

SEAN C. FORBES, Ph.D.

Department of Physical Therapy
2216 Clinical and Translational Research Building
Gainesville, Florida 32611
University of Florida
E-mail: scforbes@ufl.edu

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
2011-Present	Research Assistant Professor	University of 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 Vandeborne, 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

PROFESIONAL 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

2015	NIH Scientific Review, Imaging study section
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:

NIH/NIAMS R01AR070101 08/20/2016-07/31/2020
MR assessment of Bioenergetics and Microvascular Function in Dystrophic Muscle. The overall goal of this project is to evaluate deficits in energy and blood flow in dystrophic muscle using novel magnetic resonance imaging (MRI) and spectroscopy (MRS) techniques. We aim to determine the potential of these measures to: 1) track disease progression, 2) be early markers of disease pathology, and 3) be sensitive to treatments that restore dystrophin.
 Role: Principal Investigator

NIH/NIAMS R01 AR056973 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 (PI: Vandeborne)

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)

Summit Therapeutics

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 (PI: Vandeborne)

Catabasis Pharmaceuticals

4/1/2016-3/31/2017

A Phase 1/2 Study of CAT-1004 in Pediatric Patients with Duchenne Muscular Dystrophy

This study evaluates the safety and efficacy of CAT-1004 in ambulatory, male, pediatric patients with a confirmed diagnosis of DMD.

Role: Co-investigator (PI: Vandeborne)

Completed Research Support

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

American Journal of Physiology: Cell Physiology
Journal of Applied Physiology
Medicine and Science in Sports and Exercise
European Journal of Applied Physiology
Clinical Physiology and Functional Imaging
Metabolism: Clinical and Experimental
Journal of Magnetic Resonance
Scandinavian Journal of Medicine and Science in Sports
Muscle and Nerve
Journal of Biomedicine and Biotechnology
Journal of Clinical Medicine and Research
Applied Physiology, Nutrition, and Metabolism
Human Molecular Genetics
Acta Physiologica
PLoS ONE
Magnetic Resonance Materials in Physics, Biology and Medicine
NMR in Biomedicine
Frontiers in Physiology
Contemporary Clinical Trials

GRANT REVIEWER

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

TEACHING

Course Director/ Primary Instructor	Human Physiology (PHT 6935C). Department of Physical Therapy, University of Florida (2016-present).
	Seminar in Rehabilitation Science (PHT 6935C). Department of Physical Therapy, University of Florida (Fall 2015).
	Neuromuscular Responses to Exercise (Kin 813). Department of Kinesiology, Michigan State University (Fall 2007).
Co-instructor	Exercise Physiology (PHT 6152). Department of Physical Therapy, University of Florida (2012-present).
	Human Physiology (PHT 6935C). Department of Physical Therapy, University of Florida (2010-2015).

Seminar in Rehabilitation Science (PHT 6935C). Department of Physical Therapy, University of Florida (Fall 2015).

Muscle Plasticity (PHT 6935C, Section 17G9). Department of Physical Therapy, University of Florida (2014).

Magnetic Resonance Imaging (PHT 6935). Department of Physical Therapy, University of Florida (Spring 2010). Instructed component of course on Magnetic Resonance Spectroscopy (MRS).

Guest Lecturer Clinical Exercise Physiology. Basic Clinical Skills II (PHT 6207C). Department of Physical Therapy, University of Florida (2012).

Teaching Assistant Introduction to Research in Magnetic Resonance and Medicine (PRO200H). Michigan State University (2007-2008)

Exercise Physiology (Kin 230). Instructed the laboratory component. School of Kinesiology, The University of Western University (2003-2004, 2004-2005, 2005-2006).

MENTORSHIP

Thesis & Dissertation Committee Member:

Name	Date	Degree	Primary Advisor
Harneet Arora	2013-present	Ph.D. Candidate	Krista Vandeborne, P.T., PhD

Undergraduate Honors Thesis Advisor

Name	Date	Degree	Current Status
Hannah Rasmussen	2017-present	In progress	Enrolled
Kimberly Guice	2017-present	In progress	Enrolled, 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
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

PUBLICATIONS

Peer Reviewed Publications:

1. 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.
2. 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.
3. Chrzanowski SM, Batra A, Lee-McMullen BA, Vohra RS, **Forbes SC**, Jiang H, Vandenborne K, Walter GA. Near infrared optical imaging non-invasively detects acutely damaged muscle. *American Journal of Pathology*, 186 (10), 2682-700, 2016.
4. 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.
5. Willcocks RJ, Rooney WD, Triplett WT, **Forbes SC**, Lott DJ, Senesac CR, Daniels MJ, Wang DJ, Harrington AT, Tennekoon GI, Russman BS, Finanger EL, Byrne BJ, Finkel RS, Walter GA, Sweeney HL, Vandenborne K. Multicenter Prospective Longitudinal Study of Magnetic Resonance Biomarkers in a Large Duchenne Muscular Dystrophy Cohort. *Annals of Neurology*, 79(4):535-47, 2016.
6. **Forbes SC**, Willcocks RJ, Rooney WD, Walter GA, Vandenborne K. MRI quantifies neuromuscular disease progression. *Lancet Neurol.* S1474-4422(15)00320-8, 2015.
7. Vohra RS, Lott D, Mathur S, Senesac C, Deol J, Germain S, Bendixen R, **Forbes SC**, Sweeney HL, Walter GA, Vandenborne K. Magnetic Resonance Assessment of Hypertrophic and Pseudo-Hypertrophic Changes in Lower Leg Muscles of Boys with Duchenne Muscular Dystrophy and Their Relationship to Functional Measurements. *PLoS One.* 2015 Jun 23;10(6):e0128915. doi: 10.1371/journal.pone.0128915. eCollection 2015.
8. Vohra RS, Mathur S, Bryant ND, **Forbes SC**, Vandenborne K, Walter GA. Age related T₂ changes in hindlimb muscles of *mdx* mice. *Muscle Nerve*, 53(1): 84-90, 2016.
9. Senesac CR, Lott DJ, **Forbes SC**, Mathur S, Arpan I, Deol J, Senesac E, Walter GA, Vandenborne K. Longitudinal Evaluation of Muscle Composition using Magnetic Resonance in Four Boys with Duchenne Muscular Dystrophy: A Case Series. *Physical Therapy Journal*, 95(7):978-88, 2015.
10. **Forbes SC**, Willcocks RJ, Triplett WT, Rooney WD, Lott DJ, Wang DJ, Pollaro J, Senesac CR, Daniels MJ, Finkel RS, Russman BS, Byrne BJ, Finanger EL, Tennekoon GI, Walter GA, Sweeney HL, Vandenborne K. Magnetic resonance Imaging and Spectroscopy Assessment of Lower Extremity Skeletal Muscles in Boys with Duchenne Muscular Dystrophy: A Multicenter Cross Sectional Study. *PLoS ONE*, doi: 10.1371/journal.pone.0106435. 9(9):e106435, 2014.

11. Arpan I, Willcocks RJ, **Forbes SC**, Finkel RS, Lott DJ, Rooney WD, Triplett WT, Senesac CR, Daniels MJ, Byrne BJ, Finanger EL, Russman BS, Wang DJ, Tennekoon GI, Walter GA, Sweeney HL, and Vandeborne K. Examination of Effects of Corticosteroids on Skeletal Muscles of Boys with DMD using MRI and MRS. *Neurology*, 2014 Aug 6. pii: 10.1212/WNL.0000000000000775. PMID: 25098537.
12. Lott DJ, **Forbes SC**, Mathur S, Germain SA, Senesac C, Walter GA, Vandeborne K. In-vivo quantification of lower leg muscle metabolites using magnetic resonance spectroscopy in children with Duchenne muscular dystrophy. *Neuromuscular Disorders*, 22(7):574-82, 2014. doi: 10.1016/j.nmd.2014.03.013.
13. Willcocks RJ, Arpan IA, **Forbes SC**, Lott DJ, Senesac CS, Senesac E, Deol J, Triplett W, Baligand C, Daniels MJ, Sweeney HL, Walter GA & Vandeborne K. Longitudinal measurements of MRI-T2 in boys with Duchenne muscular dystrophy: Effects of age and disease progression. *Neuromuscular Disorders*. 24(5): 393-401, 2014. doi: 10.1016/j.nmd.2013.12.012.
14. **Forbes SC**, Bish LT, Ye F, Spinazzola J, Baligand C, Plant D, Vandeborne K, Barton ER, Sweeney HL, and Walter GA. Gene transfer of arginine kinase to skeletal muscle using adeno-associated virus. *Gene Therapy*, 21(4): 387-92, 2014. doi: 10.1038/gt.2014.9.
15. Forbes D, Thiessen EJ, Blake CM, Forbes SC, **Forbes S**. *Exercise programs for people with dementia. Cochrane Database of Systematic Reviews 2013, Issue 11. Art. No.: CD006489.* doi: 10.1002/14651858.CD006489.pub3.
16. Triplett WT, Baligand C, **Forbes SC**, Willcocks RJ, Lott DJ, DeVos S, Pollaro J, Rooney WD, Sweeney HL, Bönnemann C, Wang DJ, Vandeborne K, Walter GA. Chemical shift-based MRI to measure fat fractions in dystrophic skeletal muscle. *Magnetic Resonance in Medicine*, 72(1):8-19, 2014. doi: 10.1002/mrm.24917, PMID:24006208.
17. **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, Meyer J, Sweeney HL, Vandeborne K. Skeletal Muscles of Ambulant Children with Duchenne Muscular Dystrophy: Validation of Multicenter Study of Evaluation with MR Imaging and MR Spectroscopy. *Radiology*, 269(1):198-207, 2013. doi: 10.1148/radiol.13121948.
18. Arpan I, **Forbes SC**, Lott D, Senesac C, Daniels M, Triplett W, Deol J, Sweeney HL, Walter GA, Vandeborne K. T2 mapping provides multiple approaches to characterize muscle involvement in neuromuscular diseases: a cross-sectional study of lower leg muscles in 5-15 year old boys with Duchenne Muscular Dystrophy. *NMR in Biomedicine*, 26(3):320-8,2013. DOI: 10.1002/nbm.2851.
19. **Forbes SC**, Lott D, Finkel R, Senesac C, Byrne B, Sweeney HL, Walter GA, Vandeborne K. MRI/MRS evaluation of a female carrier of Duchenne muscular dystrophy. *Neuromuscular Disorders*, 22 (Suppl 2):S111-21, 2012.
20. Finanger EL, Russman B, **Forbes, SC**, Rooney WD, Walter GA, Vandeborne K. Use of skeletal muscle MRI in diagnosis and monitoring disease progression in Duchenne Muscular Dystrophy. *Physical Medicine & Rehabilitation Clinics of North America*, 23(1): 1-10, 2012.

21. Bish LT, Sleeper MM, **Forbes SC**, Wang B, Reynolds C, Singletary GE, Trafny D, Morine KJ, Sanmiguel J, Cecchini S, Virag T, Vulin A, Beley C, Bogan J, Wilson JM, Vandeborne K, Kornegay JN, Walter GA, Kotin RM, Garcia L, Sweeney HL. AAV6-mediated delivery of a U7 exon skipping construct restores cardiac dystrophin long term in Golden Retriever Muscular Dystrophy. *Molecular Therapy*, 20(3): 580-9, 2012.
22. Bish LT, Sleeper MM, **Forbes SC**, Morine KJ, Reynolds C, Singletary, Trafny D, Bogan J, Kornegay JN, Vandeborne K, Walter GA, and Sweeney HL. Long-term systemic myostatin inhibition via liver-targeted gene transfer in Golden Retriever Muscular Dystrophy. *Human Gene Therapy*, 22(12): 1499-509, 2011.
23. Mathur S, Vohra RS, Germain SA, **Forbes SC**, Bryant ND, Vandeborne K, Walter GA. Changes in muscle T₂ and tissue damage following downhill running in mdx mice. *Muscle and Nerve*, 43(6):878-86, 2011.
24. **Forbes SC**, Slade JM, Francis, RM, Meyer, RA. Comparison of oxidative capacity among leg muscles in humans using 31-P 2-D gated chemical shift imaging. *NMR in Biomedicine*, 22(10):1063-71, 2009. DOI: 10.1002/nbm.1413.
25. **Forbes SC**, Paganini AT, Slade JM, Towse TF, Meyer RA. Phosphocreatine recovery kinetics following low and high intensity exercise in human triceps surae and rat posterior hindlimb muscles. *American Journal of Physiology Regulatory, Integrative, and Comparative Physiology* 296 (1): R161-170, 2009. doi:10.1152/ajpregu.90704.2008.
26. **Forbes SC**, Slade JM, Meyer RA. Short-term high-intensity interval training improves phosphocreatine recovery kinetics following moderate-intensity exercise in humans. *Applied Physiology, Nutrition, and Metabolism*, 33(6): 1124-1131, 2008. DOI:10.1139/H08-099.
27. Forbes D, Culum I, Lischka AR, Morgan DG, Peacock S, Forbes J, **Forbes S**. Light therapy for managing cognitive, sleep, functional, behavioural, or psychiatric disturbances in dementia. *Cochrane Database of Systematic Reviews* 2009, Issue 4. Art. No.: CD003946. DOI: 10.1002/14651858.CD003946.pub3.
28. 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.
29. Forbes D, **Forbes S**, Morgan DG, Markle-Reid M, Wood J, Culum I. Physical activity programs for persons with dementia. *Cochrane Database of Systematic Reviews* Issue 3: Art. No. CD006489, 2008. DOI: 10.1002/14651858.CD006489.pub2.
30. **Forbes SC**, Raymer GH, Kowalchuk JM, Thompson RT, Marsh GD. Effects of recovery time on phosphocreatine kinetics during repeated bouts of heavy-intensity exercise. *European Journal of Applied Physiology* 103(6):665-75, 2008. DOI 10.1007/s00421-008-0762-2.
31. **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.

32. Raymer, GH, **Forbes SC**, Kowalchuk JM, Thompson RT, Marsh GD. Prior exercise delays the onset of acidosis during incremental exercise. *Journal of Applied Physiology* 102(5):1799-805, 2007. doi:10.1152/jappphysiol.01151.2006.
33. **Forbes SC**, Raymer GH, Kowalchuk JM, Marsh GD. NaHCO₃-induced alkalosis reduces the phosphocreatine slow component during heavy-intensity forearm exercise. *Journal of Applied Physiology* 99(5): 1668-1675, 2005. doi:10.1152/jappphysiol.01200.2004.

Non-Peer Reviewed Publications:

1. Batra A, Vohra R., Chrzanowski S, Lott D, Walter GA, Vandenborne 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.
2. **Forbes SC**, Batra A, Vohra R, Vandenborne 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.
3. **Forbes SC**, Vohra R, Zeng H, McNally E, Vandenborne 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.
4. Vohra R, **Forbes SC**, Batra A, Zeng H, Kumar A, Girgenrath M, Vandenborne 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.
5. **Forbes SC**, Baligand C, Brady S, Vohra R, Vandenborne 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.
6. **Forbes SC**, Bish LT, Barton ER, Ye F, Spinazzola J, Baligand C, Plant D, Zeng H, Vandenborne 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.
7. **Forbes SC**, Vohra R, Ye F, Vandenborne K, Walter GA. Myocardium transverse relaxation time in *mdx* mice following uphill running. National High Magnet Field Laboratory (NHMFL) Research Reports, 2012.
8. **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.
9. Triplett W, Baligand C, **Forbes S**, Willcocks R, Lott D, DeVos S, Pollaro J, Rooney W, Vandenborne 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.

10. 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.
11. 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.
12. 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.T/17.6T): A Comparative Study, National High Magnet Field Laboratory Research Reports (NHMFL) Reports, Report Number 333, 2011.
13. **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:

- | | |
|------------|--|
| 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 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.
2. **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.
3. **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 $^1\text{H}_2\text{O}$ T_2 Analyzed for Multiple Components. *Proc. Intl. Soc. Mag. Reson. Med.* 23: 4242, 2015. Presented at ISMRM, Toronto, Canada, May 31 – June 5, 2015.
4. **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.
5. **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. T_2 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.
6. **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).
7. **Forbes SC**, Vohra R, Batra A, Vandeborne K, Walter GA. Sildenafil citrate attenuates T_2 the increase in skeletal muscle T_2 following downhill running in mdx mice. Presented at Muscular Dystrophy Association Annual conference, Washington DC, April, 2013 (poster presentation).
8. **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).
9. **Forbes SC**, Baligand C, Vohra R, Vandenborne 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).
 10. **Forbes SC**, Vohra RS, Ye F, Vandenborne 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).
 11. **Forbes SC**, ER Barton, LT Bish, F Ye, J Spinazzola, C Baligand, D Plant, H Zeng, D Plant, K Vandenborne, 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).
 12. **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, Vandenborne 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).
 13. **Forbes SC**, Bish LT, Sleeper MM, Mai W, Vandenborne 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).
 14. **Forbes SC**, Bish LT, Barton ER, Ye F, Baligand C, Vandenborne 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).
 15. **Forbes SC**, Wilson D, Wickham S, Mai W, Bish LT, Morine KJ, Vandenborne 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).
 16. **Forbes SC**, Lott D, Israel-Stahre N, Senesac C, Byrne B, Finkel R, Sweeney HL, Walter GA, Vandenborne K. MRI/MRS evaluation of a female carrier of Duchenne muscular dystrophy: A case study. Neuromuscular Plasticity Symposium, Gainesville, Florida, March 2011 (poster presentation).
 17. **Forbes SC**, Mai W, Bish LT, Morine KJ, Wickham S, Wilson D, Vandenborne 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).

18. **Forbes SC**, Germain S, Lott DJ, Vandenborne 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).
19. **Forbes SC**, Wickham S, Vandenborne 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).
20. **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).
21. **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).
22. **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).
23. **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).
24. **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).
25. **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).
26. **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).
27. **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).
28. **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).
 29. **Forbes SC**, Kowalchuk JM, Thompson RT, Marsh GD. Effects of respiratory alkalosis on phosphocreatine kinetics during moderate-intensity plantar flexion exercise. *Med. Sci. Sports Exerc.*, 38 (5): S520, 2006. Presented at the 53rd Annual Meeting of the American College of Sports Medicine, Denver, Colorado, June, 2006 (poster presentation).
 30. **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).
 31. **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).
 32. **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).
 33. **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).
 34. **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. 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.
2. 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.

3. 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. Muscle Magnetic Resonance Measures Correlate with Functional Ability in DMD. 29th Annual PHHP Research Day. Gainesville, Florida. April 13, 2016.
4. 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, Vandeborne 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.
5. Arora H, Willcocks RJ, Lott DJ, Senesac CR, **Forbes SC**, Rooney WD, Walter GA, Vandeborne K. MR - Quantitative Measures to Study Arm Involvement in Boys with DMD. 29th Annual PHHP Research Day. Gainesville, Florida. April 13, 2016.
6. 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, Vandeborne K, Walter GA. Metabolomic Analysis of Urine in Duchenne Muscular Dystrophy. 11th Annual Neuromuscular Plasticity Symposium. Gainesville, FL. March 11, 2016.
7. 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. 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.
8. Arora H, Willcocks RJ, Lott DJ, Senesac CR, **Forbes SC**, Rooney WD, Walter GA, Vandeborne 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.
9. 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.
10. 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.
11. 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.

12. 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.
13. 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.
14. 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.
15. 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.
16. 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.
17. 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.
18. 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.
19. 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, Vandeborne K. Genetic polymorphisms modify intramuscular fat in Duchenne muscular dystrophy. 28th Annual PHHP Research Day, Gainesville, Florida, April 2015.
20. Willcocks RJ, **Forbes SC**, Triplett BT, Lott DJ, Senesac CR, Nicholson TR, Arora H, Walter GA, Vandeborne 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.
21. Senesac CR, Willcocks RJ, Lott, DJ, **Forbes, SC**, Rooney W, Walter GA, Sweeney HL, Vandeborne 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.

22. 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, Vandeborne K. Effect of Obesity in Disease Progression in Boys with Duchenne Muscular Dystrophy. PPHP Research Day, 2015, Gainesville, Florida.
23. 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, Vandeborne K. Boss Mass Index and Disease Progression in Boys with Duchenne Muscular Dystrophy. Neuromuscular Plasticity, March, 2015, Gainesville, Florida.
24. Lott DJ, Cooke KD, **Forbes SC**, Jacobs AJ, George SZ, Vandeborne 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.
25. 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, Vandeborne K. MRI biomarkers are responsive to disease progression and predictive of functional decline in Duchenne muscular dystrophy, Neuromuscular Plasticity symposium, March, 2015, Gainesville, Florida.
26. Bibeau V, Lott DJ, **Forbes SC**, Willcocks R, Senesac CR, Triplett W, Walter GA, Vandeborne 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.
27. 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, Vandeborne 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.
28. Vohra R, **Forbes SC**, Vandeborne 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.
29. Willcocks RJ, **Forbes SC**, Triplett BT, Lott DJ, Senesac CR, Nicholson TR, Arora H, Walter GA, Vandeborne 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.
30. 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 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.
31. 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.
32. 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.
 33. 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.
 34. 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 PHHP Research Day. Gainesville, Florida. April 8, 2015.
 35. 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.
 36. 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.
 37. 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.
 38. 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.
 39. 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.
 40. 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.
 41. 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.
42. 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.
 43. 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.
 44. 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.
 45. 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.
 46. 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.
 47. 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.
 48. 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.
 49. 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.
 50. 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.

51. 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.
52. 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.
53. 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.
54. 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.
55. 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.
56. 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.
57. 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.
58. 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.
59. 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.
60. 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).
61. 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).
 62. 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).
 63. 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).
 64. 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).
 65. 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).
 66. 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 ³¹P MR spectroscopy. *Advances in Skeletal Muscle Biology in Health & Disease*, Gainesville, Florida, February 2012 (poster presentation).
 67. Willcocks RJ, Arpan I, **Forbes SC**, Lott DJ, Senesac CR, Walter GA & Vandeborne K. Longitudinal changes in skeletal muscle MRI T₂ relaxation time in boys with Duchenne muscular dystrophy. *Advances in Skeletal Muscle Biology in Health & Disease*, Gainesville, Florida, February 2012 (poster presentation).
 68. 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).
 69. 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).
70. Arpan I, **Forbes S**, Lott D, Senesac C, de Vos S, Senesac E, Triplett W, Walter GA, Vandendorne K. Assessment of soleus muscle involvement in children with Duchenne muscular dystrophy (DMD) using T2 mapping. Combined Sections Meeting (American Physical Therapy Association), Chicago, Illinois, February 2012 (oral presentation).
 71. Rooney WD, Pollaro J, **Forbes SC**, Wang DJ, Vandendorne K, and Walter GA. Application of the Extended Phase Graph Technique to Improve T₂ 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).
 72. Baligand C, Vohra RS, Ye F, Keener J, Lim W, **Forbes SC**, Shah PK, Bose P., Walter GA, Thompson F and Vandendorne K. Morphological and metabolic characterization of a new model of spinal cord injury without reloading using ¹H MRI and ³¹P 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).
 73. Ishu A, **Forbes SC**, Lott D, Senesac E, De Vos S, Senesac C, Walter GA, Vandendorne K. Use of MRI T2 histograms to quantify lower leg muscle involvement in children with DMD. Neuromuscular Plasticity Symposium, Gainesville, Florida, March 2011 (poster presentation).
 74. Israel-Stahre NB, Willcocks R, **Forbes SC**, Arpan I, De Vos S, Lott D, Senesac C, Walter GA, Vandendorne K. Reproducibility of MRI-T2 measures in leg muscles of children with Duchenne muscular dystrophy. Neuromuscular Plasticity Symposium, Gainesville, Florida, March, 2011 (poster presentation).
 75. Arpan I, **Forbes SC**, Lott D, Senesac C, Senesac E, de Vos S, Walter GA, and Vandendorne 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.
 76. Crawford RE, Donovan J Lott DJ, Senesac C, **Forbes SC**, Walter G, Vandendorne 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).
 77. Lott D, Crawford R, **Forbes SC**, Senesac C, Walter G, Vandendorne 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).
 78. Vandendorne 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).
 79. Arpan I, **Forbes SC**, Lott D, Germain S, De Vos S, Senesac C, Senesac E, Walter GA, Vandendorne 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).
80. 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).
 81. 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).
 82. 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).
 83. 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).
 84. 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. PPHP research day, Gainesville, Florida, April, 2010 (poster presentation).
 85. 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. PPHP research day, Gainesville, Florida, April, 2010 (poster presentation).
 86. Wickham S, **Forbes SC**, Vandeborne K, Sleeper M, Sweeney HL, Walter GA. Myostatin Blockers: A prospective treatment for Duchenne Muscular Dystrophy. PPHP research day, Gainesville, Florida, April, 2010 (poster presentation). Winner of the undergraduate honors poster award.
 87. Bryant ND, Vorha R, Mather S, **Forbes S**, Walter GA. Multimodal imaging of tissue damage in dystrophic muscle. Neuromuscular Plasticity Symposium, Gainesville, Florida, April, 2010 (poster presentation).
 88. Arpan I, **Forbes SC**, Lott D, Germain S, Senesac E, De Vos S, Walter GA. Vandeborne K. Muscle tissue heterogeneity in children with Duchenne muscular dystrophy. Neuromuscular Plasticity Symposium, Gainesville, Florida, April, 2010 (poster presentation).
 89. 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. Neuromuscular Plasticity Symposium, April, 2010 (poster presentation).
 90. Bryant ND, Vorha R, **Forbes S**, Walter GA. Imaging of tissue damage in dystrophic muscle. Southeastern magnetic resonance conference (SEMRC), Nashville TN, November, 2009 (oral presentation).

91. Forbes D, Culum I, Lischka A, Morgan D, Peacock S, Forbes J, **Forbes S.** (2009). Light therapy for managing symptoms of dementia: A Cochrane review. Alzheimer's Association 2009 International Conference on Alzheimer's Disease, Vienna, Austria, July, 2009 (poster presentation).
92. Slade JM, **Forbes SC**, Francis RM, Wiseman RW, Meyer RA (2009). Functional MRI of central motor drive during muscle contractions. *Proc. Intl. Soc. Mag. Reson. Med.* 17: 3715, 2009. Presented at the International Society of Magnetic Resonance Meeting (ISMRM), Honolulu, Hawaii, May, 2009 (poster presentation).
93. Stein NJ, Carlson JJ, **Forbes SC**, Meyer RA, Wiseman RW, Slade JM. A high fat meal has no direct effect on the brain BOLD response in young adults. *Proc. Intl. Soc. Mag. Reson. Med.* 16: 2514, 2008. Presented at the International Society of Magnetic Resonance Meeting (ISMRM), Toronto, Ontario, May, 2008 (poster presentation).
94. Meyer RA, Slade JM, Towse TF, Olive JL, **Forbes SC.** Phosphocreatine resynthesis during recovery after exercise with blood flow occlusion. *Med. Sci. Sports Exerc.*, 40 (5): S349, 2008. Presented at the 55th Annual Meeting of the American College of Sports Medicine, Indianapolis, Indiana, June, 2008 (poster presentation).
95. Slade JM, Paganini AT, **Forbes SC**, Towse TF, Meyer RA. Biphasic phosphocreatine recovery after plantar flexion in humans. *Med. Sci. Sports Exerc.*, 40 (5): S352. Presented at the 55th Annual Meeting of the American College of Sports Medicine, Indianapolis, Indiana, June, 2008 (poster presentation).
96. Raymer GH, **Forbes SC**, Thompson RT, Kowalchuk JM, Rice CL, Marsh GD. Effects of prior exercise on the metabolic response to incremental exercise. *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).
97. Raymer GH, **Forbes SC**, Marsh GD, Kowalchuk JM, Rice CL, Thompson RT. The effect of prior heavy exercise on progressive exercise to fatigue. Presented at the Workshop on Investigation of Human Muscle Function In Vivo, Nashville, Tennessee, October, 2005 (poster presentation).
98. Kilmer CA, **Forbes SC**, Rice CL, Thompson RT, Marsh GD. Reproducibility of metabolic and force measures during electrically induced isometric dorsiflexion exercise. *Can. J. Appl. Physiol.*, 29: S58, 2004. Presented at the 12th Annual Meeting of the Canadian Society for Exercise Physiology, Saskatoon, Saskatchewan, 2004 (poster presentation).
99. Lusina SC, **Forbes SC**, Marsh GD. Gender comparison of skeletal muscle metabolism during eccentric and concentric forearm flexion exercise. *Med. Sci. Sports Exerc.*, 36 (5): S119, 2004. Presented at the 51st Annual Meeting of the American College of Sports Medicine, Indianapolis, Indiana, 2004 (poster presentation).
100. Raymer GH, **Forbes SC**, Marsh GD, Kowalchuk JM, Thompson RT. Metabolic effects of induced alkalosis during exercise and recovery. *Can. J. Appl. Physiol.*, 27: S42, 2002. Presented at the 10th Annual Meeting of the Canadian Society for Exercise Physiology, St. John's, Newfoundland, 2002 (oral presentation).

101. Raja MK, Raymer GH, Moran G, **Forbes SC**, Bartolini M, Wilson K, Marsh GD, Thompson RT. An *In Vivo* examination of exercise-induced changes in intracellular water concentration using ^{31}P NMR and bioimpedance analysis. *Can. J. Appl. Physiol.*, 27: S41, 2002. Presented at the 10th Annual Meeting of the Canadian Society for Exercise Physiology, St.John's, Newfoundland, 2002 (oral presentation).