ROBERT D. HYLDAHL, Ph.D.

robhyldahl@byu.edu

Address: 106 Smith Fieldhouse
Department of Exercise Sciences
Brigham Young University
Provo, UT 84602
Telephone: **8**01.422.1237

EDUCATION

2011 **Ph.D.,** Department of Kinesiology, University of Massachusetts Amherst
Dissertation Title: Cellular and Molecular Changes Following Skeletal Muscle Damage: A Role for NF-kB and Muscle Resident Pericytes
Dissertation Advisor: Priscilla M. Clarkson, Ph.D.

2008 **M.S.,** Department of Kinesiology, University of Massachusetts Amherst
Thesis Title: A Novel *in vitro* Model of Muscle Atrophy
Thesis Advisor: Priscilla M. Clarkson, Ph.D.

2003 **B.S.,** Department of Exercise and Sport Science, University of Utah
Emphasis: Athletic Training

ACADEMIC, PROFESSIONAL & RESEARCH POSITIONS HELD

2018 – present **Associate Professor,** Department of Exercise Sciences, Brigham Young University

2012 – 2018 **Assistant Professor**, Department of Exercise Sciences, Brigham Young University

2011 – 2012 **Visiting Assistant Professor**, Department of Health and Exercise Science, University of New Mexico

2006 – 2011 **Graduate Research Assistant Instructor**, worked on projects ranging from mechanisms of muscle damage, to clinical trials on the effects of statin drugs on myopathy in the Lab of Dr. Priscilla Clarkson, Department of Kinesiology, University of Massachusetts Amherst

2003 – 2006 **Certified Athletic Trainer**, Registered Physical Therapists, Sandy, UT

2002 – 2003 **Laboratory Technician,** Studied zebra fish lateral line development in Lab of Dr. Tatjana Piotrowski, Department of Neurobiology and Anatomy, University of Utah

1999 – 2002 **Undergraduate Research Assistant,** Studied Fragile X syndrome in a drosophila model in the lab of Dr. Kenal Broadie, Department of Biology, University of Utah

GRANT ACTIVITY

Funded Projects: Internal

Title: Repeated Exposure to Heat Stress as a Means to Attenuate Disuse Skeletal Muscle Atrophy
Funding Agency: Brigham Young University Technology Transfer Office
Amount: $12,500
Funding Period: 1/2018 – 1/2019
Role: Principal Investigator

Title: The Role of Matricellular Proteins in Skeletal Muscle Regeneration and Stem Cell Activity in Aged Adults
Funding Agency: Brigham Young University Gerontology Program
Amount: $9,610
Funding Period: 1/2015 – 1/2016
Role: Principal Investigator

Title: Development of a Countermeasure for Sarcopenia by Targeting the Myostatin Signaling Pathway
Funding Agency: Brigham Young University Gerontology Program
Amount: $8,470
Funding Period: 1/2013 – 1/2014
Role: Principal Investigator

Title: Using Web-Based Software To Teach Peer Review and Enhance Student Writing
Funding Agency: BYU College of Life Sciences Teaching Enhancement Grant
Amount: $3,000
Funding Period: 12/2012 – 7/2013

Title: Identifying the Mechanisms of Pericyte-Derived NF-kB Dependant Effects on Satellite Cell Proliferation
Funding Agency: The University of New Mexico Research Allocations Committee
Amount: $2,500
Funding Period: 12/2011 – 7/2012
Role: Principal Investigator

Funded Projects: External

Title: Managing Muscle Autophagy through the Heat Shock Response in Patients with Heart Failure: The Role of Exercise Intensity
Funding Agency: The University of New Mexico Clinical and Translational Science Center
Amount: $25,000
Funding Period: 9/2011 – 7/2012
Role: Co-Investigator

Title: The Effect of Metallothionein Knockdown on Muscle Atrophy and Oxidative Stress
Funding Agency: The American College of Sports Medicine NASA Research Initiative
Amount: $5,000

Funding Period: 7/2009 – 7/2010
Role: Principal Investigator

Title: SENP1, a possible novel regulator of muscle atrophy
Funding Agency: The American College of Sports Medicine NASA Research Initiative
Amount: $5,000
Funding Period: 7/2007 – 7/2008
Role: Principal Investigator

Pending Grant Submissions

Title: Heat-Induced Skeletal Muscle Mitochondrial Biogenesis
Funding Agency: National Institutes of Health (NIAMS) R01
Amount Requested: $525,000 (submitted July, 2018)
Role: Principal Investigator

Title: Effect of a multi-ingredient pre-workout supplement on performance and skeletal muscle signaling in response to a bout of a varied high intensity exercise
Funding Agency: 4Life Research USA
Amount: $27,700 (submitted February, 2017)
Role: Principal Investigator

Unfunded Grant Submissions: Internal

Title: Contralateral Muscle Protection Following Contraction-Induced Injury in Rats
Funding Agency: Brigham Young University Mentored Environment Grant
Amount Requested: $20,000 (submitted October 2016)
Role: Principal Investigator

Title: The role of CD8+ T-Cells in Human Muscle Regeneration
Funding Agency: Brigham Young University Mentored Environment Grant
Amount Requested: $20,000 (submitted October 2015)
Role: Principal Investigator

Title: Inhibition of Myostatin Signaling in Dystrophic Mice Using a Novel Small Molecule
Funding Agency: Brigham Young University Mentored Environment Grant
Amount Requested: $20,000 (submitted October 2014)
Role: Principal Investigator

Title: Inhibition of Myostatin Signaling in Dystrophic Mice Using a Novel Small Molecule
Funding Agency: Brigham Young University Mentored Environment Grant
Amount Requested: $20,000 (submitted October 2014)
Role: Principal Investigator
Summary of Review: Very few comments returned

Title: Development of a countermeasure for cancer cachexia using a novel myostatin/activin antagonist
Funding Agency: Brigham Young University Technology Transfer Fund
Amount Requested: 18,835

Role: Principal Investigator
Summary of Review: No rationale given for not funding the project

Title: The Role of NF-kB Signaling in the Repair and Adaptation of Human Skeletal Muscle
Funding Agency: Brigham Young University Mentored Environment Grant
Amount Requested: $20,000 (submitted October 2014)
Role: Principal Investigator
Summary of Review: Good proposal with clear objectives and overall goals, clear mentoring plan, successful record especially with co-PI. New faculty but with some good previous mentoring experience. Relies heavily on graduate student mentoring undergrads, access to PI is not as clear. Graduate and undergrad coauthors are not distinguished in publication list.

Unfunded Grant Submissions: External

Title: Single Center, double-blinded clinical study to determine the effect of Deep Blue Polyphenol Complex on delayed onset muscle soreness and muscle function following exercise
Funding Agency: DoTERRA inc. Submitted April 2016)
Amount Requested: $30,543
Role: Principal Investigator
Summary of Review: Company decided not to invest money in research

Title: Effects of Experimental Anterior Knee Pain on Knee Articular Cartilage Morphology and composition, Lower Extremity Neuromechanics, and Blood Biomarkers
Funding Agency: National Institutes of Health (NIAMS) R15
Amount Requested: $375,000 (submitted October, 2015)
Role: Co-Investigator (Mathew Seeley PI)
Summary of Review: Impact Score: 60

Title: Effects of Experimental Anterior Knee Pain on Knee Articular Cartilage Morphology and composition, Lower Extremity Neuromechanics, and Blood Biomarkers
Funding Agency: National Institutes of Health (NIAMS) R15
Amount Requested: $375,000 (submitted October, 2014)
Role: Co-Investigator (Mathew Seeley PI)
Summary of Review: Impact Score: 28

Title: Effects of Experimental Anterior Knee Pain on Knee Articular Cartilage Morphology and composition, Lower Extremity Neuromechanics, and Blood Biomarkers
Funding Agency: National Institutes of Health (NIAMS) R15
Amount Requested: $375,000 (submitted February, 2014)
Role: Co-Investigator (Mathew Seeley PI)
Summary of Review: Scored well with positive reviews with a few issues that need to be resolved. Re-submitted October, 2014

Title: Inhibition of Myostatin Signaling in mdx mice using a novel small molecule
Funding Agency: Muscular Dystrophy Association
Amount Requested: $76,249 (submitted summer 2013)
Role: Principal Investigator

Summary of Review: Generally positive, though lacking preliminary data. We currently have more preliminary data and are considering re-submission

REFEREED PUBLICATIONS

1. Hafen PS, Sorensen JR, Preece CN, Hancock CR, **Hyldahl RD**. Deep tissue heating increases mitochondrial respiratory capacity of human skeletal muscle. *J Appl Physiol.* In Press

2. Deyhle MR, **Hyldahl RD**. The role of T lymphocytes in skeletal muscle repair from traumatic and contraction-induced injury. *Front. Physiol.* In Press

3. Sorensen JR, Fuqua JD, Dehyle MR, Parmley J, Skousen CB, Hancock C, Parcell, AC, **Hyldahl RD**. Preclinical characterization of the JAK/STAT inhibitor SGI-1252 on skeletal muscle function, morphology and satellite cell content. *Plos One.* In Press

4. Deyhle MR, Hafen P, Parmley J, Robison M, Sorenson JR, Jackson B, Hancock C, Parcell AC, **Hyldahl RD**. CXCL10 increases in human skeletal muscle following damage but is not necessary for muscle regeneration. *Physiol. Rep.* Apr 2018; 6(8).

5. Sorensen JR, Skousen CB, Holland A, Williams K, **Hyldahl RD**. Acute extracellular matrix, inflammatory and MAPK response to lengthening contractions in elderly human skeletal muscle. *Exp Geront.* Feb 2018; 106:28-38.

6. **Hyldahl RD**, Chen TC, Nosaka K. Mechanisms and mediators of the skeletal muscle repeated bout effect. *Exerc Sport Sci. Rev.* Jan 2017; 45(1): 24-33 (IF 4.451, cited 1)

7. **Hyldahl RD**, Evans A, Kwon SK, Ridge ST, Robinson E, Hopkins JT, Seeley MK. Running decreases knee intra-articular cytokine and cartilage oligomeric matrix concentrations. *Euro J Appl Physiol.* Dec 2016; (11-12): 2305-2314 (IF 2.328)

8. Deyhle MR, Sorensen JR, **Hyldahl RD.** Induction and assessment of exertional skeletal muscle damage in humans. *J Vis Exp.* Dec 2016; 118: doi: 10.3792/54859 (IF 1.113)

9. Deyhle MR, Gier AM, Evans KC, Eggett DL, Nelson WB, Parcell AC, **Hyldahl RD.** Skeletal muscle inflammation following repeated bouts of lengthening contractions in humans. *Front. Physiol.* Jan 2016; 12(6): 424 (IF 4.031, cited by 13)

10. **Hyldahl RD**, Nelson B, Xin L, Welling T, Groscost L, Hubal MJ, Chipkin S, Clarkson PM, Parcell AC. Extracellular matrix remodeling and its contribution to protective adaptation following lengthening contractions in human muscle. *FASEB,* Jul 2015; 29(7): 2894-904 (IF 5.299, Cited 28)

11. LaBarbera KE, **Hyldahl RD**, O'Fallon KS, Clarkson PM, Witkowski S. Pericyte NF-kB activation enhances endothelial cell proliferation and proangiogenic cytokine secretion in vitro. Apr 2015; 3(4) (currently no IF, cited by 10)

Contributions: data collection, conception of experiments, revised manuscript

12. Chen D, **Hyldahl RD**, Hayward RC. Creased hydrogels as active platforms for mechanical deformation of cultured cells. *Lab on a Chip.* Feb 2015; 15(4): 1160-7 (IF 5.586, cited by 8)
Contributions: collected all cell culture data, assisted in the analysis of cell culture data, advised primary authors throughout data collection, drafted and revised manuscript

13. **Hyldahl RD**, Olson T, Welling T, Groscost L, Parcell AC. Satellite cell activity is differentially affected by contraction mode in human muscle following a work matched bout of exercise. *Front. Physiol.* Dec 2014; 11(5): 485 (IF 4.031, cited by 22)

14. Xin L, **Hyldahl RD**, Chipkin SR, Clarkson PM. Post-Exercise NF-kB DNA-Binding Activity is Attenuated After a Contralateral Repeated Bout of Eccentric Exercise. *J Appl Physiol*, Jun 2014; 116(11): 1473-80 (IF 3.004, cited 17)
Contributions: data collection, data analysis, drafting and revision of manuscript

15. **Hyldahl RD**, Hubal MJ. Lengthening Our Perspective: Morphological, Cellular and Molecular Changes to Eccentric Exercise. *Muscle Nerve,* Feb 2014; 49(2): 155-70. (IF 2.713, cited 35)

16. **Hyldahl RD**, Schwartz LM, Clarkson PM. NF-kB Functions in Primary Pericyte Cells in a Cell- and Non-Cell Autonomous Manner to Affect Myotube Formation. *Muscle Nerve*, Apr 2013; 47(4): 522-31. (IF 2.713, cited 7)

17. **Hyldahl RD**, Xin L, Moeckel-Cole S, Hubal MJ, Chipkin S, Clarkson PM. Activation of Nuclear Factor-κB Following Eccentric Contractions in Humans is Localized Primarily to Skeletal Muscle Residing Pericytes. *FASEB,* Sep 2011; 25(9): 2956-66. (IF 5.299, cited 37)

18. **Hyldahl RD**, O'Fallon KS, Schwartz LM, Clarkson PM. Knockdown of metallothionein 1 and 2 does not affect atrophy or oxidant activity in a novel in vitro model. *J Appl Physiol,* Nov 2010; 109: 1515-1523. (IF 3.004, cited 5)

19. **Hyldahl RD**, Keadle J, Rouzier PA, Pearl D, Clarkson PM. Effects of Ibuprofen Topical Gel on Muscle Soreness. *Med Sci Sports Exerc,* Mar 2010; 42(3): 614-21. (IF 4.041, cited 15)

Manuscripts Currently in Peer Review

20. Magoffin RD, Parcell AC, **Hyldahl RD**, Fellingham GW, Hopkins JT, Feland JB. The effect of whole body vibration on exercise-induced muscle damage and delayed-onset muscle soreness. *J Strength Cond Res*. In Review
Contributions: conception of experiments, revised manuscript

21. Xin L, **Hyldahl RD**, Hubal MJ, Chipkin SR, Clarkson PM, Schwartz LM. Ankyrin repeat domain 1 protein is induced in response to skeletal muscle damage. *Am J Physiol Regul Integr Comp Physiol* In Review
Contributions: data collection (at BYU), statistical analysis, conception of experiments

PUBLISHED ABSTRACTS RESULTING FROM PRESENTATION AT A NATIONAL CONFERENCE

1. Deyhle MR, Evans K, Sutton C, Hampton S, Parmley J, Sorensen JR, **Hyldahl RD.** CD+ T cells infiltrate healthy skeletal muscle after exertional damage to a greater degree in women. *Med Sci Sports Exerc.* May 2018
   Conference: American College of Sports Medicine, Minneapolis, May 2018.

2. Sorensen JR, Skousen C, Holland A, Williams K, **Hyldahl RD**. Asynchronous inflammation and MAPK singaling in aged human muscle following exercise-induced damage. *Med Sci Sports Exerc.* May 2018
   Conference: American College of Sports Medicine, Minneapolis, May 2018.

3. Skousen C, Sorensen JR, Williams K, **Hyldahl RD.** Fatigue resistance to eccentric contractions in older adults. *Med Sci Sports Exerc.* May 2018
   Conference: American College of Sports Medicine, Minneapolis, May 2018.

4. Sorensen JR, Holland A, Sutton C, Parcell AC, **Hyldahl RD.** Dysregulated extracellular matrix remodeling in aged human skeletal muscle following damaging exercise. *Med Sci Sports Exerc.* May 2017
   Conference: American College of Sports Medicine, Denver, May 2017.

5. Deyhle MR, Preece C, Robison M, Parmley J, Sorensen JR, Hafen PS, **Hyldahl RD**. The chemokine CXCL10 is not necessary for normal skeletal muscle regeneration following a toxin-induced injury. *Med Sci Sports Exerc.* May 2017
   Conference: American College of Sports Medicine, Denver, May 2017.

6. Hafen PS, Hancock CR, **Hyldahl RD**. Deep tissue heating increases mitochondrial respiratory capacity of human skeletal muscle. *Med Sci Sports Exerc.* May 2017
   Conference: American College of Sports Medicine, Denver, May 2017.

7. Evans A, Ridge ST, **Hyldahl RD**, Kwon S, Hopkins JT, Robinson E, Seeley MK. The effect of running ground reaction force on serum and knee synovial fluid cartilage oligomeric matrix protein.
   Conference: Annual Meeting of the American Society of Biomechanics. Raleigh, NC, July 2016.

8. Seeley MK, Evans A, **Hyldahl RD**, Kwon S, Ridge ST, Robinson E, Hopkins JT. Decreased intra-articular inflammation of the knee and mechanical load due to running.
   Conference: Annual Meeting of the American Society of Biomechanics. Raleigh, NC, July 2016.

9. Dehyle M*, Parcell AC, **Hyldahl RD**. Intramuscular inflammatory response and muscle soreness in the repeated bout effect. *Med Sci Sports Exerc.* May 2015
   Conference: American College of Sports Medicine, San Diego, May 2015.

10. **Hyldahl RD**, Nelson B, Welling T, Groscost L, Parcell AC. Extracellular matrix remodeling following repeated bouts of eccentric contractions in human skeletal muscle. *Med Sci Sports Exerc.* May 2015.
Conference: American College of Sports Medicine, San Diego, May 2015.

11. Parcell AC, Benson B, Magoffin R, **Hyldahl RD**, Thomson D, Mack GW. Gastrocnemius and soleus muscles of FBV mice are not damaged by 30 minutes of downhill running. *Med Sci Sports Exerc.* 46(5s):638-642, May 2014.
Conference: American College of Sports Medicine, Orlando, May 2014.

12. LaBarbera K, **Hyldahl RD**, Witkowski S. Pericyte NF-kB activation enhances endothelial cell proliferation and proangiogenic cytokine secretion. *Med Sci Sports Exerc.* 46(5s):921-929, May 2014.
Conference: American College of Sports Medicine, Orlando, May 2014.

13. **Hyldahl RD,** Jackson K, Groscost L, Welling T, Parcell AC. Satellite cell response to a repeated bout of eccentric contractions in human skeletal muscle. *Med Sci Sports Exerc.* 46(5s):638-642, May 2014.
Conference: American College of Sports Medicine, Orlando, May 2014.

14. Xin L, **Hyldahl RD**, Hubal MJ, Chipkin SR, Schwartz LM, Clarkson PM. Identification of NF-κB target inflammatory genes associated with contralateral repeated bout effect. 45(5S), May 2013
Conference: American College of Sports Medicine, San Francisco, May 2013.

15. **Hyldahl RD,** Olson T, Magoffin R, Leavitt MG, Parcell AC. Effect of a work-matched bout of lengthening or shortening contractions on satellite cell proliferation in human muscle. *FASEB J,* 27: Ib815, April 2013
Conference: Experimental Biology, Boston, April 2013.

16. **Hyldahl RD**, Schwartz LM, Clarkson PM. Nuclear Factor-KappaB Activity in Human Primary Pericytes Affects Proliferation and Differentiation of Co-Cultured Skeletal Muscle Myoblasts. *Med Sci Sports Exerc.* 44:5, May 2012.
Conference: American College of Sports Medicine, San Francisco, May 2012.

17. Xin L, Ramakrishnan S, **Hyldahl RD,** Riska, KL, Chipkin S, Murray MA, Greger V, Prabhakar P, Shaver K, Clarkson PM. Effects of a Botanical Supplement on Gene Expression of Peroxisome Proliferator-Activated Receptor Proteins Following Eccentric Exercise *Med Sci Sports Exerc.* 43(5):416, May 2011.
Conference: American College of Sports Medicine, Denver, May 2011.

18. **Hyldahl RD**, Kodela J, Hubal MJ, Schwartz LM, Clarkson PM. Transcriptomic Differences Between High and Low Creatine Kinase Responders. *Med Sci Sports Exerc.* 43:5, 414, May 2011.
Conference: American College of Sports Medicine, Denver, May 2011.

19. **Hyldahl, RD,** Xin L, Hubal M, Moekel-Cole S, Chipkin S, Clarkson PM. Activation of NF-kB in Pericytes of Human Skeletal Muscle Following Eccentric Exercise-Induced Damage. *Med Sci Sports Exerc.* 42(10):96, October 2010.
Conference: Integrative Physiology of Exercise, Miami, September 2010.

20. **Hyldahl RD**, Ramakrishnan S, Xin L, Riska, KL, Chipkin S, Murray MA, Greger V, Prabhakar P, Shaver K, Clarkson PM. Two Botanical Supplements with Antioxidant and Anti-inflammatory Properties Protect Against Eccentric Exercise-Induced Strength Loss. *Med Sci Sports Exerc.* 42(5):385, May 2010.

Conference: American College of Sports Medicine, Baltimore, May 2010.

21. Xin L, Ramakrishnan S, **Hyldahl RD,** Riska, KL, Chipkin S, Murray MA, Greger V, Prabhakar P, Shaver K, Clarkson PM. The Effects of Two Botanical Supplements on Gene Expression Following Eccentric Exercise. *Med Sci Sports Exerc.* 42(5):383-384, May 2010.
Conference: American College of Sports Medicine, Baltimore, May 2010.

22. Riska KL, Ramakrishnan S, Xin L, **Hyldahl RD,** Riska, KL, Chipkin S, Murray MA, Greger V, Prabhakar P, Shaver K, Clarkson PM. Gene Expression Profiling of Skeletal Muscle After Eccentric Exercise. *Med Sci Sports Exerc.* 42(5):8, May 2010.
Conference: American College of Sports Medicine, Baltimore, May 2010.

23. **Hyldahl RD**, Sewright KA, Schwartz LM, Clarkson PM. Growth Factor Withdrawal: A Novel Approach to *in vitro* Muscle Atrophy. *Med Sci Sports Exerc.* 41(5):79, May 2009.
Conference: American College of Sports Medicine, Seattle, May 2009.

24. **Hyldahl RD**, Sewright KA, Schwartz LM, Clarkson PM. A Novel Model of Muscle Atrophy. *Med Sci Sports Exerc.* 40(5): S241-S242, May 2008.
Conference: American College of Sports Medicine, Indianapolis, May 2008.

25. **Hyldahl RD** and PM Clarkson. The Effects of CoQ_9 and CoQ_{10} Treatment on Muscle Cell Viability. *Med Sci Sports Exerc.* 39(5): S221, May 2007.
Conference: American College of Sports Medicine, New Orleans, May 2007.

SYMPOSIA AND INVITED PRESENTATIONS

"Immunological- and heat-stress mediated skeletal muscle adaptations," University of Copenhagen Center for Sports Medicine, May 2018, Copenhagen, Denmark.

"Mechanisms of the Skeletal Muscle Repeated Bout Effect," Southwest Chapter of ACSM Annual Meeting, Oct 2017, Costa Mesa, CA

"Mechanisms of the Skeletal Muscle Repeated Bout Effect," ACSM Annual Meeting, May 2017, Denver, CO

"Understanding Skeletal Muscle Regeneration: Implications for Management of Muscle Injuries," NATA Annual Meeting, Jun 2016, Baltimore, MD

‘‘Mechanisms of the Repeated Bout Effect," University of Nevada Las Vegas Faculty and Graduate Seminar Series, Feb 2016, Las Vegas, NV

"Examining muscle physiology using the experimental continuum: from hypertrophy to atrophy," Southwest Chapter of ACSM Annual Meeting, Oct 2015, Costa Mesa, CA

"Mechanisms of the Repeated Bout Effect: Role of the Extracellular Matrix," Southwest Chapter of ACSM Annual Meeting, Oct 2014, Costa Mesa, CA

"Attenuation of the Inflammatory Response Following Skeletal Muscle Injury: Constructive or Destructive," Rocky Mountain Athletic Trainers' Association Clinical Symposium, April 2014, Provo, UT

"Novel Strategies to Combat Degeneration of Skeletal Muscle Associated with Aging," BYU Gerontology Conference, March 2014, Provo, UT

"Skeletal Muscle Structure/Function – Exercise and the Satellite Cell Response," Southwest Chapter of ACSM Annual Meeting, Oct 2013, Newport Beach, CA

"Skeletal Muscle Damage – Mechanisms to Management," Rocky Mountain Athletic Trainers' Association Clinical Symposium, April 2013, Denver, CO

"Molecular Mechanisms of Exertional Rhabdomyolysis," UMass Sports Medicine/Kinesiology/Athletic Training Conference, Jan 2011, Amherst, MA

"A Primer on Methods in Genomic Research," New England Chapter ACSM Annual Meeting, Nov 2008, Providence, RI

NON-PUBLISHED SCIENTIFIC PRESENTATIONS AT LOCAL, REGIONAL AND NATIONAL MEETINGS

1. Sorensen JR, Skousen C, Holland A, Williams K, **Hyldahl RD**. Aged human skeletal muscle is characterized by an asynchronous and aberrant response to damage. Southwest Chapter of American College of Sports Medicine Meeting, Long Beach, CA, October 2017.

2. Holland A, Sorenson JR, Skousen C, **Hyldahl RD**. The Effect of a novel JAK/STAT inhibitor on Skeletal Muscle Inflammation and Insulin Sensitivity of Diet-Induced Obese Mice. Southwest Chapter of American College of Sports Medicine Meeting, Long Beach, CA, October 2017.

3. Williams KA, Sorensen JR, **Hyldahl RD**. Fatigue Resistance to eccentric contractions in older adults. Southwest Chapter of American College of Sports Medicine Meeting, Long Beach, CA, October 2017.

4. Evans A, **Hyldahl RD**, Ridge ST, Kwon S, Hopkins JT, Robinson ER, Seeley MK. Does serum COMP represent the inflammatory environment of the knee before and after exercise? Southwest Chapter of American College of Sports Medicine Meeting, Costa Mesa, CA, October 2016.

5. Twitchell A, Hafen P, Parmley J, **Hyldahl RD**. The effect of IP-10 on the differentiation of human primary myoblasts. Southwest Chapter of American College of Sports Medicine Meeting, Costa Mesa, CA, October 2016.

6. Preece C, Deyhle MD, Sorensen JR, Parmley J, Hafen P, Robison M, **Hyldahl RD.** Role of the cytokine IP-10 in skeletal muscle regeneration. Southwest Chapter of American College of Sports Medicine Meeting, Costa Mesa, CA, October 2016.

7. Groscost L, Sorensen JR, Holland A, **Hyldahl RD.** Tenascin C expression in old and young human skeletal muscle in response to damaging exercise. Southwest Chapter of American College of Sports Medicine Meeting, Costa Mesa, CA, October 2016.

8. Sorensen J, Fuqua J, Dehyle MR, Parcell AC, Groscost L, Hampton S, Bearss D, **Hyldahl RD.** Preclinical characterization of the JAK/STAT inhibitor SGI-1252 on skeletal muscle functional,

morphological and myogenic outcomes. Advances in Skeletal Muscle Biology in Health and Disease Conference, Gainsville, FL, January 2016.

9. Hafen PS, Parmley JW, **Hyldahl RD.** The effect of IP-10 on proliferation and differentiation of skeletal myoblasts. Advances in Skeletal Muscle Biology in Health and Disease Conference, Gainsville, FL, January 2016.

10. Deyhle MR, Evans KC, Sorensen J, **Hyldahl RD.** CD8+ T-cells infiltrate healthy skeletal muscle after exertional damage to a greater extent in women. Advances in Skeletal Muscle Biology in Health and Disease Conference, Gainsville, FL, January 2016.

11. Deyhle MR, Gier AM, Evans KC, Eggett DL, Nelson WB, Parcell AC, **Hyldahl RD.** Skeletal muscle inflammation following repeated bouts of lengthening contractions in humans. Southwest Chapter of American College of Sports Medicine Meeting, Costa Mesa, CA, October 2015. **Winner of student presentation competition**

12. Parmley JW, Hafen PS, **Hyldahl RD.** The effect of IP-10 on proliferation and differentiation of skeletal myoblasts. Southwest Chapter of American College of Sports Medicine Meeting, Costa Mesa, CA, October 2015.

13. Welling T, Groscost L, Parcell, AC, **Hyldahl RD**. Expression of extracellular matrix-related transcripts in human muscle following repeated bouts of eccentric exercise. Southwest Chapter of American College of Sports Medicine Meeting, Costa Mesa, CA, October 2014.

14. Sorensen J, **Hyldahl RD**, Parcell AC. MAPK Signaling In Response To Repeated Bouts Of Eccentric Exercise. Southwest Chapter of American College of Sports Medicine Meeting, Costa Mesa, CA, October 2014.

15. **Hyldahl RD**, Matekel R, Parcell AC, Bearss D. Antagonism of Myostatin/Activin Type IIB Receptor Signaling via a Novel Small Molecule. Advances in Skeletal Muscle Biology in Health and Disease Conference, Gainsville, FL, March 2014.

16. "Knockdown of metallothionein 1 and 2 does not affect atrophy or oxidant activity in a novel in vitro model," School of Public Health and Health Sciences Research Day, April 2010, Amherst, MA.

17. "Two Botanical Supplements with Antioxidant and Anti-inflammatory Properties Protect Against Eccentric Exercise-Induced Strength Loss," New England American College of Sports Medicine Annual Meeting, Providence, RI, November 2009.

18. "Growth Factor Withdrawal Produces the Morphological and Biochemical Changes Associated with Disuse Atrophy," New England American College of Sports Medicine Annual Meeting, November 2008, Providence, RI.

19. "The Effects of CoQ_9 and CoQ_{10} Treatment on Muscle Cell Viability," School of Public Health and Health Sciences Research Day, April 2007, Amherst, MA.

20. "Fragile X Syndrome (FRAXA): The Most Common Inherited Mental Retardation Disease," University of Utah Bioscience Symposium for Undergraduate Research, April 2002, Salt Lake City, UT

TEACHING

Brigham Young University

EXSC 320 – Basic Athletic Training (Fall 2012,13,14,15, 16, 17 Winter 2013,14,16, 17)
EXSC 625R – Musculoskeletal Pathophysiology (Fall 2013, Winter 2015,17, 18; graduate course)
EXSC 501 – Pathology and Pharmacology in Athletic Training (Winter 2014,15,16,17, 18 Spring 2014,15 Fall 2014,15,16, 17)
EXSC 769 – Advanced Skeletal Muscle Physiology (Winter 2018)

University of New Mexico

PEP 326 – Exercise Physiology (Fall 2011)
PEP 277 – Kinesiology (Fall 2011, Spring 2012)
PEP 289 – Tests and Measures in the Exercise Sciences (Fall 2011)
PEP471 – Exercise and Disease Prevention (Spring 2012)
PEP 528 – Neuromuscular Physiology (Spring 2012; graduate course)

UMASS Amherst

KIN 355 – Writing in Kinesiology (Spring 2008,9,10 Fall 2008,9,10)

MENTORING ACTIVITIES

Graduate Students (Advisor):

Jordan Fuqua	MS	Awarded 2015	Role: Co-Advisor, Thesis Committee Member
Michael Dehyle	PhD	Awarded 2018	Role: Primary Advisor, Dissertation Committee Chair
Paul Haffen	PhD	Awarded 2018	Role: Primary Advisor, Dissertation Committee Chair
Jacob Sorensen	PhD	2014-Present	Role: Co-Advisor, Dissertation Committee Member
Caitlin Skousen	MS	2017-Present	Role: Primary Advisor, Thesis Committee Chair

Graduate Students (Committee Member):

Micah Zuhl	PhD	Awarded 2013	Role: Dissertation Committee Member
Michael Dehyle	MS	Awarded 2014	Role: Thesis Committee Member
Brenda Benson	MS	Awarded 2014	Role: Thesis Committee Member
Ryan Magoffin	MS	Awarded 2016	Role: Thesis Committee Member
Mikayla Thatcher	PhD	Awarded 2015	Role: Dissertation Committee Member
Brady Smith	MS	Awarded 2018	Role: Thesis Committee Member
Kathleen Thiriot	MS	Awarded 2018	Role: Thesis Committee Member
Alyssa Evans	MS	Awarded 2018	Role: Thesis Committee Member
Victoria Violette	MS	2017-Present	Role: Thesis Committee Member

Undergraduate Students

***Co- or primary author of peer reviewed manuscript**
#Co- or primary author of published abstract
$Recipient of BYU undergraduate ORCA grant

Alexandra Lotto, 2007-2008
Jennifer Kodela, 2010-2011
[#*]**Ty Olson**, 2012-2013
[#]Kailee Jackson, 2013-2014
[$#*]**Logan Groscost**, 2013-2016
[#*]**Tyson Welling**, 2013-2015
[*$]**Ryan Matekel**, 2013-2015
[$#*]**Amanda Gier**, 2014-2015
[*$]**Seth Hampton**, 2014-2016
Tim Bitner, 2015-2016
[*]**Kaitlyn Evans**, 2014-2016
[*$#]**Jacob Parmley**, 2015-2016
Chistopher Sutton, 2015-2016
Gavin Davis, 2015-present
[$]**Corray Preece**, 2015-2017
[*#]**Marissa Robison**, 2015-2017
[*#]Kyle Williams 2016-present
[*#]Blake Jackson 2016-present
[#]**Amy Twitchell**, 2016-2018
[$#*]**Alex Holland**, 2015-2017
Kylie Jespersson, 2016-2017
[#*]Caitlin Skousen, 2016
[$]Kaitlyn Abbott, 2017-present
Nani Kaluhiokalani, 2018-present

EDITORIAL POSITIONS

Assistant to the Editor in Chief, Exercise Sciences and Sport Reviews (ESSR), 2009-2011

Ad Hoc Reviewer:
The Journal of Physiology
American Journal of Physiology: Regulatory, Integrative and Comparative Physiology
American Journal of Physiology: Endocrinology and Metabolism
PlosOne Journal
Medicine and Science in Sports and Exercise
Journal of Athletic Training
International Journal of Sports Medicine
Journal of Applied Physiology
Neuromuscular disorders
Applied Physiology, Nutrition, and Metabolism
Exercise and Sport Science Reviews
American Journal Sports Medicine

Ad Hoc Grant Reviewer:
Research Councils UK (Biotechnology and Biological Sciences Research)
Canadian Institutes of Health Research (CIHR)

AWARDS & FELLOWSHIPS

-University of Massachusetts Amherst Graduate Student Fellowship Award (2010)
Amount: $13,000

-UMass Space Grant Fellowship for a project entitled “The Development of a Novel *in vitro* Model of Muscle Atrophy” (2008)
Amount: $1500

-Mark Connelly Memorial Scholarship, New England Chapter of the American College of Sports Medicine (2007)
Amount: $750

PROFESSIONAL MEMBERSHIPS

2002 – present The National Athletic Trainers Association
2010 – present The American Physiological Society
2006 – present The American College of Sports Medicine

PROFESSIONAL CERTIFICATIONS

Certified Athletic Trainer (since 2003)

LANGUAGES

Fluent English and Spanish

MEDIA

Heat induced mitochondrial biogenesis research (BYU Radio)
Small Molecule TGG-b inhibition (BYU Radio)
Influence of 30 minutes of running on joint inflammation:

The New York Times	Runner’s World
Fox News (National)	Health Magazine
U.S. News & World Report	BYU Home Page

T-Cells in skeletal muscle repair:

Science daily	BYU Home Page