiologica

American Journal of Physiology: Cell Physiology

Applied Physiology, Nutrition, and Metabolism

British Journal of Medicine and Medical Research

Circulation

Clinical Physiology and Functional Imaging

Contemporary Clinical Trials

European Journal of Applied Physiology

European Journal of Paediatric Neurology

European Journal of Sport Science

Frontiers in Neuroscience

Frontiers in Physiology

Gait & Posture

Gene Reports

Human Molecular Genetics

Journal of Biomedicine and Biotechnology

Journal of Clinical Medicine and Research

Journal of Applied Physiology

Journal of Magnetic Resonance

Journal of Morphology
 Journal of Neuromuscular Diseases
 Journal of Physiology
 Magnetic Resonance Imaging
 Magnetic Resonance Materials in Physics, Biology and Medicine
 Medicine and Science in Sports and Exercise
 Metabolism: Clinical and Experimental
 Muscle and Nerve
 Neurology
 NMR in Biomedicine
 PLoS ONE
 Quantitative Imaging in Medicine and Surgery
 Rheumatology and Orthopedics
 Scandinavian Journal of Medicine and Science in Sports
 Scientific Reports
 Ultrasonics Sonochemistry

GRANT REVIEWER

2023	NIH Scientific Review (ad hoc reviewer), V02 Clinical Trial Readiness Review Meeting
2023	NIH Scientific Review (ad hoc reviewer), Small Business: Musculoskeletal, Orthopedic, Oral, Dermatology, and Rheumatology
2021-2022	Department of Defense (co-chair/ad hoc reviewer) Congressionally Directed Medical Research Programs, Duchenne Muscular Dystrophy Research Program: Idea Development Award
2020-2022	NIH Scientific Review (co-chair/ad hoc reviewer), F10B fellowship and Research Enhancement Award (R15 mechanism): musculoskeletal, rehabilitation, dental and skin sciences.
2019	NIH Scientific Review (ad hoc reviewer), Small Business: Orthopedic and Skeletal Biology
2019	NIH/NINDS Scientific Review (ad hoc reviewer), R35 applications, Special Emphasis Panel ZNS1 SRB-H (12)
2018-2020	National High Magnetic Field Laboratory Research: User Collaboration Grants Program
2017-2018	NIH Scientific Review (ad hoc reviewer), Skeletal muscle biology and exercise physiology (SMEP) study section
2017-2018, 2020-2021	Swiss National Science Foundation
2016	Muscular Dystrophy Ireland

- 2015 NIH Scientific Review, Imaging study section
Special Emphasis Panel/Scientific Review Group 2015/05 ZRG1 DTCS-A (81) S
meeting (Clinical and Translational Imaging Applications)
- 2015 Muscular Dystrophy Campaign, United Kingdom
- 2014 The Prinses Beatrix Spierfonds, Neuromuscular Research, Netherlands

Other Professional Service

- 2022-present Consultant for Solid Biosciences Inc.
- 2015-2016 ISMRM abstract reviewer
- 2013 Abstract reviewer and awards committee, ACSM non-invasive interest group

Department/College/University Service

- 2019, 2021-2022 Deans Citation Paper and Scholarship of Teaching Award Committee Chair
- 2012-2014, 2016-2018 Deans Citation Paper Award Committee Member
- 2016-present DPT Scholarship and Awards Committee Member
- 2022-present Rehabilitation Science Seminar Series Committee member
- 2023 PPHP Research Committee (ad hoc member)
- 2021-present Recruitment/Admissions for Inclusion, Diversity, Equity, and Access (IDEA) task force
- 2020-present Faculty mentor, “Gaitor” Challenge, Department of Physical Therapy
- 2020-present 3T MRI advisory committee member at the Advanced Magnetic Resonance Imaging and Spectroscopy (AMRIS) center
- 2021 Chair of Faculty Search Committee in Department of Physical Therapy (Research Assistant Professor)
- 2014-2019, 2022-2023 Neuromuscular Plasticity Symposium Poster Judge
- 2019 Graduation marshal for the doctoral commencement (Doctoral Processional Leader, spring 2019)
- 2018 Course Integration Task Force Working Group, Department of Physical Therapy

2016	UF Research Day, Poster Judge
2015-2017	Blood Borne Pathogen Coordinator, Department of Physical Therapy
2010-2015	Muscle Biology/Physiology Seminar Series Co-organizer
2009-present	MBI emergency coordinator

TEACHING

Course Director/ Primary Instructor	<p>Human Physiology (PHT 6935C). Department of Physical Therapy, University of Florida (2016-present).</p> <p>Supervised Teaching (RSD6940). Department of Physical Therapy, University of Florida (Fall 2017, 2018, 2023).</p> <p>Seminar in Rehabilitation Science (PHT 6935C). Department of Physical Therapy, University of Florida (Fall 2015).</p> <p>Neuromuscular Responses to Exercise (Kin 813). Department of Kinesiology, Michigan State University (Fall 2007).</p>
Co-instructor	<p>Exercise Physiology (PHT 6152). Department of Physical Therapy, University of Florida (2012-2021).</p> <p>Human Physiology (PHT 6935C). Department of Physical Therapy, University of Florida (2010-2015).</p> <p>Seminar in Rehabilitation Science (PHT 6935C). Department of Physical Therapy, University of Florida (Fall 2015).</p> <p>Muscle Plasticity (PHT 6935C, Section 17G9). Department of Physical Therapy, University of Florida (2014).</p> <p>Magnetic Resonance Imaging (PHT 6935). Department of Physical Therapy, University of Florida (Spring 2010). Instructed component of course on Magnetic Resonance Spectroscopy (MRS).</p>
Guest Lecturer	Clinical Exercise Physiology. Basic Clinical Skills II (PHT 6207C). Department of Physical Therapy, University of Florida (2012).
Teaching Assistant	<p>Introduction to Research in Magnetic Resonance and Medicine (PRO200H). Michigan State University (2007-2008)</p> <p>Exercise Physiology (Kin 230). Instructed the laboratory component. School of Kinesiology, The University of Western University (2003-2004, 2004-2005, 2005-2006).</p>

MENTORSHIP

Post-doctoral Associates

Name	Date	Current Status
Kinyata Cooper, PhD (co-advisors:Dr. Fed Pozzi/Forbes)	2023-present	Post-doctoral Associate
Chris Lopez, PhD	2018-2022	MR Medical Specialist, ImagingNMD, University of Florida, Gainesville
Abhi Batra, PhD	2017-2019	Assistant Professor, University of Louisiana Monroe
Hung, Cheng-Ju, PhD (co-advisors: Dr. Fed Pozzi/Forbes)	2021-2022	Texas Woman's University, Denton Texas
Harneet Arora, PT, PhD	2018	Post-doctoral associate (current advisor: Dr. Jonathan Afilalo), Department of Medicine, Division of Experimental Medicine, McGill University, Montreal, Canada
Jingfeng Ma, PhD	2014-2016	Associate Professor, College of Computer and Communication Engineering, China University of Petroleum, Shandong, China

Dissertation Chair/Co-chair/Committee Member:

Name	Date	Degree	Primary Advisor	Role
Pratiksha Awale	2021-present	Ph.D. Candidate	Sean Forbes, PhD	Chair
Prathyusha Bellam	2021-present	Ph.D. Candidate	Krista Vandeborne, P.T., PhD	Committee Member
Kavya Nair	2020-2022	Ph.D.	Krista Vandeborne, P.T., PhD	Co-chair
Harneet Arora	2013-2018	Ph.D.	Krista Vandeborne, P.T., PhD	Committee Member

Undergraduate Honors Thesis Advisor

Name	Date	Degree	Current Status
Luke Chase	2023-current	In progress	Undergraduate student, PHHP
Rendell Lucena	2021-2022	BS, with <i>summa cum laude</i>	Physician Assistant student
Denise Limdimas	2020-2021	BS, with <i>summa cum laude</i>	DPT student at University of South Florida

Andy Rennick	2018-2019	BS, with <i>summa cum laude</i>	University of Miami Miller School of Medicine
Hannah Rasmussen	2017-2018	BS, with <i>summa cum laude</i>	Physician Assistant student, University of Florida
Kimberly Guice	2017-2018	BS, with <i>summa cum laude</i>	Medical School applicant, University Scholar
Gianna Mangieri	2016-2017	BS, with <i>summa cum laude distinction</i>	EMT training
Oliver Stewart	2015-2016	BS, with <i>summa cum laude distinction</i>	Medical School
Kaylyn Plum	2013-2014	BS, with <i>summa cum laude distinction</i>	Physician Assistant, Nova Southeastern University, Jacksonville, FL
Steven Brady	2012-2013	BS, with <i>summa cum laude distinction</i>	Medical School, Lake Erie College of Osteopathic Medicine, Bradenton, FL
Stephanie Wickham	2009-2010	BS, with <i>summa cum laude distinction</i>	Doctor of Physical Therapy, UF

Research Assistants/Interns

Name	Date	Position	Department
Maria Berru	2020	Intern	Applied Physiology and Kinesiology, UF
Brooke Newmans	2016-present	Research Assistant	Enrolled Veterinary Medicine, UF
Savanna Boyle	2013-2014	Research Assistant	Enrolled in MSc program at UCF
Brittany Cools-Lartique	2013-2014	Research Assistant	Medical School
Kevin Lopez	2013	Intern	Applied Physiology and Kinesiology, UF
Mario Beltran	2012	Intern	Applied Physiology and Kinesiology, UF
Emily Grady	2012	Intern	Applied Physiology and Kinesiology, UF
Nick Israel	2011	Intern	Applied Physiology and Kinesiology, UF

CONTINUING EDUCATION

2022

PHHP Mentoring Course

2020	Bruker MR Sequence Programming course
2015	Philips Sequence Development course

PUBLICATIONS

Peer Reviewed Publications:

1. **Forbes SC.** Insights into neuromuscular fatigue using ^{31}P -MRS. *J Physiol.*; 600(13):3011-3012, 2022.
2. Louis J, Bennett S, Owens DJ, Tiollier E, Brocherie F, Carneiro MAS, Nunes PRP, Costa B, Castro-e-Souza P, Lima LA, Lisboa F, Oliveira-Júnior G, Kassiano W, Cyrino ES, Orsatti FL, Bossi AH, Matta G, Tolomeu de Oliveira G, Renato Melo F, Rocha Soares E, Ocelli Ungheri B, Daros Pinto M, Nuzzo JL, Latella C, van den Hoek D, Mallard A, Spathis J, DeBlauw JA, Ives SJ, Ravanelli N, Narang BJ, Debevec T, Baptista LC, Padrão AI, Oliveira J, Mota J, Zacca R, Nikolaidis PT, Lott DJ, **Forbes SC**, Cooke K, Taivassalo T, Elmer SJ, Durocher JJ, Fernandes RJ, Silva G, Costa MJ. Commentaries on Viewpoint: Hoping for the best, prepared for the worst: can we perform remote data collection in sport sciences? *J Appl Physiol* (1985);133(6):1433-1440, 2022.
3. Batra A, Barnard A, Lott DJ, Willcocks R, **Forbes SC**, Chakraborty S, Daniels M, Arbogast J, Triplett W, Henricson E, Dayan Y, Schmalfluss C, Sweeney L, Byrne BJ, McDonald C, Vandenborne K, Walter GA. The natural history of cardiac disease progression in the Duchenne muscular dystrophy population as measured by magnetic resonance imaging. *BMC Cardiovascular Disorders.* 9;22(1):260, 2022.
4. Barnard AM, Hammers DW, Triplett WT, Kim S, **Forbes SC**, Willcocks RJ, Daniels MJ, Senesac CR, Lott DJ, Arpan I, Rooney WD, Wang RT, Nelson SF, Sweeney HL, Vandenborne K, and Walter GA. Evaluating Genetic Modifiers of Duchenne Muscular Dystrophy Disease Progression using Modeling and MRI. *Neurology*, 22; 99(21):e2406-e2416, 2022.
5. Nair KS, Lott DJ, **Forbes SC**, Barnard AM, Willcocks RJ, Senesac CR, Daniels MJ, Harrington AT, Tennekoon GI, Zilke K, Finanger EL, Finkel RS, Rooney WD, Walter GA, Vandenborne K. Step activity monitoring in boys with Duchenne muscular dystrophy and its correlation with magnetic resonance measures and functional performance. *J Neuromuscul Dis.*
6. Willcocks RJ, Barnard AM, Wortman RJ, Senesac CR, Lott DJ, Harrington AT, Zilke KL, **Forbes SC**, Rooney WD, Wang DJ, Finanger EL, Tennekoon GI, Daniels MJ, Triplett WT, Walter GA, Vandenborne K. Development of Contractures in DMD in Relation to MRI-Determined Muscle Quality and Ambulatory Function. *J Neuromuscul Dis*, 9(2), 2022.
7. Barnard AM, Lott DJ, Batra A, Triplett WT, Willcocks RJ, **Forbes SC**, Rooney WD, Daniels MJ, Smith BK, Vandenborne K, Walter GA. Characterizing Expiratory Respiratory Muscle Degeneration in Duchenne Muscular Dystrophy Using MRI. *Chest*, 161(3): 753-763, 2022.

8. Lopez C, Batra A, Moslemi Z, Rennick A, Guice K, Zeng H, Walter GA, **Forbes SC**. Effects of muscle damage on 31 phosphorus magnetic resonance spectroscopy indices of energetic status and sarcolemma integrity in young mdx mice. *NMR Biomed.*, 35(3):e4659, 2022.
9. Finkel RS, Finanger E, Vandenborne K, Sweeney HL, Tennekoon G, Shieh PB, Willcocks R, Walter G, Rooney WD, **Forbes SC**, Triplett WT, Yum SW, Mancini M, MacDougall J, Fretzen A, Bistaf P, Nichols A, Donovan JM. Disease-modifying effects of edasalonexent, an NF- κ B inhibitor, in young boys with Duchenne muscular dystrophy: Results of the MoveDMD phase 2 and open label extension trial: Running title: Edasalonexent for Duchenne muscular dystrophy. *Neuromuscular Disorders*, 31(5):385-396, 2021.
10. Willcocks RJ, Forbes SC, Walter GA, Sweeney HL, Rodino-Klapac LR, Mendell JR, Vandenborne, K. Assessment of rAAVrh. 74. MHCK7. micro-dystrophin Gene Therapy Using Magnetic Resonance Imaging in Children With Duchenne Muscular Dystrophy. *JAMA Network Open*, 4(1), e2031851-e2031851, 2021.
11. Lott DJ, Taivassalo T, Cooke K, Park H, Moslemi Z, Batra A, Forbes SC, Byrne BJ, Walter GA, Vandenborne K. Safety and Feasibility of Strengthening Exercise in Duchenne Muscular Dystrophy. *Muscle and Nerve* 63(3):320-326, 2021.
12. Lopez C., Taivassalo T., Berru M.G., Saavedra, A., Rasmussen, H.C., Batra, A., Arora, H., Roetzheim, A.M., Walter, G.A., Vandenborne, K., Forbes, S.C. Post-contractile blood oxygen level-dependent (BOLD) response in Duchenne muscular dystrophy. *J Appl Physiol*, 1;131(1):83-94, 2021.
13. Batra A, Lott DJ, Willcocks R, **Forbes SC**, Triplett W, Dastgir J, Yun P, Reghan Foley A, Bönnemann CG, Vandenborne K, Walter GA. Lower Extremity Muscle Involvement in the Intermediate and Bethlem Myopathy Forms of COL6-Related Dystrophy and Duchenne Muscular Dystrophy: A Cross-Sectional Study. *J Neuromuscul Dis.*, 7(4):407-417, 2020.
14. Meyerspeer M, Bendahan D, Boesch C, Cameron D, Chatel B, Dezortová M, **Forbes SC**, Heerschap A, Jeneson J, Jue T, Kan H, Kent J, Layec G, Prompers J, Reyngoudt H, Sleight A, Valkovic L, Kemp G. ^{31}P magnetic resonance spectroscopy in skeletal muscle: Experts' consensus recommendations. *NMR in Biomed*, 34 (5): e4246, 2020.
15. **Forbes SC**, Arora H, Willcocks RJ, Triplett WT, Rooney WD, Wang DJ, Lott DJ, Senesac CR, Harrington AT, Barnard AM, Finanger EL, Tennekoon GI, Brandsema J, Daniels MJ, Sweeney HL, Walter GA, Vandenborne K. Upper and lower extremities in Duchenne muscular dystrophy evaluated with magnetic resonance imaging and spectroscopy: A multicenter study. *Radiology*, 295(3):616-625, 2020.
16. Rooney WD, Berlow YA, Triplett WT, **Forbes SC**, Willcocks RJ Wang DJ, Ishu Arpan I, Arora H, Senesac C, Lott DJ, Tennekoon G, Finkel R, Barry S, Russman BS, Finanger EL, Chakraborty S, O'Brien E, Moloney B, Barnard A, Sweeney HL, Daniels MJ, Walter GA, Vandenborne K. Modeling Disease Trajectory in Duchenne Muscular Dystrophy, *Neurology*, 94(15):e1622-e1633, 2020.
17. Barnard A, Willcocks RJ, Triplett WT, **Forbes SC**, Daniels MJ, Chakraborty S, Lott DJ, Senesac CR, Finanger EL, Harrington AT, Tennekoon G, Arora H, Wang DJ, Sweeney HL, Rooney WD, Walter GA, and Vandenborne K. *Neurology*, 94(9):e897-e909, 2020.

18. Barnard AM, Lott DJ, Batra A, Triplett WT, **Forbes SC**, Riehl SL, Willcocks RJ, Smith BK, Vandenborne K, Walter GA. Imaging Respiratory Muscle Quality and Function in Duchenne Muscular Dystrophy. *J Neurol*, 266 (11), 2752-2763, 2020.
19. Batra A, Vohra RS, Chrzanowski SM, Hammers DW, Lott DJ, Vandenborne K, Walter GA, **Forbes SC**. Effects of PDE5 inhibition on dystrophic muscle following an acute bout of downhill running and endurance training. *J Appl Physiol.*, 126(6):1737-1745, 2019.
20. Lee-McMullen B, Chrzanowski SM, Vohra R, **Forbes SC**, Vandenborne K, Edison AS, Walter GA. Age-dependent changes in metabolite profile and lipid saturation in dystrophic mice. *NMR Biomed.* 32(5):e4075, 2019.
21. Willcocks RJ, **Forbes SC**, Walter GA, Vandenborne K. Magnetic resonance imaging characteristics of injection site reactions after long-term subcutaneous delivery of drisapersen. *Eur J Pediatr.* 178(5):777-778, 2019.
22. Batra A, Harrington A, Lott DJ, Willcocks R, Senesac CR, McGehee W, Xu D, Mathur S, Daniels MJ, Rooney WD, **Forbes SC**, Triplett W, Deol JK, Arpan I, Bendixen R, Finkel R, Finanger E, Tennekoon G, Byrne B, Russman B, Sweeney HL, Walter G, Vandenborne K. Two-Year Longitudinal Changes in Lower Limb Strength and Its Relation to Loss in Function in a Large Cohort of Patients With Duchenne Muscular Dystrophy. *Am J Phys Med Rehabil.* 97(10):734-740, 2018.
23. Barnard AM, Willcocks RJ, Finanger EL, Daniels MJ, Triplett WT, Rooney WD, Lott DJ, **Forbes SC**, Wang DJ, Senesac CR, Harrington AT, Finkel RS, Russman BS, Byrne BJ, Tennekoon GI, Walter GA, Sweeney HL, Vandenborne K. Skeletal muscle magnetic resonance biomarkers correlate with function and sentinel events in Duchenne muscular dystrophy. *PLoS One*, 13(3):e0194283. doi: 10.1371/journal.pone.0194283. eCollection 2018.
24. Willcocks RJ, Triplett WT, Lott DJ, **Forbes SC**, Batra A, Sweeney HL, Mendell JR, Vandenborne K, Walter GA. Leg muscle MRI in identical twin boys with duchenne muscular dystrophy. *Muscle Nerve*, 2018 Jan 24. doi: 10.1002/mus.26081.
25. Chrzanowski SM, Vohra R, Lee-McMullen B, Batra A, Spradlin R, Morales J, **Forbes S**, Vandenborne K, Barton ER, Walter G. Contrast enhanced near infrared optical imaging detects exacerbation and amelioration of murine muscular dystrophy. *Molecular Imaging*, 16:1-11, 2017.
26. Vohra R, Batra A, **Forbes SC**, Vandenborne K, Walter GA. Magnetic Resonance monitoring of disease progression in *mdx* mice on different genetic backgrounds. *American Journal of Pathology*, 187(9):2060-2070, 2017.
27. Willcocks RJ, Triplett WT, **Forbes SC**, Arora H, Senesac CR, Lott DJ, Nicholson TR, Rooney WD, Walter GA, Vandenborne K. Magnetic resonance imaging of the proximal upper extremity musculature in boys with Duchenne muscular dystrophy. *J Neurol.*, 264(1):64-71, 2017.
28. Hammers DW, Sleeper MM, **Forbes SC**, Coker CC, Jirousek MR, Zimmer M, Walter GA, Sweeney HL. Disease modifying effects of orally bioavailable NF- κ B inhibitors on dystrophinopathic muscle. *Journal of Clinical Investigation*, 1(21):e90341, 2016.

29. Chrzanowski SM, Batra A, Lee-McMullen BA, Vohra RS, **Forbes SC**, Jiang H, Vandeborne K, Walter GA. Near infrared optical imaging non-invasively detects acutely damaged muscle. *American Journal of Pathology*, 186 (10), 2682-700, 2016.
30. Hammers DW, Sleeper MM, **Forbes SC**, Shima A, Walter GA, Sweeney HL. Tadalafil Treatment Delays the Onset of Cardiomyopathy in Dystrophin-Deficient Hearts. *J Am Heart Assoc.* 9;5(8), 2016.
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54. Slade JM, Carlson JJ, **Forbes SC**, Stein NL, Moll MR, Wiseman RW, Meyer RA. The post-prandial increase in blood triglycerides has no direct effect on the brain BOLD response. *Human Brain Mapping*, 30(3):749-756, 2009. DOI: 10.1002/hbm.20543.
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57. **Forbes SC**, Kowalchuk JM, Thompson RT, Marsh GD. Effects of hyperventilation on phosphocreatine kinetics and muscle deoxygenation during moderate-intensity plantar flexion exercise. *Journal of Applied Physiology* 102(4): 1565-1573, 2007. DOI:10.1152/jappphysiol.00895.2006.
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Non-Peer Reviewed Publications:

1. Lopez C, Moslemi Z, Batra A, Rennick A, Walter GA, Zeng H, **Forbes SC**. Effects of downhill running on skeletal muscle of dystrophic mice evaluated by MR T₂ and ³¹P Phosphorus-

- magnetic resonance spectroscopy. National High Magnetic Field Laboratory 2018 Research Reports.
2. Guice K, Lopez C, Zeng H, Walter GA, **Forbes SC**. Altered bioenergetics in skeletal muscle of young mdx mice. National High Magnetic Field Laboratory 2017 Research Reports.
 3. Batra A, Vohra, R, Chrzanowski S, Lott D, Walter GA, Vandeborne K, **Forbes SC**. Effects of PDE5A inhibition on skeletal muscle T₂ after low intensity treadmill training in dystrophic mice. National High Magnetic Field Laboratory 2017 Research Reports.
 4. Batra A, Vohra R., Chrzanowski S, Lott D, Walter GA, Vandeborne K, **Forbes SC**. Effects of PDE5A inhibition on skeletal muscle ¹H₂O T₂ after exercise in dystrophic mice. National High Magnet Field Laboratory (NHMFL) Research Reports, 2016.
 5. **Forbes SC**, Batra A, Vohra R, Vandeborne K, Walter GA. Skeletal Muscle ¹H₂O T₂ Analyzed for Multiple Components in mdx Mice after Downhill Running. National High Magnet Field Laboratory (NHMFL) Research Reports, 2015.
 6. **Forbes SC**, Vohra R, Zeng H, McNally E, Vandeborne K, Walter GA Myocardial and Skeletal Muscle T₂ is Reduced in γ -Sarcoglycan Deficient Mice at 7 Months of Age. National High Magnet Field Laboratory (NHMFL) Research Reports, 2014.
 7. Vohra R, **Forbes SC**, Batra A, Zeng H, Kumar A, Girgenrath M, Vandeborne K, Walter GA. Assessment of Skeletal Muscle Size and Composition in Dystrophin and Laminin- α 2 Deficient Mice. National High Magnet Field Laboratory (NHMFL) Research Reports, 2014.
 8. **Forbes SC**, Baligand C, Brady S, Vohra R, Vandeborne K, Walter GA. Lack of Neuronal Nitric Oxide Synthase Slows Phosphocreatine Recovery and Reduces Microvascular Function Following Muscle Contractions. National High Magnet Field Laboratory (NHMFL) Research Reports, 2012.
 9. **Forbes SC**, Bish LT, Barton ER, Ye F, Spinazzola J, Baligand C, Plant D, Zeng H, Vandeborne K, Sweeney HL, Walter GA. Gene transfer of arginine kinase to skeletal muscle monitored with ³¹P-MRS: A comparison of adeno-associated virus and adenovirus delivery methods. National High Magnet Field Laboratory (NHMFL) Research Reports, 2012.
 10. **Forbes SC**, Vohra R, Ye F, Vandeborne K, Walter GA. Myocardium transverse relaxation time in *mdx* mice following uphill running. National High Magnet Field Laboratory (NHMFL) Research Reports, 2012.
 11. **Forbes SC**, Bish LT, Barton ER, Ye F, Baligand C, Sweeney HL, Plant D, Zeng H, Walter GA. Noninvasive Monitoring of Arginine Kinase Gene Transfer to Skeletal Muscle. National High Magnet Field Laboratory (NHMFL) Research Reports, Report Number 257, 2011.
 12. Triplett W, Baligand C, **Forbes S**, Willcocks R, Lott D, DeVos S, Pollaro J, Rooney W, Vandeborne K, Bönnenman C, Sweeney L, Walter GA. Chemical Shift Based Imaging and Modeling of Dystrophic Muscle. National High Magnet Field Laboratory (NHMFL) Research Reports, 2011.

13. Mathur S, Vohra R, **Forbes SC**, Bryant ND, Vandeborne K, Walter GA. Changes In Muscle T2 and Tissue Damage Following Downhill Running in mdx Mice, National High Magnet Field Laboratory (NHMFL) Research Reports, Report Number 239, 2011.
14. Baligand C, Walter GA, Keener J, Bose P, Thompson F, Vohra R, Ye F, **Forbes SC**, Lim W, Shah PK, Vandeborne K. Morphological and Metabolic Characterization of a New Model of Spinal Cord Injury Without Reloading Using ¹H MRI and ³¹P NMR Spectroscopy, National High Magnet Field Laboratory (NHMFL) Research Reports, Report Number 241, 2011.
15. Baligand C, **Forbes SC**, Wary C, Carlier P, Walter GA. Quantitative Measurement of Skeletal Muscle Perfusion Using Arterial Spin Labeling NMR Imaging at High (4.7T) and Ultrahigh Field (11.1T/17.6T): A Comparative Study, National High Magnet Field Laboratory Research Reports (NHMFL) Reports, Report Number 333, 2011.
16. **Forbes SC**, Germain S, Bryant N, McNally E, Sweeney HL, Walter GA. γ -Sarcoglycan Deficiency Reduces Left Ventricular Function and T2 in Old Mice, National High Magnet Field Laboratory (NHMFL) Research Annual Reports, Report Number 359, 2010.

PROFESSIONAL PRESENTATIONS AND PUBLISHED ABSTRACTS

Invited Presentations and Non-peer Reviewed Talks/Panels:

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| Mar. 2023 | Grant Writing Workshop. Invited panelist: F-Grants. Advances in Skeletal Muscle Biology in Health and Disease. Gainesville, Florida. |
| Apr. 2021 | Bioenergetics and Microvascular Function in Dystrophic Muscle, UF/Philips (Eindhoven, Netherlands). Quarterly Research Review Seminar (delivered online). |
| Jan. 2020 | “MRI/MRS Evaluation of Bioenergetics and Microvascular Function in Dystrophic Muscle”. Myology Institute, University of Florida. |
| Nov. 2019 | MRI/MRS Evaluation of Skeletal Muscles in Muscular Dystrophies. Philips Innovation Center, Eindhoven, Netherlands. |
| Feb. 2019 | “Non-invasive assessment of dystrophic muscle using magnetic resonance imaging and spectroscopy”. Department of Molecular & Cellular Pharmacology, University of Miami Miller School of Medicine, University of Miami, Florida. |
| Jan. 2019 | “Assessing Dystrophic muscle using MR at High Field”. Maglab Strategic Planning meeting. University of Florida, Gainesville, Florida. |
| April 2018 | “Assessing Muscle Quality Using Magnetic Resonance Imaging and Spectroscopy”. Department of Physical Therapy, University of Florida. |
| Oct. 2013 | “Cross-sectional MRI/MRS Study of Lower Extremity Muscles”. ImagingDMD Investigators meeting. Oregon Health & Science University, Portland, Oregon. |

Sept. 2013	“Evaluating Potential Treatments in Muscular Dystrophies using Magnetic Resonance Imaging and Spectroscopy: A Translational Approach”. Rehabilitation Seminar Series, University of Florida, Gainesville, Florida.
Oct. 2011	“Assessment of dystrophic muscle using MRI/MRS”. New Frontiers in High Field Condensed Matter NMR and NHMFL 2011 User Committee Meeting, National High Magnetic Field Laboratory, Tallahassee, Florida
June 2011	“Skeletal muscle energetics and perfusion in dystrophic muscle”. Muscle Biology/Physiology Seminar Series. University of Florida, Gainesville, Florida.
May 2011	“Assessment of Dystrophic Muscle using Magnetic Resonance Imaging and Spectroscopy”. Department of Physical Therapy, University of Florida, Gainesville, Florida.
Feb. 2011	“Tissue heterogeneity in muscular dystrophies”. Diffusion Imaging Workshop. University of Florida, Gainesville, Florida
Oct. 2008	“Non-invasive assessment of skeletal muscle energetics during exercise and recovery”. Department of Physiology and Functional Genomics, University of Florida
Mar. 2008	“MRI/MRS assessment of skeletal muscle metabolism”. Faculty of Physical Education and Recreation, University of Alberta, Edmonton, Alberta
Dec. 2006	“Acid-base status and skeletal muscle energetics”. Ph.D. Public Lecture, The University of Western Ontario
Oct. 2006	“Effects of acid-base status on skeletal muscle energetics during exercise”. Bioscience Seminar Series, The University of Western Ontario
Dec. 2004	“Metabolic effects of induced alkalosis during moderate and heavy exercise”. Talks on Friday’s (TOFS) presentation, Department of Biophysics, The University of Western Ontario

Presenting Author at Conferences and Scientific Abstracts:

1. **Forbes, S.C.**, Lopez, C., Hammers, D.W., Awale, P., Chamberlain, J.S., Vandenborne, K., Walter, G.A. MRI/MRS assessment of micro-dystrophin gene transfer in skeletal muscle of mdx mice. Presented at New Directions in Biology and Disease of Skeletal Muscle, Fort Lauderdale, Florida, June, 2022.
2. Lucena R, Lopez C, Awale P, Taivassalo T, Vandenborne K, Walter GA, **Forbes SC**. Skeletal muscle phosphocreatine recovery kinetics and BOLD response following isometric dorsiflexion contractions in Duchenne muscular dystrophy. Presented at MYO-MRI (online meeting), October, 2021.
3. Lopez C, Saavedra A, Batra A, Moslemi Z, Rasmussen H, Walter GA, Vandenborne K, **Forbes SC***. Microvascular Function in Duchenne muscular dystrophy evaluated with MRI. Myology Institute Retreat, Gainesville, Florida, March, 2020. (*presenter)

4. Moslemi Z, Lopez C, Batra A, Rennick A, **Forbes SC***. Effects of downhill running on muscle MRI T2 in young mdx mice. Presented at the American College of Sports Medicine, Orlando, FL., *Med & Sci Sports Exerc*, 51 (6): 334, June 2019. (*presenter)
5. Lopez C, Batra A, Moslemi Z, Rennick A, **Forbes SC***. Effects of downhill running on skeletal muscle of dystrophic mice evaluated by ³¹phosphorus magnetic resonance spectroscopy, Presented at the American College of Sports Medicine, Orlando, FL., *Med & Sci Sports Exerc*, 51 (6): 335, June 2019. (*presenter)
6. **Forbes SC**, Willcocks R, Triplett W, Arora H, Rooney W, Wang DJ, Daniels M, Finanger E, Finkel R, Tennekoon G, Sweeney H, Walter GA, Vandeborne K. MR biomarkers in imaging DMD clinical trial network. *Neuromuscular Disorders*, 28, S41, 2018. Presented at World Muscle Society, Mendoza, Argentina, October, 2018.
7. **Forbes SC**, Batra A, Baligand C, Vandeborne K, Walter GA. Effect of PDE5 inhibition on the post-contraction MRI blood-oxygenation-level-dependent (BOLD) effect in skeletal muscle of dystrophic mice. *Neuromuscular Disorders*, 28, S94-95, 2018. Presented at World Muscle Society, Mendoza, Argentina, October, 2018.
8. **Forbes SC**, Mangiera G, Batra A, Vohra R, Vandeborne K, Walter GA. Altered bioenergetics with age and genetic background in skeletal muscle of mdx mice. *New Directions in Biology and Disease of Skeletal Muscle Conference*. June 29-July 2, 2016.
9. **Forbes SC**, Ma J, Walter GA, Vandeborne K, and Lai S. Skeletal Muscle Perfusion Measured with Pseudo-Continuous Arterial Spin-Labeling MRI After Dorsiflexion Contractions. *Proc. Intl. Soc. Mag. Reson. Med.* 23:1235, 2015. Presented at ISMRM, Toronto, Canada, May 31-June 5, 2015.
10. **Forbes SC**, Triplett WT, Willcocks R, Batra A, Vohra R, Pollaro J, Wang DJ, Finkel R, Byrne BJ, Russman BS, Finanger E, Daniels M, Rooney WD, Walter GA, Sweeney HL, and Vandeborne K. Dystrophic Skeletal Muscle ¹H₂O T₂ Analyzed for Multiple Components. *Proc. Intl. Soc. Mag. Reson. Med.* 23: 4242, 2015. Presented at ISMRM, Toronto, Canada, May 31 – June 5, 2015.
11. **Forbes SC**, Baligand C, Vohra R, Batra A, Vandeborne K, Walter GA. Phosphocreatine recovery kinetics and microvascular function in *mdx* and nNOS-null mice assessed using MRI/MRS. *Integrative Physiology of Exercise*, Miami, FL, September 17-20, 2014.
12. **Forbes SC**, Walter GA, Rooney WD, Wang DJ, Triplett W, Willcocks R, Pollaro J, Byrne B, Finkel R, Russman B, Finanger E, Sweeney HL, Vandeborne K. T₂ mapping and Single Voxel ¹H-MRS Detect Skeletal Muscle Involvement in Young Boys with Duchenne Muscular Dystrophy. Presented at ISMRM, Milan, Italy, May 10-16, 2014.
13. **Forbes SC**, Walter GA, Rooney WD, Wang DJ, DeVos S, Pollaro J, Triplett W, Lott DJ, Willcocks RJ, Senesac C, Daniels MJ, Byrne B, Russman B, Finkel R, Meyer JS, Sweeney HL, Vandeborne K. Reproducibility of Skeletal Muscle MR measures in Children: A Multi-Center Study of Duchenne Muscular Dystrophy. *Proc. Intl. Soc. Mag. Reson. Med.* 21, 1633, 2013 Presented at ISMRM, Salt Lake City, Utah, April, 2013 (poster presentation).
14. **Forbes SC**, Vohra R, Batra A, Vandeborne K, Walter GA. Sildenafil citrate attenuates T₂ the increase in skeletal muscle T₂ following downhill running in mdx mice. Presented at Muscular Dystrophy Association Annual conference, Washington DC, April, 2013 (poster presentation).
15. **Forbes SC**, Baligand C, Vohra R, Vandeborne K, Walter GA. Neuronal nitric oxide synthase-deficient mice have slower phosphocreatine recovery kinetics and reduced microvascular response following muscle contractions. Presented at the New Directions in Biology and Disease of Skeletal Muscle, New Orleans, Louisiana, June, 2012 (poster presentation).

16. **Forbes SC**, Baligand C, Vohra R, Vandeborne K, Walter GA. Effect of lack of nNOS on phosphocreatine recovery kinetics following muscle contractions. *Advances in Skeletal Muscle Biology in Health & Disease*, Gainesville, Florida, February 2012 (poster presentation).
17. **Forbes SC**, Vohra RS, Ye F, Vandeborne K, Walter GA. Effect of uphill running on myocardium T₂ in mdx mice. *Journal of Cardiovascular Magnetic Resonance* 2012, 14 (Suppl 1): P59, 2012 (poster presentation).
18. **Forbes SC**, ER Barton, LT Bish, F Ye, J Spinazzola, C Baligand, D Plant, H Zeng, D Plant, K Vandeborne, HL Sweeney, and GA Walter. Gene transfer of arginine kinase to skeletal muscle monitored with ³¹P-MRS: A comparison of adeno-associated virus and adenovirus delivery methods. ISMRM workshop on MRI-based Cell Tracking, Miami Florida, February 2012 (poster presentation).
19. **Forbes SC**, Walter GA, Rooney WD, Wang DJ, DeVos S, Pollaro J, Triplett W, Lott DJ, Senesac C, Daniels MJ, Willcocks RJ, Byrne B, Russman B, Finkel R, Sweeney HL, Vandeborne K. Design of a Multi-center Study to Examine Skeletal Muscles of Children with Duchenne Muscular Dystrophy using MRI/MRS. World Muscle Society meeting, Algarve, Portugal, October, 2011 (poster presentation).
20. **Forbes SC**, Bish LT, Sleeper MM, Mai W, Vandeborne K, Sweeney HL, and Walter GA. AAV6-mediated delivery of a U7 exon skipping construct improves regional cardiac function in Golden Retriever muscular dystrophy dogs. *Proc. Intl. Soc. Mag. Reson. Med.* 19: 1313, 2011. International Society of Magnetic Resonance Meeting (ISMRM), Montreal, Canada, May, 2011 (poster presentation).
21. **Forbes SC**, Bish LT, Barton ER, Ye F, Baligand C, Vandeborne K, Sweeney HL, and Walter GA. Gene transfer of arginine kinase to skeletal muscle using adeno-associated virus. *Proc. Intl. Soc. Mag. Reson. Med.* 19: 1150, 2011. Presented at the International Society of Magnetic Resonance Meeting (ISMRM), Montreal, Canada, May, 2011 (poster presentation).
22. **Forbes SC**, Wilson D, Wickham S, Mai W, Bish LT, Morine KJ, Vandeborne K, Walter GA, Sleeper MM, Sweeney HL. Effects of myostatin inhibition in skeletal muscle of Golden Retriever muscular dystrophy dogs. Muscular Dystrophy Association National Scientific Conference, Las Vegas, NV, March, 2011 (poster presentation).
23. **Forbes SC**, Lott D, Israel-Stahre N, Senesac C, Byrne B, Finkel R, Sweeney HL, Walter GA, Vandeborne K. MRI/MRS evaluation of a female carrier of Duchenne muscular dystrophy: A case study. Neuromuscular Plasticity Symposium, Gainesville, Florida, March 2011 (poster presentation).
24. **Forbes SC**, Mai W, Bish LT, Morine KJ, Wickham S, Wilson D, Vandeborne K, Walter GA, Sleeper MM, Sweeney HL. MRI evaluation of systemic myostatin inhibition in skeletal muscle of Golden Retriever muscular dystrophy dogs. Presented at The Wellstone Investigators Meeting, Philadelphia, PA, October, 2010 (poster presentation).
25. **Forbes SC**, Germain S, Lott DJ, Vandeborne K, Walter GA. NNLS Analyses of Skeletal Muscle T₂ in children with Duchenne muscular dystrophy. *Med. Sci. Sports Exerc.* 42(5):756-757, 2010. Presented at the American College of Sports Medicine, Baltimore, Maryland, June, 2010 (poster presentation).
26. **Forbes SC**, Wickham S, Vandeborne K, Mai W, Bish LT, Morine KJ, Walter GA, Sleeper MM, Sweeney HL. MRI evaluation of systemic myostatin inhibition in skeletal muscle of Golden Retriever muscular dystrophy dogs. Presented at The Ottawa Conference on New Directions in Biology and Disease of Skeletal Muscle, Ottawa, Ontario, May, 2010 (poster presentation).
27. **Forbes SC**, Germain S, Bryant N, Walter GA. γ -Sarcoglycan deficiency reduces cardiac function and T₂ in Old Mice. *Proc. Intl. Soc. Mag. Reson. Med.* 18: 3588, 2010. Presented at the International Society of Magnetic Resonance Meeting (ISMRM), Stockholm, Sweden, May, 2010 (e-poster presentation).

28. **Forbes SC**, Slade JM, Carlson JJ, Wiseman RW, Meyer RA (2009). Ischemia increases central drive from the motor cortex during submaximal exercise in healthy adults. *Med. Sci. Sports Exerc.* 41(5): 433-434, 2009. Presented at the American College of Sports Medicine, Seattle, Washington, June, 2009 (poster presentation).
29. **Forbes SC**, Slade JM, Braman JE, Coil YI, Drenowatz C, Papineau M, Radic Z, Siebel MB, Sutton D, Visintine KR, Meyer RA (2008). Short-term high-intensity cycling interval training improves quadriceps strength, cycling power, and muscle oxidative capacity. Presented at Mid-west American College of Sports Medicine (MWACSM), Bowling Green, Ohio, October, 2008 (poster presentation).
30. **Forbes SC**, Slade JM, Meyer RA. Effects of high-intensity cycling training on phosphocreatine recovery kinetics. Presented at the American Physiological Society (APS) Intersociety Meeting: The Integrative Biology of Exercise V: Hilton Head, South Carolina, September, 2008 (poster presentation).
31. **Forbes SC**, Forbes DA, Markle-Reid M, Morgan DG, Wood J. Effects of physical activity programs on persons with dementia: A cochrane review. *Alzheimers Dement.* 4(4 suppl 2): T500. Presented at the International Conference of Alzheimer's Disease (ICAD), Chicago, Illinois, July, 2008 (poster presentation).
32. **Forbes SC**, Paganini AT, Slade JM, Towse TF, Meyer RA. Non-negative least squares and CSI analyses of phosphocreatine recovery kinetics in human skeletal muscle. *Proc. Intl. Soc. Mag. Reson. Med.* 16: 2569, 2008. Presented at the International Society of Magnetic Resonance Meeting (ISMRM), Toronto, Ontario, May, 2008 (poster presentation).
33. **Forbes SC**, Slade JM, Weston CL, Meyer RA. Muscle heterogeneity does not explain biphasic phosphocreatine recovery kinetics after plantar flexion exercise in humans. *Med. Sci. Sports Exerc.*, 40 (5): S347, 2008. Presented at the 55th Annual Meeting of the American College of Sports Medicine, Indianapolis, Indiana, June, 2008 (poster presentation).
34. **Forbes SC**, Raymer GH, Kowalchuk JM, Thompson RT, Marsh GD. Phosphocreatine metabolism during repeated bouts of heavy-intensity exercise separated by 3-min rest. *Appl. Physiol. Nutr. Metab.*, 31 Suppl S1, 2006. Presented at the 14th annual meeting of the Canadian Society for Exercise Physiology, Halifax, Nova Scotia, November, 2006 (poster presentation).
35. **Forbes SC**, Raymer GH, Kowalchuk JM, Thompson RT, Marsh GD. Phosphocreatine metabolism and acidosis during repeated bouts of heavy-intensity exercise separated by 15-min rest. *Med. Sci. Sports Exerc.*, 38 (11): Suppl 1: S28, 2006. Presented at ACSM Integrative Physiology, Indianapolis, Indiana, September, 2006 (poster presentation).
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37. **Forbes SC**, Raymer GH, Kowalchuk JM, Rice CL, Thompson RT, Marsh GD. Reproducibility of on-transient PCr kinetics during moderate-intensity exercise using 3-tesla ³¹P-MRS. Presented at the Workshop on Investigation of Human Muscle Function In Vivo, Nashville, Tennessee, October, 2005 (poster presentation).
38. **Forbes SC**, Kowalchuk JM, Thompson RT, Marsh GD. Effects of induced metabolic alkalosis on phosphocreatine kinetics during moderate and heavy forearm exercise. *Med. Sci. Sports Exerc.*, 37 (5): S443, 2005. Presented at the 52nd Annual Meeting of the American College of Sports Medicine, Nashville, Tennessee, 2005 (poster presentation).
39. **Forbes SC**, Kilmer CA, Rice CL, Thompson RT, Marsh GD. Metabolic comparison of voluntary isotonic dorsiflexion and plantar flexion exercise. *Can. J. Appl. Physiol.*, 29: S48, 2004. Presented at

the 12th Annual Meeting of the Canadian Society for Exercise Physiology, Saskatoon, Saskatchewan, October, 2004 (oral presentation).

40. **Forbes SC**, Raymer GH, Kowalchuk JM, Marsh GD. Metabolic effects of induced alkalosis during moderate and heavy exercise. *Med. Sci. Sports Exerc.*, 35 (5): S92, 2003. Presented at the 50th Annual Meeting of the American College of Sports Medicine, San Francisco, California, 2003 (poster presentation).
41. **Forbes SC**, Marsh GD. Metabolic comparison of eccentric and concentric exercise. *Can. J. Appl. Physiol.*, 27: S17, 2002. Presented at the 10th Annual Meeting of the Canadian Society for Exercise Physiology, St. John's, Newfoundland, 2002 (poster presentation).

Additional Scientific Abstracts:

1. Awale P, Lopez C, Taivassalo T, Vandeborne K, Walter GA, **Forbes SC**. Relationship between skeletal muscle energetics and clinical functional measures in Duchenne muscular dystrophy. To be presented at Combined Sections meeting, Boston, USA.
2. Awale P, Lopez C, Taivassalo T, Vandeborne K, Walter G, **Forbes S**. Energetics and acid-base status of skeletal muscle at rest and following isometric dorsiflexion and plantar flexion contractions in Duchenne muscular dystrophy. To be presented at World Muscle Society, South Carolina, USA.
3. Awale P, Lopez C, Taivassalo T, Vandeborne K, Walter GA, **Forbes SC**. Phosphocreatine Recovery Kinetics Following Plantar Flexion Exercise in Young Boys with Duchenne Muscular Dystrophy. Presented at Neuromuscular Plasticity Training, Gainesville, Florida, March, 2023.
4. Baetscher E, Triplett W, Walter GA, **Forbes S**, Willcocks R, Barnard A, Mueller R, Vandeborne K, Rooney W. Fat fraction dependent decrease of muscle water T2 in Duchenne muscular Dystrophy is steeper in patients with faster disease progression. Presented at International Society of Magnetic Resonance, Toronto, Canada, 2023.
5. Walter GA, Barnard A, **Forbes SC**, Willcocks RJ, Baetscher E, Triplett W, Rooney W, Vandeborne K. Elevated Muscle Water T2 in Dystrophinopathy. Presented at International Society of Magnetic Resonance Meeting, Toronto, Canada, 2023.
6. Yoon DY, Daniels MJ, Morales JF, Willcocks RJ, Triplett WT, Barnard A, **Forbes SC**, Walter G, Rooney WD, Vandeborne K, Kim S. Optimizing clinical trials for Duchenne muscular dystrophy by quantitatively bridging a functional endpoint and each transverse relaxation time of five leg muscles measured by MRI. Presented at American Society for Clinical Pharmacology & Therapeutics, Atlanta, Georgia, 2023.
7. Bellam P, Lopez C, **Forbes SC**, Willcocks RJ, Rooney WD, Triplett WT, Brandsema J, Finanger EL, Barnard AM, Lott DJ, Senesac CR, Walter GA, Sweeney HL, Vandeborne K. Noninvasive Methods to Measure Fat Infiltration and Performance in Upper Extremities of Boys with DMD. Presented at Combined Sections Meeting, San Diego, California, February, 2023.
8. Taivassalo T., Carvill A., Lott D., Stubbs K., Dixon W., **Forbes S.**, Vandeborne K., Walter G., Sweeney HL. Therapeutic potential of combined cycling and isometric strength training in patients with DMD: preliminary findings. *Eur J Transl Myol.* 32(1): 10440, 2022.
9. Willcocks RJ, Barnard AM, **Forbes SC**, Triplett WT, Brandsema J, Finanger EL, Rooney WD, Kim S, Wang DJ, Lott DJ, Senesac CR, Walter GA, Sweeney HL, Vandeborne K. Minimum Clinically Important Difference in Magnetic Resonance Biomarkers in DMD. World Muscle Society, Halifax, Canada, 2022.

10. Nair K., **Forbes SC**, Barnard A., Willcocks RJ, Rooney W., Lott DJ, Finanger E., Senesac C., Brandsema J., Wang DJ, Walter GA, Vandeborne K. Longitudinal Assessment of Disease Progression in Duchenne Muscular Dystrophy Using Magnetic Resonance Imaging and North Star Ambulatory Assessment. Muscular Dystrophy Association Clinical & Scientific Conference, Nashville, Tennessee, March, 2022.
11. Willcocks RJ, Barnard AM, **Forbes SC**, Triplett WT, Brandsema J, Finanger EL, Rooney WD, Kim S, Wang DJ, Lott DJ, Senesac CR, Walter GA, Sweeney HL, Vandeborne K. Minimum Clinically Important Difference in Magnetic Resonance Spectroscopy Vastus Lateralis Muscle Fat Fraction in DMD. Muscular Dystrophy Association Clinical & Scientific Conference, Nashville, Tennessee, March, 2022.
12. Awale P., Lopez C., Amna S., Park S., Vandeborne K., **Forbes SC**. Reproducibility of MRI data analysis of dystrophic skeletal muscle in lower hindlimbs of mice. Neuromuscular Plasticity Symposium, Gainesville, Florida, March, 2022.
13. Lucena R., Lopez C., Awale P., Taivassalo T., Vandeborne K., Walter G.A., **Forbes S.C.** Magnetic Resonance Phosphocreatine Recovery Rates and Functional Test Performance in Boys with Duchenne Muscular Dystrophy. Undergraduate Research Symposium, University of Florida, Gainesville, Florida, April, 2022.
14. Bellam P, Lopez C, Forbes SC, Willcocks RJ, Triplett WT, Brandsema J, Finanger EL, Rooney WD, Wang DJ, Barnard AM, Lott DJ, Senesac CR, Walter GA, Sweeney HL, Vandeborne K. Comparison of Dixon MR Imaging and MR Spectroscopy to Quantify Fat Infiltration in Arm Muscles of Boys with Duchenne Muscular Dystrophy. Neuromuscular Plasticity Symposium, Gainesville, Florida, March, 2022.
15. Lopez C., Taivassalo T., Berru M.G., Saavedra, A., Rasmussen, H.C., Batra, A., Arora, H., Roetzheim, A.M., Walter, G.A., Vandeborne, K., **Forbes, S.C.** Post-contractile blood oxygenation level-dependence (BOLD) response in Duchenne muscular dystrophy, Neuromuscular Plasticity, 2021.
16. Lopez C., Taivassalo T., Berru M.G., Saavedra, A., Rasmussen, H.C., Batra, A., Arora, H., Roetzheim, A.M., Walter, G.A., Vandeborne, K., **Forbes, S.C.** Post-contractile blood oxygenation level-dependence (BOLD) response in Duchenne muscular dystrophy, Muscular Dystrophy Association Clinical and Scientific Meeting, 2021.
17. Berru M, Lopez C, Roetzheim A, Saavedra A, Walter GA, Vandeborne K, Taivassalo T, **Forbes SC**. Relationship between the post-contractile MRI blood oxygen level dependent (BOLD) response and markers of disease progression in Duchenne muscular dystrophy. Presented at the Undergraduate Research Day, University of Florida, April, 2020.
18. Lopez C, Saavedra A, Batra A, Moslemi Z, Rasmussen H, Walter GA, Vandeborne K, **Forbes SC**. Microvascular Function in Duchenne muscular dystrophy evaluated with MRI. Myology Institute Retreat, Gainesville, Florida, March, 2020.
19. Lopez C, Moslemi Z, Batra A, Rennick A, Walter GA, **Forbes SC**. ³¹P-MRS markers of muscle damage in young mdx mice. Myology Institute Retreat, Gainesville, Florida, March, 2020.
20. Lopez C, Saavedra A, Batra A, Rasmussen H, Walter GA, Vandeborne K, **Forbes SC**. Microvascular Function in Duchenne muscular dystrophy evaluated with MRI. Accepted for presentation at MDA Clinical & Scientific Conference, Orlando, Florida, 2020.
21. Vandeborne K, Sweeney HL, Finkel R, Willcocks RJ, Barnard A, Finanger EL, Tennekoon GI, Shieh P, Walter GA, Rooney W, **Forbes SC**, Triplett WT, Yum SW, Mancini M, MacDougall J, Donovan J.M. A Composite of MRI T₂ of Five Lower Leg Muscles Is Highly Correlated with Timed Function

- Tests and Functional Status in ImagingDMD Natural History Database, and Supports Positive Effects of Edasalonexent in 4 to 7-Year Old Patients with Duchenne Muscular Dystrophy. Presented at Myo-MRI, Berlin, Germany, November 2019.
22. Sweeney HL, Vandenborne K, Finkel R, Finanger EL, Tennekoon GI, Shieh P, Willcocks RJ, Walter GA, Rooney W, **Forbes SC**, Triplett WT, Yum SW, Mancini M, MacDougall J and Donovan JM. MoveDMD, a Phase 2 with Open-Label Extension Study of Treatment of Young Boys with Duchenne Muscular Dystrophy with the NF- κ B Inhibitor Edasalonexent Showed a Slowing of Disease Progression as Assessed by MRI and Functional Measures. Presented at Myo-MRI, Berlin, Germany, November 2019.
 23. Lopez C, Guice K, Arora H, Batra A, Moslemi Z, Zeng H, Walter GA, **Forbes SC**. Relationship between 31 P-MRS markers of pathology and inflammation in young *mdx* mice. Presented at Myo-MRI, Berlin, Germany, November 2019.
 24. Lopez C, Guice K, Arora H, Batra A, Moslemi Z, Zeng H, Walter GA, **Forbes SC**. 31 P-MRS Biomarkers of Muscle Pathology Related to Inflammation in Young *mdx* Mice. Southeast Magnetic Resonance Conference, Gainesville, Florida, October, 2020.
 25. Finkel R, Vandenborne K, Sweeney HL, Finanger E, Tennekoon G, Shieh P, Willcocks R, Walter G, Rooney W, **Forbes S**, Triplett W, Yum S, Mancini M, MacDougall J, Fretzen A, Bista P, Nichols A, Donovan J. Treatment of young boys with Duchenne muscular dystrophy with the NF- κ B inhibitor edasalonexent showed a slowing of disease progression as assessed by MRI and functional measures. World Muscle Society, Copenhagen, Netherlands, October, 2019.
 26. Moslemi Z, Lopez C, Batra A, Rennick A, **Forbes SC**. Effects of downhill running on muscle MRI T2 in young *mdx* mice. Presented at the American College of Sports Medicine, Orlando, FL, Med & Sci Sports Exerc, 51 (6): 334, June 2019.
 27. Lopez C, Batra A, Moslemi Z, Rennick A, **Forbes SC**. Effects of downhill running on skeletal muscle of dystrophic mice evaluated by 31 phosphorus magnetic resonance spectroscopy, Presented at the American College of Sports Medicine, Orlando, FL, Med & Sci Sports Exerc, 51 (6): 335, June 2019.
 28. Barnard A, Lott D, Batra A, Triplett W, **Forbes SC**, Riehl S, Willcocks RJ, Smith B, Vandenborne K, Walter G. Characterizing respiratory muscle composition and function in Duchenne muscular dystrophy using dynamic MRI and chemical shift-encoded imaging. Presented at the International Society of Magnetic Resonance Meeting (ISMRM), Montreal, Canada, April, 2019.
 29. Finkel RS, Vandenborne K, Sweeney HL, Finanger E, Tennekoon G, Shieh P, Willcocks RJ, Walter GA, Rooney WD, **Forbes SC**, Triplett WT, Yum S, Mancini M, MacDougall, Donovan JM. Edasalonexent, a Novel NF- κ B Inhibitor, Slows Disease Progression in Young Boys with Duchenne in Phase 2 and Open-Label Extension of MoveDMD® Trial. Parent Project Muscular Dystrophy, Orlando, FL, June, 2019.
 30. Finkel RS, Vandenborne K, Sweeney HL, Finanger E, Tennekoon G, Shieh P, Willcocks RJ, Walter GA, Rooney WD, **Forbes SC**, Triplett WT, Yum S, Mancini M, MacDougall, Donovan JM. MoveDMD Phase 2 Data Supports Design of PolarisDMD, a Phase 3 Study of Edasalonexent, a Novel NF- κ B Inhibitor. Muscular Dystrophy Association, Orlando, FL, February, 2019.
 31. Finkel RS, Vandenborne K, Sweeney HL, Finanger EL, Tennekoon GI, Shieh P, Willcocks RJ, Walter G, Rooney WD, **Forbes SC**, Triplett WT, Yum SW, Mancini M, MacDougall J, Fretzen A, Bista P, Nichols A, Donovan JM. Edasalonexent, an NF- κ B Inhibitor, Slows Longer-Term Disease Progression on Multiple Functional and MRI Assessments Compared to Control Period in 4 to 7-Year Old Patients with Duchenne Muscular Dystrophy. *Neurology* Apr 2019, 92 (15 Supplement) S51.006. Presented at The American Academy of Neurology, Philadelphia, PA, April, 2019.

32. Vandeborne K, Sweeney HL, Finkel RS, Willcocks RJ, Finanger EL, Tennekoon GI, Shieh P, Walter G, Rooney W, **Forbes SC**, Triplett WT, Barnard A, Wang DJ, Yum SW, Mancini M, MacDougall J, Fretzen A, Donovan JM. A Composite of MRI T2 of Five Lower Leg Muscles Is Highly Correlated with Timed Function Tests and Functional Status, and Supports Positive Effects of Edasalonexent in 4 to 7-Year Old Patients with Duchenne Muscular Dystrophy. Presented at World Muscle Society, Mendoza, Argentina, October, 2018.
33. Saavedra A, Rasmussen H, Lopez C, Arora H, Taivassalo T, Vandeborne K, **Forbes SC**. MR Assessment of Bioenergetics and Microvascular Function in Dystrophic Muscle: A Feasibility Study. Parent Project Muscular Dystrophy, Orlando, FL., June, 2019.
34. Willcocks RJ, Barnard AM, Arora H, **Forbes SC**, Lott DJ, Harrington AT, Senesac CR, Triplett WT, Daniels MJ, Finanger EL, Finkel RS, Tennekoon GI, Wang DJ, Rooney WD, Walter GA, Sweeney HL, Vandeborne K. Development of contractures in DMD: Natural history data from the ImagingDMD study. Parent Project Muscular Dystrophy, Orlando, FL., June, 2019.
35. Alabasi UM, Willcocks RJ, **Forbes SC**, Triplett WT, Rooney WD, Wang DJ, Senesac CR, Lott DJ, Finkel RS, Subramony SH, Tennekoon GI, Finanger EL, Russman BS, Byrne BJ, Walter GA, Sweeney HL, Vandeborne K. Relationships between body mass index, intramuscular fat, and functional performance in DMD. Parent Project Muscular Dystrophy, Orlando, FL., June, 2019.
36. Lopez C, Moslemi Z, Batra A, Rennick A, Walter GA, Zeng H, **Forbes SC**. Effects of downhill running on skeletal muscle of dystrophic mice evaluated by MR T₂ and ³¹phosphorus-magnetic resonance spectroscopy. *Advances in Skeletal Muscle Biology in Health and Disease*, Gainesville, FL., March, 2019.
37. Rennick A, Lopez C, Batra A, **Forbes SC**. *mdx* Mice Evaluated with Magnetic Resonance Imaging and Spectroscopy, Public Health and Health Professions Research Day, Gainesville, FL., March, 2019.
38. Lopez C, Moslemi Z, Guice K, Arora H, Batra A, Zeng H, Walter GA, **Forbes SC**. Altered metabolic flux of dystrophic skeletal muscle evaluated with ³¹Phosphorus magnetic resonance spectroscopy, Neuromuscular Plasticity Symposium, Gainesville, FL, March, 2019.
39. Arora H, Willcocks R, **Forbes SC**, Triplett W, Rooney W, Wang DJ, Daniels M, Finanger E, Tennekoon G, Brandsema J, Sweeney HL, Walter G, Vandeborne K. Disease progression in arm versus leg muscles in Duchenne muscular dystrophy. *Neuromuscular Disorders*, 28, S123, 2018. Presented at World Muscle Society, Mendoza, Argentina, October, 2018.
40. Batra A, Vohra R, Chrzanowski S, Lott DJ, Walter GA, Vandeborne K, **Forbes SC**. Effects of PDE5A inhibition on skeletal muscle ¹H₂O T₂ following an acute bout of downhill running and endurance training in dystrophic mice. *Proc. Intl. Soc. Mag. Reson. Med.* 26, 1410, 2018. Presented at the International Society of Magnetic Resonance in Medicine, Paris, France, June, 2018.
41. Baligand, C., Ye, F., **Forbes, S.C.**, Vohra, R., Keener, J., Bose, P., Thompson, F., Walter, G.A., Vandeborne, K. Energy Metabolism Differences in Rat Skeletal Muscle Due to Restricted Ambulation Following SCI. *Proc. Intl. Soc. Mag. Reson. Med.* 26, 3897, 2018. Presented at the International Society of Magnetic Resonance in Medicine, Paris, France, June, 2018.
42. Barnard A, Lott D, Batra A, Triplett W, **Forbes SC**, Riehl S, Willcocks R, Smith B, Vandeborne K, Walter GA. An imaging study of the diaphragm and accessory respiratory muscles in Duchenne muscular dystrophy. *New directions in Muscle Biology and Disease of Skeletal Muscle*. New Orleans, Louisiana, June, 2018.
43. Lopez C, Guice K, Arora H, Batra A, Walter GA, **Forbes SC**. A non-invasive longitudinal study of phosphorous metabolites in young *mdx* mice. Presented at Experimental Nuclear Magnetic Resonance Conference, Orlando, FL., April 2018.

44. Finkel R, Vandenborne K, Sweeney HL, Finanger E, Tennekoon E, Shieh P, Willcocks RJ, **Forbes SC**, Triplett W, Yum S, Mancini M, Fretzen A, Donovan J. MoveDMD®: Positive Effects of Edasalonexent, an NF-κB Inhibitor, in 4 to 7-Year Old Patients with Duchenne Muscular Dystrophy in Phase 2 Study with an Open-Label Extension (S29.006) Neurology Apr 2018, 90 (15 Supplement) S29.006.
45. Rasmussen H, Arora H, **Forbes SC**. Human Calf Muscle Metabolites Evaluated by ³¹Phosphorous-Magnetic Resonance Spectroscopy as Biomarkers in Duchenne Muscular Dystrophy. Public Health and Health Professions Research Day, Gainesville, FL, 2018.
46. Guice K., Lopez C., Arora H., Batra A., Walter G.A., **Forbes SC**. Evaluating a Mouse Model of Duchenne Muscular Dystrophy at a Young Age with Magnetic Resonance Imaging and Spectroscopy. Public Health and Health Professions Research Day, Gainesville, FL, 2018. Neuromuscular Plasticity Symposium, Gainesville, FL, 2018.
47. Wortman RJ, Notman D, Willcocks RJ, Finager EL, **Forbes SC**, Triplett WT, Rooney WD, Wang DJ, Russman BS, Finkel RS, Tennekoon GI, Brandsema S, Sweeney HL, Walter GA, Vandenborne K. Examining bone health in Duchenne muscular dystrophy using Magnetic Resonance Imaging. Neuromuscular Plasticity Symposium, Gainesville, FL, 2018.
48. Reid G, Arora H, Willcocks RJ, **Forbes SC**, Triplett WT, Rooney WD, Wang DJ, Finager EL, Russman BS, Finkel RS, Tennekoon GI, Brandsema S, Sweeney HL, Walter GA, Vandenborne K. Upper extremity muscle cross sectional area: a possible target for intervention in individuals with DMD? Neuromuscular Plasticity Symposium, Gainesville, FL, 2018.
49. Arora H, Rasmussen H, Lopez C, **Forbes SC**. Day-to-day Reproducibility of ³¹Phosphorus 2D-Chemical Shift Imaging of Lower Leg Muscles of Humans. Neuromuscular Plasticity Symposium, Gainesville, FL, 2018.
50. Rooney WD, Berlow Y, **Forbes SC**, Willcocks RJ, Triplett WT, Wang DJ, Byrne BJ, Finkel R, Russman BS, O'Brien E, Moloney B, Finanger EL, Daniels MJ, Sweeney HL, Walter GA and Vandenborne K. Statistical modeling of 5-year longitudinal data from a large cohort of Duchenne muscular dystrophy (DMD) subjects: an interim look at temporal characteristics of disease progression from the ImagingDMD study. Imaging in Neuromuscular Disease, Berlin, Germany, November 2017.
51. Chrzanowski SM, Vohra R, Lee-McMullen B, Batra A, Spradlin R, Morales J, **Forbes S**, Vandenborne K, Barton ER, Walter G. Near-infrared optical imaging detects exacerbation and amelioration of muscular dystrophy. Imaging in Neuromuscular Disease, Berlin, Germany, November 2017.
52. Barnard A, Lott D, Batra A, Willcocks R, **Forbes SC**, Triplett WT, Riehl S, Smith B, Vandenborne K, Walter GA. Respiratory muscle composition and breathing dynamics assessed by MRI in Duchenne muscular dystrophy. Imaging in Neuromuscular Disease. Berlin, Germany, November 2017.
53. Willcocks RJ, Barnard AM, Arora H, **Forbes SC**, Lott DJ, Harrington AT, Triplett WT, Daniels MJ, Finanger EL, Finkel RS, Tennekoon GI, Wang DJ, Rooney WD, Walter GA, Sweeney HL, Vandenborne K. Quantitative magnetic resonance biomarkers are related to both lower and upper extremity function. Presented at the Parent Project Muscular Dystrophy meeting, Chicago, June 29-July 2, 2017.
54. Lott DJ, Cooke KD, Park HJ, **Forbes SC**, Triplett WT, Walter GA, Vandenborne K, Ashizawa T, Subramony SH. Upper and Lower Extremity Magnetic Resonance Imaging Correlates with Function & Strength in People with Myotonic Dystrophy Type 1. Presented at the International Myotonic Dystrophy Consortium, San Francisco, September 5-9, 2017.

55. Finkel RS, Vandenberg K, Sweeney HL, Finanger EL, Tennekoon GI, Shieh P, Willcocks RJ, **Forbes SC**, Triplett WT, Yum S, Mancini M, Friedman M, Fretzen A, Donovan JM. MoveDMD: Phase 2 Trial of Edasalonexent, an NF- κ B Inhibitor, in 4 to 7-Year Old Patients with Duchenne Muscular Dystrophy. Presented at World Muscle Society, Saint Malo, France, October 3-7, 2017.
56. Willcocks RJ, **Forbes SC**, Lott DJ, Senesac CR, Arora HA, Barnard AR, Harrington AT, Daniels MJ, Finanger EL, Tennekoon GI, Finkel RS, Wang DJ, Rooney WR, Walter GA, Sweeney HL, Vandenberg K. Magnetic resonance biomarkers in the proximal and distal upper extremity in a large cohort of boys with Duchenne muscular dystrophy. Presented at World Muscle Society, Saint Malo, France, October 3-7, 2017. *Neuromuscular Disorders* 27, S96–S249, p.92, 2017.
57. Mangieri GM, Newmans B, **Forbes SC**. Use of MRI to characterize the DBA/2J-mdx mouse model of Duchenne muscular dystrophy. Presented at PPHP research Day, Gainesville Florida, April 17, 2017.
58. Alabasi U, Willcocks RJ, **Forbes SC**, Triplett W, Rooney WD, Wang DJ, Lott D, Barnard AM, Senesac CR, Finanger E, Tennekoon G, Finkel RS, Russman BS, Byrne BJ, Walter GA, Sweeney HL, Vandenberg K. Upper Extremity Muscles Involvement in Boys with Duchenne Muscular Dystrophy, a Natural Disease Progression Study. 30th Annual PPHP Research Day. Gainesville, FL. April 2017
59. Arora H, Willcocks RJ, **Forbes SC**, Rooney WD, Triplett WT, Wang DJ, Lott DJ, Senesac CR, Barnard AM, Harrington AT, Zilke KL, Finanger EL, Tennekoon GI, Russman BS, Finkel RS, Byrne BJ, Sweeney HL, Walter GA & Vandenberg K. Quantitative MR measures of upper extremity are related to upper extremity functional ability in boys with DMD. 30th Annual PPHP Research Day. Gainesville, FL. April 12, 2017.
60. Barnard AM, Lott D, Willcocks RJ, **Forbes SC**, Triplett W, Riehl S, Batra A, Smith BK, Vandenberg K, Walter GA. A Novel MRI Study of Diaphragm and Chest Wall Dynamics in Duchenne Muscular Dystrophy. 30th Annual PPHP Research Day. Gainesville, FL. April 2017.
61. Willcocks RJ, **Forbes SC**, Triplett WT, Arora H, Walter GA, Vandenberg K. MR biomarkers capture disease in both progressed and preserved muscles in the upper extremity of nonambulatory boys with DMD. Presented at MDA Scientific Conference, Arlington, Virginia, March 19-22, 2017.
62. Alabasi UM, Willcocks RJ, **Forbes SC**, Triplett WT, Rooney, WD, Wang, DJ, Lott, DJ, Barnard AM, Senesac CS, Finanger E, Tennekoon GI, Finkel RS, Russman BS, Byrne BJ, Walter GA, Sweeney HL, Vandenberg K. MRI quantification of Intramuscular Fat in Arm Muscles in Boys with Duchenne Muscular Dystrophy. 12th Annual Neuromuscular Plasticity at UF, Gainesville, FL. March 17, 2017
63. Arora H, Willcocks RJ, **Forbes SC**, Rooney WD, Triplett WT, Wang DJ, Lott DJ, Senesac CR, Barnard AM, Harrington AT, Zilke KL, Finanger EL, Tennekoon GI, Russman BS, Finkel RS, Byrne BJ, Sweeney HL, Walter GA & Vandenberg K. MR measures correlate with functional ability in the upper extremity of boys with DMD. 12th Annual Neuromuscular Plasticity Symposium. Gainesville, FL. March 17, 2017.
64. Barnard AM, Lott D, Willcocks RJ, **Forbes SC**, Triplett W, Riehl S, Batra A, Smith BK, Vandenberg K, Walter GA. The Effects of Failed Muscle Regeneration on Trunk and Respiratory Muscle Composition and Function in Duchenne Muscular Dystrophy. 12th Annual Neuromuscular Plasticity Symposium. Gainesville, FL. Mar 2017.
65. Alabasi U, Willcocks R, **Forbes S**, Triplett WT, Rooney WD, Wang DJ, Lott DJ, Finkel R, Tennekoon, G, Finanger EL, Russman BS; Byrne B, Walter GA, Sweeney HL, Vandenberg K. Natural Disease Progression of Upper Extremity Muscles in Boys with Duchenne Muscular Dystrophy, Cross-sectional Study. Advances in Skeletal Muscle Biology in Health and Disease Conference, Gainesville, Florida, March, 2017.

66. Arora H, Willcocks RJ, **Forbes SC**, Rooney WD, Lott DJ, Senesac CR, Zilke KL, Harrington AT, Wang DJ, Tennekoon GI, Finanger EL, Russman BS, Finkel RS, Triplett WT, Byrne BJ, Sweeney HL, Walter GA, Vandenborne, K. MRI muscle T2 correlates with upper extremity functional ability in boys with DMD. Advances in Skeletal Muscle Biology in Health and Disease Conference, Gainesville, Florida, March, 2017.
67. Barnard AM, Lott D, Willcocks RJ, **Forbes SC**, Triplett W, Batra A, Smith BK, Vandenborne K, Walter GA. An MRI Investigation of Trunk Muscle Involvement and Effects on Expiratory Function in Duchenne Muscular Dystrophy. Advances in Skeletal Muscle Biology in Health and Disease: 15th Biennial Conference. Gainesville, FL. March 2017.
68. Lott D, Cooke K, Park H, Black B, **Forbes S**, Byrne BJ, Walter GA, Vandenborne K. A Pilot Study for Mild to Moderate Intensity Resistance Exercise in Boys with Duchenne Muscular Dystrophy. Combined Sections Meeting, San Antonio, Texas, February 17-18, 2017.
69. Barnard AM, Lott D, Willcocks RJ, **Forbes SC**, Triplett W, Batra A, Smith K, Vandenborne K, Walter GA. Preliminary Investigation of Trunk Muscle Involvement in Duchenne Muscular Dystrophy using Magnetic Resonance Imaging. Combines Sections Meeting of the APTA. San Antonio, Tx. Feb 2017.
70. Lee-McMullen BA, Chrzanowski SM, Vohra R, **Forbes S**, Edison AS, Vandenborne K, Walter GA. In vivo and ex vivo metabolomic analysis for Duchenne muscular dystrophy in the mdx mouse model. New Directions in Biology and Disease of Skeletal Muscle Conference. June 29-July 2, 2016.
71. Arora H, Willcocks RJ, **Forbes SC**, Rooney WD, Lott DJ, Senesac CR, Zilke KL, Harrington AT, Wang DJ, Tennekoon GI, Finanger EL, Russman BS, Finkel RS, Triplett WT, Byrne BJ, Sweeney HL, Walter GA, Vandenborne K. Relationship between MR measures of muscle quality and functional ability in the upper extremity of boys with Duchenne Muscular Dystrophy. Parent Project Muscular Dystrophy's Annual Connect Conference. Orlando, Florida. June 26-29, 2016.
72. Barnard AM, Willcocks RJ, Finanger, EL, Triplett WT, Rooney WD, Lott DJ, Wang DJ, Senesac CR, **Forbes SC**, Tokay-Harrington AT, Daniels MJ, Finkel RS, Russman BS, Byrne BJ, Tennekoon GI, Glenn GA, Sweeney HL, Vandenborne K. Muscle Magnetic Resonance Measures Correlate with Functional Ability in DMD. 29th Annual PHHP Research Day. Gainesville, Florida. April 13, 2016.
73. Alabasi U, Willcocks RJ, **Forbes SC**, Triplett WT, Rooney WD, Wang DJ, Lott DJ, Senesac CR, Finkel RS, Tennekoon GI, Finanger EL, Russman BS, Byrne BJ, Walter GA, Sweeney HL, Vandenborne K. Obesity Impact on Disease Progression in Boys with Duchenne Muscular Dystrophy Over 1-year Period. 29th Annual PHHP Research Day. Gainesville, Florida. April 13, 2016.
74. Arora H, Willcocks RJ, Lott DJ, Senesac CR, **Forbes SC**, Rooney WD, Walter GA, Vandenborne K. MR - Quantitative Measures to Study Arm Involvement in Boys with DMD. 29th Annual PHHP Research Day. Gainesville, Florida. April 13, 2016.
75. Lee-McMullen BA, Chrzanowski SM, Vohra R, Willcocks R, Cunkle H, Powers C, Baligand C, Triplett W, **Forbes S**, Lott D, Senesac C, Edison AS, Vandenborne K, Walter GA. Metabolomic Analysis of Urine in Duchenne Muscular Dystrophy. 11th Annual Neuromuscular Plasticity Symposium. Gainesville, FL. March 11, 2016.
76. Barnard AM, Willcocks RJ, Finanger, EL, Triplett WT, Rooney WD, Lott DJ, Wang DJ, Senesac CR, **Forbes SC**, Tokay-Harrington AT, Daniels MJ, Finkel RS, Russman BS, Byrne BJ, Tennekoon GI, Glenn GA, Sweeney HL, Vandenborne K. Skeletal muscle magnetic resonance measures are linked to function and sentinel events in Duchenne muscular dystrophy. 11th Annual Neuromuscular Plasticity Symposium. Gainesville, FL. March 11, 2016.
77. Arora H, Willcocks RJ, Lott DJ, Senesac CR, **Forbes SC**, Rooney WD, Walter GA, Vandenborne K. Correlation of MRI and MRS with Performance of Upper Limb Functional Test in Boys with Duchenne

- Muscular Dystrophy. 11th Annual Neuromuscular Plasticity Symposium. Gainesville, Florida. March 11, 2016.
78. Senesac CR, Willcocks RJ, Lott DJ, **Forbes SC**, Rooney WD, Wang DJ, Finanger EL, Tokay-Harrington AT, Tennekoon GI, Finkel RS, Russman BS, Byrne BJ, Walter GA, Sweeney HL, Vandeborne K. ImagingDMD: MR Biomarkers in Duchenne Muscular Dystrophy: What we have learned in 5 years. American Physical Therapy Association Combined Sections Meeting. Anaheim, CA. Feb 17-20, 2016.
 79. Barnard AM, Willcocks RJ, Finanger, EL, Triplett WT, Rooney WD, Lott DJ, Wang DJ, Senesac CR, **Forbes SC**, Tokay-Harrington AT, Daniels MJ, Finkel RS, Russman BS, Byrne BJ, Tennekoon GI, Glenn GA, Sweeney HL, Vandeborne K. Magnetic resonance measures are correlated to functional ability in Duchenne muscular dystrophy. 14th Biennial Advances in Skeletal Muscle Biology in Health and Disease. Gainesville, FL. Jan 20-22, 2016.
 80. Alabasi U, Willcocks RJ, **Forbes SC**, Triplett WT, Rooney WD, Wang DJ, Lott DJ, Finkel RS, Tennekoon GI, Finanger EL, Russman BS, Byrne BJ, Walter GA, Sweeney HL, Vandeborne K. Effect of Obesity on Disease Progression in Boys with Duchenne Muscular Dystrophy over 1-year Period. 14th Biennial Advances in Skeletal Muscle Biology in Health and Disease. Gainesville, FL. Jan 20-22, 2016.
 81. Willcocks RJ, Triplett WT, Lott DJ, **Forbes SC**, Dastgir J, Bonnemann C, Vandeborne K, Walter GA. Quantitative MRI and MRS detect alterations in muscle quality in both congenital muscular dystrophy and Duchenne muscular dystrophy. 20th International World Muscle Society Conference. Brighton, UK. Sept 30-Oct 5, 2015.
 82. Batra A, Vohra R, Chrzanowski S, Lott D, Walter GA, Vandeborne KV, **Forbes SC**. Effects of a PDE5A inhibitor on muscle damage and performance during progressive low-intensity treadmill training in *mdx* mice. Advances in Skeletal Muscle Biology in Health and Disease Conference, Gainesville, Florida, January 20-22, 2016.
 83. Rooney WD, Berlow Y, **Forbes SC**, Willcocks RJ, Pollaro J, Triplett WT, Wang DJ, Byrne BJ, Finkel R, Russman BS, Finanger EL, Daniels MJ, Sweeney HL, Walter GA, Vandeborne K. Modeling Duchenne Muscular Dystrophy Disease Progression: A Longitudinal Multicenter MRI Study. Proc. Intl. Soc. Mag. Reson. Med. 23:1227, 2015. Presented at ISMRM, Toronto, Canada, May 31-June 5, 2015.
 84. Vohra R, **Forbes SC**, Vandeborne K, McNally E, Walter GA. Characterization of Murine Model of Dystrophy on a DBA Background. Proc. Intl. Soc. Mag. Reson. Med. 23:1241, 2015. Presented at ISMRM, Toronto, Canada, May 31-June 5, 2015.
 85. Stewart O, **Forbes SC**, Hammers D, Batra A, Vohra R, Triplett W, Willcocks RJ, Sleeper M, Sweeney HL, Walter GA, Vandeborne K. MRI assessment of heterogeneity of muscles across three models of muscular dystrophy. 28th Annual PHHP Research Day, Gainesville, Florida, April 2015.
 86. Chrzanowski SM, Batra A, Lee BA, Vohra R, Forbes SC, Vandeborne K, Walter GA. Near infrared optical imaging sheds new light into dystrophic and damaged muscle in mice. American Physician Scientists Association Annual Conference. Chicago, IL. April 23-26, 2015.
 87. Barnard AM, Willcocks RJ, **Forbes SC**, Rooney WD, Pham J, Hammers D, Triplett WT, Lott DJ, Senesac CR, Byrne BJ, Finanger EL, Russman BS, Wang DJ, Tennekoon GI, Finkel RS, Walter GA, Sweeney HL, Vandeborne K. Intramuscular fat is modified by genetic polymorphisms in Duchenne muscular dystrophy. 10th Annual Neuromuscular Plasticity Symposium, Gainesville, Florida, April, 2015.
 88. Barnard AM, Willcocks RJ, **Forbes SC**, Rooney WD, Triplett WT, Lott DJ, Senesac CR, Byrne BJ, Finanger EL, Russman BS, Wang DJ, Tennekoon GI, Finkel RS, Walter GA, Sweeney HL,

- Vandenborne K. Genetic polymorphisms modify intramuscular fat in Duchenne muscular dystrophy. 28th Annual PPHP Research Day, Gainesville, Florida, April 2015.
89. Willcocks RJ, **Forbes SC**, Triplett BT, Lott DJ, Senesac CR, Nicholson TR, Arora H, Walter GA, Vandenborne K. Magnetic resonance imaging of the arm and shoulder of boys with DMD. Presented at the Parent Project Muscular Dystrophy meeting in Washington, DC, June 2015.
 90. Senesac CR, Willcocks RJ, Lott, DJ, **Forbes, SC**, Rooney W, Walter GA, Sweeney HL, Vandenborne K. ImagingDMD: What have we learned in 5 years and what comes next? Presented at the Parent Project Muscular Dystrophy meeting in Washington, DC, June 2015.
 91. Alabasi U, Willcocks R, Arpan I, **Forbes S**, Triplett T, Rooney W, Lott D, Senesac C, Finkel R, Tennekoon G, Harrington A, Finanger E, Russman B, Walter G, Sweeney HL, Vandenborne K. Effect of Obesity in Disease Progression in Boys with Duchenne Muscular Dystrophy. PPHP Research Day, 2015, Gainesville, Florida.
 92. Alabasi UA, Willcocks RJ, Arpan I, **Forbes SC**, Triplett WT, Rooney WD, Lott DJ, Senesac CR, Finkel RS, Tennekoon GI, Harrington AT, Finanger EL, Russman BS, Walter GA, Sweeney HL, Vandenborne K. Boss Mass Index and Disease Progression in Boys with Duchenne Muscular Dystrophy. Neuromuscular Plasticity, March, 2015, Gainesville, Florida.
 93. Lott DJ, Cooke KD, **Forbes SC**, Jacobs AJ, George SZ, Vandenborne K. Determining an injury threshold for eccentric loading of the dorsiflexors using T₂ MRI and NNLS. Med Sci Sports Exerc, 47(5S) 290-292, 2015. Presented as a Thematic Poster at ACSM's Annual Meeting, May 2015, San Diego, CA.
 94. Willcocks RJ, **Forbes SC**, Triplett WT, Rooney WR, Lott D, Harrington AT, Wang DJ, Tennekoon G, Finanger E, Finkel R, Byrne B, Walter GA, Sweeney HL, Vandenborne K. MRI biomarkers are responsive to disease progression and predictive of functional decline in Duchenne muscular dystrophy. Neuromuscular Plasticity symposium, March, 2015, Gainesville, Florida.
 95. Bibeau V, Lott DJ, **Forbes SC**, Willcocks R, Senesac CR, Triplett W, Walter GA, Vandenborne K. MR Spectroscopy and Functional Measures in Boys with DMD 12-18 months Prior to Loss of Ambulation. Presented at PPHP Research Day, April 2015, University of Florida.
 96. Alabasi UM, Willcocks RJ, Arpan I, **Forbes SC**, Triplett WT, Rooney W, Lott DJ, Senesac CR, Finkel RS, Tennekoon GI, Harrington AT, Finanger EL, Russman BS, Walter GA, Sweeney HL, Vandenborne K. Association between BMI and intramuscular fat fraction in boys with Duchenne muscular dystrophy. Presented at Institute for Child health Policy, Nov. 4, 2014, Gainesville, Florida.
 97. Vohra R, **Forbes SC**, Vandenborne K, McNally E, Walter GA. Age dependent changes in cardiac and skeletal muscle T₂ in gamma sarcoglycan deficient mice. New Directions in Biology and Disease of Skeletal Muscle, Chicago, IL, June 29 - July 2, 2014.
 98. Willcocks RJ, **Forbes SC**, Triplett BT, Lott DJ, Senesac CR, Nicholson TR, Arora H, Walter GA, Vandenborne K. Magnetic resonance measures of muscle size and quality are altered in the upper extremity of 7-16 year old boys with DMD. New Directions in Biology and Disease of Skeletal Muscle, Chicago, IL, June 29 - July 2, 2014.
 99. Batra A, Lott DJ, Willcocks RJ, **Forbes SC**, William T, Dastgir J, Sweeney L, Bonnemann CG, Byrne B, Rooney W, Senesac C, Wang DJ, Vandenborne K, Walter GA. Physiological changes in lower extremity skeletal muscle based on MR and Strength measures in DMD and COL VI Myopathy. New Directions in Biology and Disease of Skeletal Muscle, Chicago, IL, June 29 - July 2, 2014.

100. Arora H, Willcocks RJ, Lott DJ, Senesac CR, **Forbes SC**, Bendixen RM, Harrington AT, Walter GA & Vandeborne K (2014). Difference between upper limb strength and function in control and DMD subjects. Graduate Student Research Day. Gainesville, Florida. October 28, 2014.
101. Arora H, Willcocks RJ, Lott DJ, Senesac CR, **Forbes SC**, Bendixen RM, Harrington AT, Walter GA & Vandeborne K (2014). Boys with Duchenne muscular dystrophy have deficits in upper limb strength and function. 2nd Annual Institute of Child Health Policy Research Day. Gainesville, Florida. November 4, 2014.
102. Arora H, Willcocks RJ, Lott DJ, Harrington AT, Senesac CR, Forbes SC, Tennekoon, GI, Finanger, EL, Finkel, RS, Triplett, WT, Byrne, BJ, Walter, GA, Sweeney, HL & Vandeborne, K. Disease progression in boys with Duchenne muscular dystrophy: 1 year longitudinal evaluation of functional performance. 10th Annual Neuromuscular Plasticity Symposium. Gainesville, Florida. March 13, 2015.
103. Arora H, Willcocks RJ, Lott DJ, Harrington AT, Senesac CR, **Forbes SC**, Tennekoon GI, Finanger EL, Finkel RS, Triplett WT, Byrne BJ, Walter GA, Sweeney HL & Vandeborne K. Functional decline in boys with Duchenne Muscular Dystrophy over 1 year. 28th Annual PPHP Research Day. Gainesville, Florida. April 8, 2015.
104. Lee-McMullen B, Clendinen C, Chrzanowski S, Vohra R, Willcocks R, Cunkle R, Powers C, Triplett W, **Forbes SC**, Lott DF, Senesac CR, Edison AS, Vandeborne K, Walter GA. Metabolomic Analysis for Duchenne Muscular Dystrophy. Clinical and Translational Science Institute Research Day. Gainesville, FL, June 5, 2014.
105. Batra A, Lott DJ, Willcocks RJ, **Forbes SC**, William T, Dastgir J, Sweeney HL, Bonnemann CG, Byrne B, Rooney W, Senesac C, Wang DJ, Vandeborne K, Walter GA. Lower Extremity Muscle Involvement in Duchenne Muscular Dystrophy and Collagen VI myopathy. Public Health and Health Professions Research Day, University of Florida, Gainesville, FL. April 16, 2014.
106. Arora H, Willcocks RJ, Lott DJ, Senesac CR, **Forbes SC**, Bendixen RM, Harrington AT, Walter GA, Vandeborne K. Upper extremity strength and function differ between boys with DMD and controls. Public Health and Health Professions Research Day, University of Florida, Gainesville, FL. April 16, 2014.
107. Phelan MK, Lott DJ, Willcocks RJ, **Forbes SC**, Senesac CR, Triplett WT, Walter GA, Vandeborne K. Coenzyme Q 10 Effect on Boys with Duchenne Muscular Dystrophy. Public Health and Health Professions Research Day, University of Florida, Gainesville, FL. April 16, 2014.
108. Cooke KD, Lott DJ, **Forbes SC**, Batra A, Willcocks RJ, Vandeborne K, Walter GA. Longitudinal Assessment of Strength, Activity, and Muscle T2 in Collagen VI Myopathy. Public Health and Health Professions Research Day, University of Florida, Gainesville, FL. April 16, 2014.
109. Plum KE, Batra A, Arpan I, Lott DJ, Vandeborne K, Walter GA, **Forbes SC**. MRI/MRS assessment of dystrophic muscle during progressive treadmill training. Public Health and Health Professions Research Day, University of Florida, Gainesville, FL. April 16, 2014.
110. Willcocks RJ, **Forbes SC**, Lott DJ, Senesac CR, Nicholson TR, Arora H, Walter GA, Vandeborne, K. Arm muscle involvement in Duchenne muscular dystrophy: A quantitative MRI and MRS study. Neuromuscular Plasticity Symposium, University of Florida, Gainesville, FL. March 14, 2014.
111. Arpan I, Willcocks RJ, **Forbes SC**, Lott DJ, Senesac C, Triplett WT, Daniels MJ, Byrne BJ, Finanger EL, Finkel RS, Russman BS, Rooney WD, Wang DJ, Tennekoon GI, Walter GA, Sweeney HL, Vandeborne K. Examination of effects of corticosteroid treatment initiation on lower extremity muscles of boys with DMD using magnetic resonance imaging and spectroscopy. Neuromuscular Plasticity Symposium, University of Florida, Gainesville, FL. March 14, 2014.

112. Lee-McMullen BA, Clendinen C, Chrzanowski SM, Vohra R, Baligand C, Triplett W, **Forbes S**, Edison AS, Vandeborne K, Walter GA. Metabolomic analysis for Duchenne Muscular Dystrophy in the Mdx mouse. Neuromuscular Plasticity Symposium, University of Florida, Gainesville, FL. March 14, 2014.
113. Batra A, Lott DJ, Willcocks RJ, **Forbes SC**, William T, Dastgir J, Sweeney HL, Bonnemann CG, Byrne B, Rooney W, Senesac C, Wang DJ, Vandeborne K, Walter GA. Physiological Changes in Skeletal Muscle of Leg Based on MRI and Strength Measured in children with Duchenne Muscular Dystrophy and Collagen VI Myopathy. Neuromuscular Plasticity Symposium, University of Florida, Gainesville, FL. March 14, 2014.
114. Vohra RS, Mathur S, **Forbes SC**, Vandeborne K, Walter G. Age related changes in the lower hindlimb muscles of mdx mice. Neuromuscular Plasticity Symposium, University of Florida, Gainesville, FL. March 14, 2014.
115. Arora H, Willcocks RJ, Lott DJ, Senesac CR, **Forbes SC**, Bendixen RM, Harrington AT, Walter GA, Vandeborne K. Performance on upper limb functional tests in control and DMD subjects. Neuromuscular Plasticity Symposium, University of Florida, Gainesville, FL. March 14, 2014.
116. Arpan I, Willcocks RJ, **Forbes SC**, Lott DJ, Senesac C, Triplett WT, Daniels MJ, Byrne BJ, Finanger EL, Finkel RS, Russman BS, Rooney WD, Wang DJ, Tennekoon GI, Walter GA, Sweeney HL, Vandeborne K. Examination of the Effects of Corticosteroid Treatment on Skeletal Muscles of Boys with DMD using Magnetic Resonance Imaging and Spectroscopy. Submitted to 13th Biennial Advances in Skeletal Muscle Biology in Health and Diseases Conference, Gainesville, Florida, March 5-7, 2014.
117. Lee-McMullen B, Clendinen C, Chrzanowski S, Vohra R, Triplett W, **Forbes S**, Edison AS, Vandeborne K, Walter GA. Metabolomic analysis for Duchenne Muscular Dystrophy in the Mdx Mouse Model. 13th Biennial Advances in Skeletal Muscle Biology in Health and Diseases Conference, Gainesville, Florida, March 5-7, 2014.
118. Vohra R, Kumar A, **Forbes SC**, Batra A, Chrzanowski SM, Lee BA, Vandeborne K, Girgenrath M, Walter GA. Magnetic resonance imaging differences in animal models of Duchenne and Congenital muscular dystrophy. 13th Biennial Advances in Skeletal Muscle Biology in Health and Diseases Conference, Gainesville, Florida, March 5-7, 2014.
119. Batra A, Lott DJ, Willcocks RJ, **Forbes SC**, William T, Dastgir J, Sweeney L, Bonnemann CG, Byrne B, Rooney W, Senesac C, Wang DJ, Vandeborne K, Walter G. Lower Extremity Muscle Involvement in Duchenne Muscular Dystrophy and Collagen VI myopathy. 13th Biennial Advances in Skeletal Muscle Biology in Health and Diseases Conference, Gainesville, Florida, March 5-7, 2014.
120. Willcocks RJ, **Forbes SC**, Lott DJ, Senesac CR, Nicholson TR, Arora H, Walter GA, Vandeborne K. Arm muscle involvement in Duchenne muscular dystrophy: A quantitative MRI and MRS study. 13th Biennial Advances in Skeletal Muscle Biology in Health and Diseases Conference, Gainesville, Florida, March 5-7, 2014.
121. Arora H, Willcocks RJ, Lott DJ, Senesac CR, **Forbes SC**, Bendixen RM, Harrington AT, Walter GA, Vandeborne K. Performance on upper limb functional tests in control and DMD subjects. 13th Biennial Advances in Skeletal Muscle Biology in Health and Diseases Conference, Gainesville, Florida, March 5-7, 2014.
122. Lee-McMullen BA, Clendinen C, Chrzanowski SM, Vohra R, Baligand C, Triplett W, **Forbes S**, Edison AS, Vandeborne K, Walter GA. Metabolomic analysis for Duchenne Muscular Dystrophy in the Mdx mouse. Translational Science 2014 Annual Meeting (Association for Clinical and Translational Science), Washington DC, April 9-11, 2014.
123. Arpan I, Willcocks RJ, **Forbes SC**, Lott DJ, Senesac C, Triplett WT, Daniels MJ, Byrne BJ, Finanger EL, Finkel RS, Russman BS, Rooney WD, Tennekoon GI, Walter GA, Sweeney HL, Vandeborne K.

- MR supports the therapeutic effect of corticosteroids in 5-7 year old boys with DMD. Presented at ISMRM, Milan, Italy, May 10-16, 2014.
124. Rooney W, **Forbes SC**, Triplett W, Pollaro J, Wang DJ, de Vos S, Meyer J, Willcocks RJ, Byrne B, Finkel R, Russman B, Finanger E, Daniels M, Sweeney L, Walter GA, and Vandeborne K. Tracking Disease Progression in Duchenne Muscular Dystrophy: Longitudinal Changes in Quantitative MR Measures. Presented at ISMRM, Milan, Italy, May 10-16, 2014.
 125. Finanger EL, Pollaro J, Russman B, Lott DJ, Byrne BJ, Finkel RS, Tennekoon GI, **Forbes SC**, Walter GA, Vandeborne K, Rooney WD. MRI Measures of Bone in Duchenne Muscular Dystrophy. World Muscle Society, Asilomar, CA, Oct 1-5, 2013.
 126. Willcocks RJ, **Forbes SC**, Finanger EL, Russman B, Lott DJ, Senesac CR, Triplett WT, Daniels MJ, Byrne BJ, Finkel RS, Tennekoon GI, Rooney WD, Walter GA, Sweeney HL, Vandeborne K. Magnetic resonance imaging and spectroscopy detect changes with age, corticosteroid treatment, and functional progression in DMD. World Muscle Society, Asilomar, CA, Oct 1-5, 2013.
 127. Batra A, Lott DJ, Willcocks RJ, **Forbes SC**, Vandeborne K, Walter G. MRI and Strength changes in children with Duchenne Muscular Dystrophy and Collagen VI myopathy. UF Graduate Research Day, University of Florida, Oct. 29, 2013.
 128. Chrzanowski SM, Lapa ME, Triplett WT, **Forbes SC**, Lott DJ, De Vos S, Willcocks R, Nicholson TR, Sweeney HL, Bönnemann CG, Vandeborne K, Walter GA. Magnetic Resonance Spectroscopy of Collagen VI Myopathies and Duchenne Muscular Dystrophy. American Physician Scientists Association Meeting, Chicago, Illinois, May, 2013.
 129. Baligand C, Triplett W, **Forbes SC**, Willcocks R, Lott D, DeVos S, Pollaro J, Rooney W, Sweeney HL, Bönnemann C, Vandeborne K, Walter GA. Chemical shift-based imaging to measure fat fractions in dystrophic skeletal muscle. *Proc. Intl. Soc. Mag. Reson. Med.* 21, 3519, 2013. Presented at ISMRM, Salt Lake City, Utah, April, 2013 (poster presentation).
 130. Rooney W, **Forbes SC**, Triplett W, Wang DJ, Pollaro J, DeVos S, Willcocks R, Finkel R, Russman B, Byrne B, Sweeney HL, Walter GA, and Vandeborne K. Soleus Muscle Water T₂ Values in Duchenne Muscular Dystrophy: Associations with Age and Corticosteroid Treatment. *Proc. Intl. Soc. Mag. Reson. Med.* 21, 689, 2013. Presented at ISMRM, Salt Lake City, Utah, April, 2013 (oral presentation).
 131. Batra A, Lott D, Willcocks R, **Forbes SC**, Triplett W, Dastgir J, Sweeney L, Bonnemann CG, Byrne B, Rooney W, Senesac C, Wang DJ, Vandeborne K, Walter G, PhD. Cross sectional and contractile area comparison in children with Duchenne muscular dystrophy and collagen VI myopathy. Presented at Muscular Dystrophy Association Annual conference, Washington DC, April, 2013 (poster presentation).
 132. Baligand C, Lee B, **Forbes SC**, Chrzanowski S, Byrne B, Glenn A, Walter GA. Muscle metabolic signature in a mouse model of Pompe disease identified by ¹³C and ³¹P NMR spectroscopy. Presented at Muscular Dystrophy Association Annual conference, Washington DC, April, 2013 (poster presentation).
 133. Willcocks RJ, Finanger EL, Russman BS, Lott DJ, **Forbes SC**, Senesac C, Wu X, Triplett WT, Harrington AT, Daniels MJ, Finkel RS, Byrne BJ, Rooney WD, Tennekoon GI, Sweeney HL, Walter GA, Vandeborne K. Magnetic resonance measures of muscle physiology significantly predict functional performance in boys with Duchenne muscular dystrophy. Presented at Muscular Dystrophy Association Annual conference, Washington DC, April, 2013 (poster presentation).
 134. Willcocks RJ, Arpan I, **Forbes SC**, Lott DJ, Senesac CR, Senesac E, Walter GA, Vandeborne K. Longitudinal changes in MRI transverse relaxation time in boys with Duchenne muscular dystrophy.

Presented at the New Directions in Biology and Disease of Skeletal Muscle, New Orleans, Louisiana, June, 2012 (poster presentation).

135. Baligand C, Ye F, Keener J, **Forbes SC**, Vohra R, Bose P, Walter GA, Thompson F, Vandeborne K. Evaluation of muscle bioenergetics in a new rat model of disuse using dynamic ^{31}P MR spectroscopy. *Advances in Skeletal Muscle Biology in Health & Disease*, Gainesville, Florida, February 2012 (poster presentation).
136. Willcocks RJ, Arpan I, **Forbes SC**, Lott DJ, Senesac CR, Walter GA & Vandeborne K. Longitudinal changes in skeletal muscle MRI T_2 relaxation time in boys with Duchenne muscular dystrophy. *Advances in Skeletal Muscle Biology in Health & Disease*, Gainesville, Florida, February 2012 (poster presentation).
137. Triplett W, Baligand C, **Forbes SC**, Willcocks R, Lott D, DeVos S, Pollaro J, Rooney W, Vandeborne K, Walter GA. Assessment of chemical shift-based imaging used to estimate fat fraction in dystrophic skeletal muscle. Los Angeles, Ca, February 2012 (poster presentation).
138. Senesac C, Lott D, Mathur S, Germain S, Deol J, Arpan I, Senesac E, **Forbes S**, Walter G, Vandeborne K. Longitudinal Changes in Magnetic Resonance Evaluation of Muscle Composition in Boys with Duchenne Muscular Dystrophy: A case series. Combined Sections Meeting (American Physical Therapy Association), Chicago, Illinois, February 2012 (poster presentation).
139. Arpan I, **Forbes S**, Lott D, Senesac C, de Vos S, Senesac E, Triplett W, Walter GA, Vandeborne K. Assessment of soleus muscle involvement in children with Duchenne muscular dystrophy (DMD) using T_2 mapping. Combined Sections Meeting (American Physical Therapy Association), Chicago, Illinois, February 2012 (oral presentation).
140. Rooney WD, Pollaro J, **Forbes SC**, Wang DJ, Vandeborne K, and Walter GA. Application of the Extended Phase Graph Technique to Improve T_2 Quantitation Across Sites. *Proc. Intl. Soc. Mag. Reson. Med.* 19: 138, 2011. Presented at the International Society of Magnetic Resonance Meeting (ISMRM), Montreal, Canada, May, 2011 (oral presentation).
141. Baligand C, Vohra RS, Ye F, Keener J, Lim W, **Forbes SC**, Shah PK, Bose P., Walter GA, Thompson F and Vandeborne K. Morphological and metabolic characterization of a new model of spinal cord injury without reloading using ^1H MRI and ^{31}P NMR spectroscopy. *Proc. Intl. Soc. Mag. Reson. Med.* 19:1143, 2011. Presented at the International Society of Magnetic Resonance Meeting (ISMRM), Montreal, Canada, May, 2011 (poster presentation).
142. Ishu A, **Forbes SC**, Lott D, Senesac E, De Vos S, Senesac C, Walter GA, Vandeborne K. Use of MRI T_2 histograms to quantify lower leg muscle involvement in children with DMD. Neuromuscular Plasticity Symposium, Gainesville, Florida, March 2011 (poster presentation).
143. Israel-Stahre NB, Willcocks R, **Forbes SC**, Arpan I, De Vos S, Lott D, Senesac C, Walter GA, Vandeborne K. Reproducibility of MRI- T_2 measures in leg muscles of children with Duchenne muscular dystrophy. Neuromuscular Plasticity Symposium, Gainesville, Florida, March, 2011 (poster presentation).
144. Arpan I, **Forbes SC**, Lott D, Senesac C, Senesac E, de Vos S, Walter GA, and Vandeborne K. Quantification of muscle involvement in children with Duchenne muscular dystrophy. College of Public Health and Health Professions (PHHP) research day, Gainesville, Florida, April, 2011 (poster presentation). Winner of poster award.
145. Crawford RE, Donovan J Lott DJ, Senesac C, **Forbes SC**, Walter G, Vandeborne K. Non-invasive Assessment of Muscle and Function in Patients with Duchenne Muscular Dystrophy. College of Public Health and Health Professions (PHHP) research day, Gainesville, Florida, April, 2011 (poster presentation).

146. Lott D, Crawford R, **Forbes SC**, Senesac C, Walter G, Vandeborne K. Longitudinal Assessment of Activity, Muscle Composition, and Functional Ability in Children with Duchenne muscular dystrophy. Presented at the American College of Sports Medicine, Denver, Co, June, 2011 (poster presentation).
147. Vandeborne K, Sweeney HL, Bendixen R, Byrne B, Finkel R, **Forbes SC**, Lott D, Meyer J, Russman B, Rooney W, Senesac C, Walter GA, Wang DJ. Magnetic Resonance & Biomarkers for Muscular Dystrophy. Presented at the Wellstone Investigators Meeting, Philadelphia, PA, October, 2010 (poster presentation).
148. Arpan I, **Forbes SC**, Lott D, Germain S, De Vos S, Senesac C, Senesac E, Walter GA, Vandeborne K. Comparison of MRI proton transverse relaxation time (T2) among lower leg muscles of children with Duchenne muscular dystrophy. American Physical Therapy Association (APTA), New Orleans, La, 2010 (poster presentation).
149. Arpan I, **Forbes SC**, Lott D, Germain S, Sukumar M, Senesac C, Walter GA, Vandeborne K. Distribution of T2 in the soleus of children with Duchenne muscular dystrophy. *Med. Sci. Sports Exerc.* 42(5):707, 2010. Presented at the American College of Sports Medicine, Baltimore, Maryland, June, 2010 (poster presentation).
150. Slade JM, **Forbes SC**, Stringer R, McClowry R, Meyer RA. High Dose Statin Therapy Reduces Muscle Oxidative Capacity In Healthy Adults. *Med. Sci. Sports Exerc.* 42(5): 755, 2010. Presented at the American College of Sports Medicine, Baltimore, Maryland, June, 2010 (poster presentation).
151. Vohra R, Mather S, Germain S, **Forbes SC**, Bryant N, Vandeborne K, Walter GA. Altered muscle MRI characteristics after downhill and uphill horizontal running exercise in mdx mice. Presented at The Ottawa Conference on New Directions in Biology and Disease of Skeletal Muscle, Ottawa, Ontario, May, 2010 (poster presentation).
152. Slade JM, **Forbes SC**, Abela GS, McClowry R, and Meyer RA. The effects of statins on ³¹P MRS measured skeletal muscle metabolite content and function. *Proc. Intl. Soc. Mag. Reson. Med.* 18: 3235, 2010. Presented at the International Society of Magnetic Resonance Meeting (ISMRM), Stockholm, Sweden, May, 2010 (poster presentation).
153. Arpan I, **Forbes SC**, Bendixen R, Lott D, Germain S, Walter GA, Vandeborne K. Reproducibility of T2 analysis in muscles of children with Duchenne muscular dystrophy. PHHP research day, Gainesville, Florida, April, 2010 (poster presentation).
154. Vohra RS, Mathur S, **Forbes SC**, Vandeborne K, Walter GA. Response of muscle T2 over time following single bout of downhill running in mdx mice. PHHP research day, Gainesville, Florida, April, 2010 (poster presentation).
155. Wickham S, **Forbes SC**, Vandeborne K, Sleeper M, Sweeney HL, Walter GA. Myostatin Blockers: A prospective treatment for Duchenne Muscular Dystrophy. PHHP research day, Gainesville, Florida, April, 2010 (poster presentation). Winner of the undergraduate honors poster award.
156. Bryant ND, Vohra R, Mather S, **Forbes S**, Walter GA. Multimodal imaging of tissue damage in dystrophic muscle. Neuromuscular Plasticity Symposium, Gainesville, Florida, April, 2010 (poster presentation).
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