ADVANCES IN SKELETAL MUSCLE BIOLOGY

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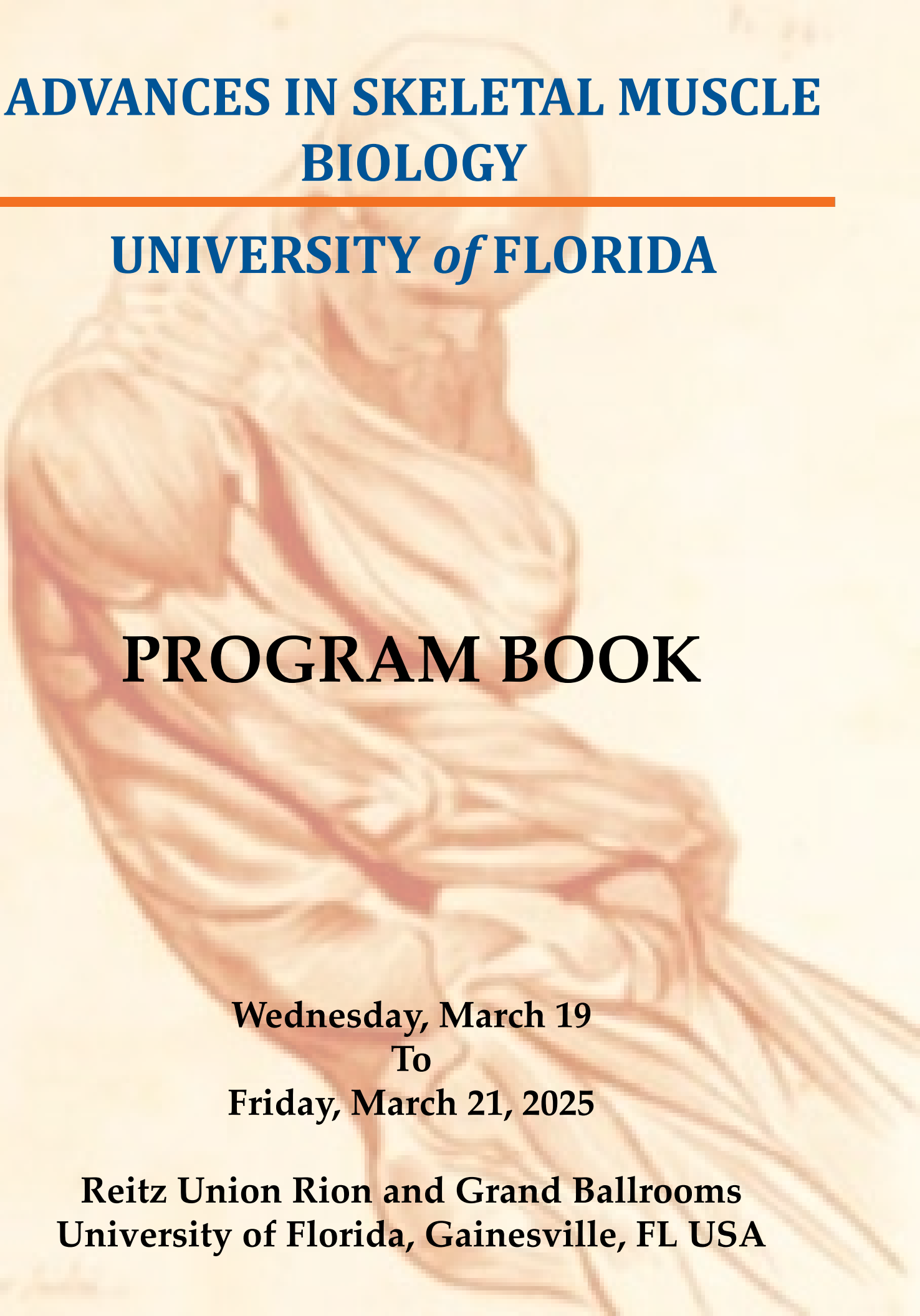

PROGRAM BOOK

Wednesday, March 19
To
Friday, March 21, 2025

Reitz Union Rion and Grand Ballrooms
University of Florida, Gainesville, FL USA

ADVANCES IN SKELETAL MUSCLE BIOLOGY

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Advances In Skeletal Muscle Biology Conference

WEDNESDAY, March 19, 2025

Reitz Union, University of Florida

Time

12:30-1:30pm — **Grant Writing Workshops,** ***Ground Floor Reitz Union (Rooms Noted Below)***

Sponsored by the Wellstone Center Training/Education Core & the University of Florida

Room G330 — R Grants

12:30-12:55 — **Christopher Fry-** Key aspects for a successful R grant – a reviewer's perspective
University of Kentucky

12:55-1:30 — **Panel Question & Answer Session**
Christopher Fry, NIH MRS study section member
University of Kentucky

Anna Thalacker-Mercer, NIH MTE, ASG and SEP Reviewer
University of Alabama at Birmingham

Zhen Yan, Former NIH SMEP study section member and CMAD study section member
Center for Exercise Medicine Research at Fralin Biomedical Research Institute at Virginia Tech Carilion

Room G320 — K Grants

12:30-12:55 — **Mattia Quattrocelli-** Key aspects for a successful K grant – a reviewer's perspective
Cincinnati Children's/University of Cincinnati

12:55-1:30 — **Panel Question & Answer Session**
Mattia Quattrocelli, K Grant Recipient 2019
Cincinnati Children's/University of Cincinnati

Clara Peek, K Grant Recipient 2015
Northwestern University

Calvin Cole, K Grant Recipient 2021
University of Rochester Medical Center

Room G310 — F Grants

12:30-12:55 — **Vihang Narkar-** Key aspects for a successful F grant – a reviewer's perspective
UTHealth McGovern Medical School at Houston

12:55-1:30 — **Panel Question & Answer Session**
Vihang Narkar, NIH SEP Fellowships: Musculoskeletal, Rehabilitation and Skin Sciences
UTHealth McGovern Medical School at Houston

Orlando Laitano, NIH SEP Fellowships: Musculoskeletal, Rehabilitation and Skin Sciences
University of Florida

Victoria Palzkill, F Grant Recipient 2024
University of Florida

1:45pm	Welcome and Opening Remarks, *Rion Ballroom (Third Floor Reitz Union)*	
2:00pm	**Session I**	**Muscle Atrophy and Associated Pathologies**
	Chairs	*Sue Bodine and Josh Huot*
2:00-2:25	Denis Guttridge Medical University of South Carolina	Inflammation in the muscle microenvironment and its role in cancer cachexia
2:25-2:50	Roberta Sartori University of Padova	Dissecting gene networks and cellular landscape in cancer cachexia
2:50-3:15	Paul Gregorevic The University of Melbourne	Examining cachexia and metastasis from a muscle perspective
3:15-3:25	Aneesha Dasgupta Indiana University School of Medicine	Effect of muscle atrophy on pancreatic cancer biology and progression
5 min talk with no questions		
3:25-3:30	Bradley Gordon Florida State University	Molecular clock suppressors promote myotube atrophy in vitro with direct relevance to limb muscle atrophy in response to androgen deprivation
3:30-3:35	Jeremy Ducharme University of Florida	KPC pancreatic cancer disrupts the skeletal muscle circadian transcriptome in a FoxP1-dependent manner
3:35-3:40	Paola Ortiz Gonzalez Indiana University School of Medicine	Neuromuscular Dysfunction Precedes Muscle Atrophy and Bone Loss in Colorectal Cancer
3:40-3:45	Nicholas Thomas University of Kentucky	HDAC4 DNA binding disrupts muscle plasticity following joint injury and is rescued with muscle-specific Hdac4 deletion
3:45-3:50	Alexandra Ware University of Chicago	BNIP3-dependent muscle atrophy in cancer cachexia promotes PDAC progression
3:50-4:20	**Coffee Break, Rion Foyers** Coffee provided	
Holmes-Huxley Memorial Keynote Lecture		
4:20-5:20	Malcolm Irving, PhD, FRS King's College London	How muscle works: a cell-downwards perspective
5:20-7:30pm	**Reception and Poster Viewing,** ***Grand Ballroom (Second Floor Reitz Union)*** Beverages and hors d'oeuvres provided	

THURSDAY, March 20, 2025

Rion Ballroom, Reitz Union, University of Florida

Time		
8:00am	Coffee, Tea, and Pastries, Grand Ballroom	
8:30am	Session II	Muscle Growth and Regeneration
	Chairs	*Marni Boppart and Jason Doles*
8:30-8:55	Troy Hornberger University of Wisconsin - Madison	Identifying the Mechanisms Through Which Exercise Regulates Muscle Mass
8:55-9:20	Clara Peek Northwestern University	Clock-oxygen signaling in the epigenetic regulation of muscle regeneration
9:20-9:45	Shihuan Kuang Duke University	Regulation of muscle growth and regeneration by mitochondrial FAM210A
9:45-9:55	Craig Goodman University of Melbourne	The Ubiquitinomics of Skeletal Muscle Hypertrophy
9:55-10:05	Dada Pisconti Stony Brook University	Neutrophils in muscle regeneration and dystrophy: a double-edged sword
5 min talk with no questions		
10:05-10:10	Cristhian Montenegro University of California San Francisco	The role of fibroadipogenic progenitor cell mitochondrial transfer in skeletal muscle following ischemia-reperfusion injury
10:10-10:15	Victoria Palzkill University of Florida	Suppression of Intramuscular Adipose Tissue Improves Limb Outcomes in Mice with Hindlimb Ischemia
10:15-10:20	Angad Yadav University of Alabama at Birmingham	Glutamine deficiency increases nuclear localization of mitochondrial-TCA-cycle enzymes, restricting myogenesis
10:20-11:00am	Coffee Break, Grand Ballroom Coffee, tea, and light snacks provided	
11:00am	Session III	Exercise and Systems Biology
	Chairs	*Rita Brookheart and Karyn Esser*
11:00-11:25	Rafael Deminice State University of Londrina	Cancer-associated Sarcopenia: Mechanisms Explored Through a Translational Approach
11:25-11:50	Kim Huffman Duke University	Updates in Rheumatoid Arthritis Skeletal Muscle

11:50-12:15	Vihang Narkar UTHealth McGovern Medical School at Houston	Estrogen-Related Receptors In Exercise & Muscle Disease
12:15-12:25	Julia Starck Karolinska Institute	Endurance Exercise Elevates Plasma Mature Brain-Derived Neurotrophic Factor in Youth and Adults, with Enhanced Effects in Adulthood
12:25-12:35	Doug Swank Rensselaer Polytechnic Institute	Stretch activation combats force loss from fatigue in fast-contracting mouse skeletal muscle fibers

5 min talk with no questions

12:35-12:40	Rebecca Mammel Virginia Tech	NOX4 Drives Exercise-Induced Mitophagy
12:40-12:45	Xuansong Mao Virginia Tech	AMPKα2(Thr172) activation is essential for exercise-induced mitochondrial adaptations in skeletal muscle but not for improved exercise capacity
12:45-12:50	Alexander Fliflet University of Illinois at Urbana-Champaign	Development of a Human Extracellular Vesicle Therapy to Recover Skeletal Muscle Following Disuse

12:50-1:08 Trainee Data Blitz Session I

Pre- and post-doctoral trainee data blitz (2 min presentations with no questions)

Chairs *Christopher Perry and Irena Rebalka*

37. **Brooke Morris**, York University
    Examining the relationship between body composition and muscle function following combined anti-obesity pharmacotherapy and nutritional intervention: A proposal

49. **Imtiaz Masfique Dowllah**, University of Florida
    ABCB10 Mediates Exercise-Induced Protection Against Doxorubicin-Induced Respiratory Muscle Dysfunction

83. **Zachary Fennel**, University of Utah
    Macrophage Metabolic Rewiring Alters Raman-Based Molecular Signatures and Functional Recovery Following Disuse Atrophy in Aged Mice

151. **Zachary Sechrist**, University of Rochester Medical Center
    AAV induced overexpression of IGFBP-3 is sufficient and necessary to promote skeletal muscle wasting via TGF-β dependent signaling in mice

153. **Emily Shorter**, Karolinska Institutet
    Functional, molecular, and histological characterization of skeletal muscle in a murine model of peripheral artery disease

183. **Yangyi Luo**, University of Florida
Muscle resident mesenchymal stem cells are required for muscle mass maintenance but not neuromuscular junction integrity

193. **Alexandra Steele**, McMaster University
Isolation of a persistently quiescent muscle satellite cell population

1:08-1:45	**Lunch** - Grand Ballroom *Beverages and sandwiches provided*	
1:45-3:15	**Poster Session I** - Grand Ballroom	
3:15pm	**Session IV** *Chairs*	**Aging of Skeletal Muscle** *Orlando Laitano and Benjamin Miller*
3:15-3:40	Zheng (Jake) Chen UT Health Science Center at Houston	Regulatory role of RORs at the interface of circadian rhythms and aging
3:40-4:05	Micah Drummond University of Utah	Immunometabolism and the regrowth of aging muscle
4:05-4:30	Bret Goodpaster AdventHealth	The molecular responses of skeletal muscle to acute endurance and resistance exercise: Initial findings from the Molecular Transducers of Physical Activity Consortium (MoTrPAC)
4:30-4:40	Severine Lamon Deakin University	The transcriptomic signature of age and sex is not conserved in human primary myocytes
4:40-4:50	Ross Wohlgemuth University of Kentucky	Targeting the extracellular matrix to support aged muscle hypertrophy
<u>5 min talk with no questions</u>		
4:50-4:55	Ted Graber East Carolina University	Effect of High Intensity Interval Training in Middle-Aged Male C57BL/6J
4:55-5:00	Jordan Fuqua Oklahoma Medical Research Foundation	mTORC1 inhibition to counteract proteostatic and mitochondrial dysfunction in aged skeletal muscle following disuse
5:00-5:05	Mia Kawaida University of Florida	Skeletal muscle PGC-1α alleviates age-related declines in physical function by modulating L-kynurenine metabolism

5:05-5:20 Trainee Data Blitz Session II

Pre- and post-doctoral trainee data blitz (2 min presentations with no questions)

Chairs *Esther Dupont-Versteegden and Allison Owen*

2. **Niloufar Amiri**, Virginia Tech
   Exercise-induced mitophagy in skeletal muscle is impaired with age and associated with loss of mitoAMPK

8. **Ryan Dannemiller**, University of Alabama at Birmingham
   The impact of serine and glycine availability on skeletal muscle cell composition following injury in aged mice

34. **Baptiste Jude**, Karolinska Institutet
   Exploring a Microvascular Impact on Muscle Metabolic Dysfunction in Chronic Inflammation

82. **Savannah Epstein**, Indiana University School of Medicine
   Investigating the role of Krüppel-Like Factor 10 (KLF10) in Pancreatic Ductal Adenocarcinoma (PDAC) associated cachexia

100. **Max Michel**, Auburn University
   The Effects of Leg Immobilization and Subsequent Resistance Training on Skeletal Muscle Adaptation in Trained vs. Untrained Adults

6:00-6:40 Trainee Career Networking Event (rsvp required)

6:45pm Dinner at the Swamp Restaurant; (please wear your name tag and lanyard)

The speakers will be dining at the Swamp Restaurant and we encourage all attendees to dine there also, at your own expense, so that informal interactions can continue.

FRIDAY, March 21, 2025

Rion Ballroom, Reitz Union, University of Florida

Time		
8:30am	Breakfast, Grand Ballroom *(poster presenters encouraged to eat prior to poster session)*	
9:00-10:30am	**Poster Session II -** Grand Ballroom	Breakfast Provided
10:30am	**Session V**	**Bioenergetics and Metabolism**
	Chairs	*Sarah White-Springer and Zhen Yan*
10:30-10:55	Paul Titchenell University of Pennsylvania	Enhancing Muscle Mass and Function to Improve Quality of Weight Loss
10:55-11:20	Sarah Greising University of Minnesota	The muscle remaining after injury, how to target metabolism

11:20-11:45	Jessica Ellis East Carolina University	How a muscle survives without fatty acid oxidation
11:45-11:55	Duarte Ferreira Karolinska Institutet	Overexpression of non-cysteine-rich domains of Imcd1 in skeletal muscle reveals enhanced mitochondrial function and glucose handling
11:55-12:05	Mattia Quattrocelli Cincinnati Children's/ University of Cincinnati	The human variant rs6190 unveils a blueprint to reconvert the glucocorticoid receptor into a muscle insulin sensitizer

5 min talk with no questions

12:05-12:10	David Lee Duke University	Metabolism-guided Isolation of Muscle Stem Cells to Improve Transplantation Efficacy
12:10-12:15	Jensen Goh University of Kentucky	Satellite cell mitochondria are transferred to muscle fibers in response to a hypertrophic stimulus
12:15-12:20	Katie Whytock AdventHealth	A full-length single nuclei transcriptomic atlas of human skeletal muscle insulin resistance

12:20-12:30 **Communications Award Presentation**

12:30-1:30 **Lunch -** Grand Ballroom

Beverages and sandwiches provided

Please remove all posters from boards by the end of lunch

1:30pm	**Session VI**	**Muscle Diseases and Therapeutics**
	Chairs	*David Hammers and Justin Hardee*
1:30-1:55	Noah Weisleder University of Kentucky	Targeting sarcolemmal membrane repair as a therapy for muscular dystrophies
1:55-2:20	Pietro Spitali Leiden University Medical Center	Spatial Transcriptomics Analysis of Becker and Duchenne Muscular Dystrophy to Uncover Histopathological Changes in Dystrophinopathies
2:20-2:45	George Rodney Baylor College of Medicine	Regulation of Sarcoplasmic Reticulum Calcium Leak in Skeletal Muscle
2:45-2:55	Heather Montie Philadelphia College of Osteopathic Medicine	Investigating the role of CD38 in spinal and bulbar muscular atrophy
2:55-3:05	Ashling Holland PepGen	Nonclinical Data for PGN-EDODM1 Demonstrated Mechanistic and Meaningful Activity for the Potential Treatment of DM1

5 min talk with no questions

3:05-3:10	Mackenzie Davenport University of Florida	Differential pathology and susceptibility to MBNL loss across mouse muscles in a myotonic dystrophy model
3:10-3:15	Muthukumar Karuppasamy University of Alabama at Birmingham	Drug repurposing evaluation of lead autophagic antagonists in a novel XMEA mouse model
3:15-3:20	Vinicius Mariani Duke University School of Medicine	Orchestrated sarcomeric protein regulation in donor-derived skeletal muscle microphysiological system

3:20pm **Presentation of Poster Awards**

3:30pm **Farewell**

Administrative Organizer:
Christa Stout, University of Florida

Administrative Assistant:
Amanda Abdala, University of Florida

Scientific Organizers:
Karyn Esser, University of Florida
Andrew Judge, University of Florida
Orlando Laitano, University of Florida
Ashley Smuder, University of Florida
David Hammers, University of Florida
Sarah Judge, University of Florida
Terence Ryan, University of Florida
H. Lee Sweeney, University of Florida

Thank you for attending, we hope to see you again for the next Advances in Skeletal Muscle Biology Conference!

ABSTRACTS/ POSTERS

Abstracts are organized by session topic then alphabetically by the **submitting author's last name.** Abstract numbers below are also the poster numbers where they will be displayed in the Grand Ballroom.

Aging of Skeletal Muscle

1. **Exercise prevents early aging-induced impairments in relaxation and MERCs in skeletal muscle**
   Allen, Ryan; Kronemberger, Ana; Shi, Qian; Pope, Marshall; Cuadra-Munoz, Elizabeth; Son, Wangkuk; Song, Long-Sheng; Anderson, Ethan; Pereira, Renata; Lira, Vitor

2. **Exercise-induced mitophagy in skeletal muscle is impaired with age and associated with loss of mitoAMPK**
   Amiri, Niloufar; Willoughby, Orion; Brisendine, Matt; Drake, Joshua C.

3. **Aging Induces a Robust Upregulation of the Cyclooxygenase Pathway and Cellular Senescence During Recovery from Disuse Atrophy**
   Bourrant, Paul-Emile.; Yee, Elena M.; Fennel, Zachary J.; Ferrara, Patrick J.; Castro, Robert J.; de Hart, Naomi N.M.M.P.; Petrocelli, Jonathan J.; Fry, Christopher S.; Drummond, Micah J.

4. **Physiological changes in Aging Male and Female Mice with Chronic Consumption of Alcohol**
   Bridges, Blake; Tangen, Avery; Steiner, Jennifer

5. **Administration of endogenous and synthetic exerkines increases mitochondrial oxygen consumption in C2C12 myoblasts.**
   Bubak, Matthew P.; Gimla, Mariola; Douglas, Zion; Miller, Benjamin F

6. **The use of 3D engineered muscle tissue models to test age effects on muscle force and mitochondrial function in vitro**
   Campbell, Matthew D.; Erker, Jayma; Paulos, Christian; Mack, David L.; Marcinek, David J.

7. **Mapping the role of sex hormones in female skeletal muscle morphology, function, and gene expression across the ageing continuum**
   Critchlow, Annabel; Gatto, Briana; Williams, Ross; Engman, Viktor; van Belleghem, Karel; Garnham, Andrew; Hiam, Danielle; Lamon, Séverine

8. **The impact of serine and glycine availiabilty on skeletal muscle cell composition following injury in aged mice**
   Dannemiller, Ryan; Rorrer, Shelby; Ma, Wenxia; Tsoneva, Daria; Lavin, Kaleen; Najt, Charles; Alexander, Matthew; Thalacker-Mercer, Anna

9. **Characterization of AMPK Activation by MK-8722 in Sarcopenic Skeletal Muscle**
   Dickerson, P. Conley; Woolsey, Walker A.; Summers, Abigail E.; Kimball, Lauren; Thomson, David M.

10. **mTORC1 inhibition to counteract proteostatic and mitochondrial dysfunction in aged skeletal muscle following disuse**
    Fuqua, Jordan D.; Taylor, Michael E.; Olszewski, Szczepan S.; Smith, Loryn; Raymond-Pope, Christiana; O'Reilly, Colleen; Bubak, Matthew P.; Brecheen, Parker L.; Borowik, Agnieszka; Peelor, Frederick F. III; Miller, Benjamin F.

11. **Effect of High Intensity Interval Training in Middle-Aged Male C57BL/6J**
    Stephenson, Justin C**.;** Tran, Tuan; Dickerson, Ashby; Tripp, Lucas; **Graber, Ted G.**

12. **Skeletal muscle PGC-1α alleviates age-related declines in physical function by modulating L-kynurenine metabolism**
    Kawaida, Mia Y.; Tice, Abigail L.; Alvarez, Samuel; Izaguirre, Benjamin; Lackey, Jacob A.; Wei-LaPierre, Lan; Hepple, Russell T.; Ryan, Terence E.

13. **Characterizing sarcopenia in a preclinical mouse model: age-related changes in muscle mass, fiber diameter, and gene expression**
    Langer, Henning Tim; Lempp, Charlotte; Holdenried-Krafft, Simon; Santhanam, Rakesh; Lam, Daniel; Zurkovic, Jelena; **Klepac, Katarina**

14. **The transcriptomic signature of age and sex is not conserved in human primary myocytes**
    Lamon, Severine; Soria, Megan; Williams, Ross; Critchlow, Annabel; Garnham, Andrew; Varshney, Akriti; Beillharz, Traude; Hiam, Danielle; Ziemann, Mark

15. **Effects of Resistance Training on Redox Markers and Targeted Proteomic Changes in Middle-Aged Adults**
    Lewis, Dustyn T.; Tiede, Dakota R.; Bittencourt, Diego; Michel, J. Max; Mattingly, Madison L.; Anglin, Derick A.; Ruple, Bradley A.; Roberts, Michael D.; Kavazis, Andreas N.

16. **Impact of physical activity on physical function, mitochondrial energetics, ROS production, and Ca2+ handling across the adult lifespan in men**
    Marcangeli, Vincent; Cefis, Marina; Hammad, Rami; Granet, Jordan; Gaudreau, Pierrette; Robitaille, Richard; Bélanger, Marc; Aubertin-Leheudre, Mylène; Morais, José A; Gouspillou, Gilles

17. **Effects of aging and mechanical ventilation on diaphragm contractile function, collagen proteostasis, and mitochondrial bioenergetics**
    Mesquita, Paulo H.C.; Halle, Jessica L.; Raymond-Pope, Christiana, J.; Stock, Amanda J.; Zehrung, Hayden; Bubak, Matthew P.; O'Reilly, Colleen L.; Kwak, Seong Eun; Smith, Loryn; Peelor III, Frederick F.; Brown, Jacob L.; Miller, Benjamin F.

18. **Augmented Muscle Mass Blunts Aging-Induced Cerebrovascular Oxidant Stress and Inflammation with Corresponding Expression of a Novel Myokine**
    Nunan, Emily; McMahon, Trinity; Butler, Landon; Main, Amber; Butcher, Joshua T.

19. **Are the beneficial effects of Metformin on healthspan context specific?**
    O'Reilly, Colleen L.; Bubak, Matthew P.; Zehrung, Hayden P.; Raymond-Pope, Christiana J.; Tuck, Joseph Q.; Murphy, Ashley M.; Kesler, Nicholas J.; Koch, Lauren G.; Miller, Benjamin F.

20. **Tau protein drives microtubule changes in aging skeletal muscle**
    Pinto, Kaylie; Ursitti, Jeanine; Shi, Guoli; Ward, Chris

21. **Impact of disuse, reloading, and rapamycin on the extracellular matrix of aged tendon**
    Raymond-Pope, Christiana; Fuqua, Jordan; Taylor, Michael; Kwak, Seong Eun; Smith, Loryn; Tuck, Joseph; Miller, Benjamin

22. **Do aging-related post-transcriptional myosin modifications contribute to sarcopenia?**
    Brown, Alon T.; Bernstein, Sanford I.; **Swank, Douglas M.**

23. **A PRELIMINARY ASSESSMENT OF PHYSICAL FUNCTION AND TRANSCIPTOME DYNAMICS IN AGED MICE WITH CONSTITUTIVE ACTIVION OF THE ARYL HYDROCARBON RECEPTORS IN SKELETAL MUSCLE**
Wimberly, Keon; Lackey, Jacob L; Tice, Abigail; Yang, Qingping; Luo, Xiaoping; LaPierre, Lan; Hepple, Russell T; Ryan, Terence E

24. **Targeting the extracellular matrix to support aged muscle hypertrophy**
Wohlgemuth, Ross P.; Keeble, Alexander R.; Owen, Allison M.; Thomas, Nicholas T.; Murach, Kevin A.; Fry, Christopher S.

Bioenergetics and Metabolism

25. **The transcriptional responses of metabolic regulatory genes in response to low androgens differ across limb muscles exhibiting high and low magnitudes of atrophy**
Ayers-Creech, Wayne A.; Laskin, Grant R.; Steiner, Jennifer L.; Gordon, Bradley S.

26. **The HOMET1D Trial – Skeletal muscle health changes in response to exercise training and disuse in Type 1 Diabetes**
Brahmbhatt, Aditya; Bulyovsky, Kayla, Garribotti, Maddison; Morris, Brooke; Rana, Ihtisham; Khumbare, Dinesh; Rebalka, Irena; Perry, Christopher; Hawke, Thomas

27. **Disruption in Metabolic Flexibility and Sex-Specific Responses following Volumetric Muscle Loss**
Bruzina, Angela S.; Crum, Braydon A.; Call, Jarrod A.; Greising, Sarah M.

28. **Magnetic Resonance Markers of Rotator Cuff Muscle Microvascular Function and Energetics Following Rotator Cuff Tears**
Cooper, Kinyata J.; Forbes, Sean; Walters, Glenn; Banks, Scott; Jackson, Virginia; Farmer, Kevin; Pozzi, Federico

29. **Inflammation, insulin resistance, and capillary rarefication: A new pathway to type 2 diabetes in rheumatoid arthritis**
Jude, B; Porra, U; Lanner, JT; **Ferreira, DMS**

30. **Overexpression of non-cysteine-rich domains of lmcd1 in skeletal muscle reveals enhanced mitochondrial function and glucose handling**
Dumont, K; Jannig, PR; Cheng, AJ; Agudelo, LZ; Porsmyr-Palmertz, M; Correia, JC; Cervenka, I; Martínez-Redondo, V; Pettersson-Klein, AT; Lanner, JT; Ruas, JL; **Ferreira, DMS**

31. **Satellite cell mitochondria are transferred to muscle fibers in response to a hypertrophic stimulus**
Goh, Jensen; Williams, Julia; Joshi, Jai K.; Scott, Logan N.; Ogle, Sarah E.; Thomas, Nicholas T.; Keeble, Alexander R.; Fry, Christopher S.; Ismaeel, Ahmed; McCarthy, John J.

32. **Estradiol mediates mitochondrial ROS and antioxidant buffering following volumetric muscle loss injury**
Heo, Junwon; Miller, David; Greising, Sarah; Call, Jarrod

33. **Titin's P-zone segment plays roles in thick filament organization, muscle function, and metabolism**
Hoover, Catherine; Kolb, Justin; Tonino, Paola; van der Pijl, Robbert; Granzier, Henk

34. **Exploring a Microvascular Impact on Muscle Metabolic Dysfunction in Chronic Inflammation**
Jude, Baptiste; Tagadirt, Léa; Porra, Ulysse; Ferreira, Duarte; Santos Alves, Estela; Mader, Theresa; Rizo-Roca, David; Chibalin, Alexander V.; Ducommun, Serge; Jollet, Maxence; Zierath, Juleen R.; von Walden, Ferdinand; Krook, Anna; Ruas, Jorge L.; Lanner, Johanna T.

35. **Metabolism-guided Isolation of Muscle Stem Cells to Improve Transplantation Efficacy**
Lee, DE; Vann, CG; Mckay, LK; Newgard, CB; Bain, JR; White, JP

36. **Mitochondria-localized AMPK May Dictate Functional Capacity of the Total AMPK Pool in Skeletal Muscle**
Montalvo, Ryan N; Many, Gina; Li, Xiaolu; Sagendorf, Tyler; Yu, Jane; Shen, Wenqing; Guan, Yuntian; Mao, Xuansong; Zhang, Mei; Qian, Wei-Jun; Yan, Zhen

37. **Examining the relationship between body composition and muscle function following combined anti-obesity pharmacotherapy and nutritional intervention: A proposal**
Morris, Brooke A.; Khajehzadehshoushtar, Shahrzad; Rana, Ihtisham A.; Brahmbhatt, Aditya N.; Garibotti, Madison C.; Perry, Christopher G.R.

38. **Mitochondrial oxidative stress alters adaptive stress response signaling to muscle contraction**
Ostrom, Ethan; Mattson-Hughes, Aurora; MacDonald, Jim; Bammler, Theo; Hagy, Bo; Humphries, Kenneth; Van-Remmen, Holly; Day, Nicholas; Gaffrey, Matthew; Qian, Wei-Jun; Marcinek, David

39. **The human variant rs6190 unveils a blueprint to reconvert the glucocorticoid receptor into a muscle insulin sensitizer**
Prabakaran, Ashok Daniel; Durumutla, Hima Bindu; Akinborewa, Olukunle; Latimer, Hannah; McFarland, Kevin; Piczer, Kevin; **Quattrocelli, Mattia**

40. **The Role of Protein Succinylation in Myogenesis**
Schmitt, Susan; Blum, Jamie; Yadav, Angad; Metallo, Christian; Thalacker-Mercer, Anna

41. **A full-length single nuclei transcriptomic atlas of human skeletal muscle insulin resistance.**
Whytock, Katie L; Goodpaster, BG; Sparks, LM

42. **Comparison of respiratory capacities of permeabilized muscle fibers and isolated mitochondria in exercising horses**
Williams, Brooke; Wesolowski, Lauren; DiSilvestro, Adrianna; Barshick, Madison; Mogge, Keely; Jolley, Emily; Kaniyamattam, Karun; Logan, Alyssa; Johnson, Sally; White-Springer, Sarah

43. **Time-dependent Ulk1(S555) regulation of skeletal muscle metabolism in response to energetic stress**
Willoughby, O., Nichenko, A., Brisendine, M., Amiri, N., Specht, K., McMillan, R., Zaitsev, A., Burrows, S., Najt, C., Craige, S., Warren, J., Drake, J.

Exercise and Systems Biology

44. **Impact of EAA+BFR on Myonuclear Accretion & Muscle Memory**
Augienello, Kaitlyn; Megowan, Helia G.; Mancuso, Gabriel; Gaash, Nitai; Dreyer, Makayla; Luu, Madeline; Fries, Adam; Dreyer, Hans C.

45. **Partial Drp1 Ablation in Skeletal Muscle Attenuates Exercise-Induced Mitophagy Activation**
Berger, Nicolas; Olatunji, Adeola; He, Catherine; Manafi, Mahdiyeh; Galvez, Mark; Patel, Diti; Carey, Elizabeth; Rosen, H. Grace; Linden, Melissa; Zou, Kai

46. **Exercise-induced Elevation of Fibroblast growth factor-1 Observed in MoTrPAC Data is Necessary for the Improved Glucose Tolerance in Mice**
    Bhonsle, Hemangi S.; Zhang, Mei; Wang, Yuqi; Burgardt, Robb; Yan, Zhen

47. **Detecting circadian clock function in cultured human primary muscle**
    Bohmke, Natalie J; Zhang, Xiping; Esser, Karyn

48. **Ladder climb resistance training promotes increased strength, hypertrophy, and changes in body composition regardless of age and sex in rats.**
    De Sousa, Luis G.; Baehr, Leslie M.; Cicha, Michael; Kramer, Kyle.; Lira, Ana; Bodine, Sue C.

49. **ABCB10 Mediates Exercise-Induced Protection Against Doxorubicin-Induced Respiratory Muscle Dysfunction**
    Dowllah, Imtiaz; Nguyen, Branden; Babuschak, Jacob; Baumfalk, Dryden; Smuder, Ashley

50. **Effects of Oxidation on Muscle Tissue-Level Passive Mechanics**
    Ortiz-Delatorre, Julissa; **Gulati, Rishi;** Ricci, Austin; Callahan, Damien

51. **Aerobic exercise improves cardiovascular health in a mouse model of DMD and is well tolerated in micro-dystrophin treated animals**
    Hart, Cora; Lee, Matt; Hammers, David; Sweeney, Lee

52. **Ribosomal protein L3-like (RPL3L) is not required for endurance capacity and adaptation in mice.**
    Julien, Maxime; Jude, Baptiste; Cui, Minying; Edman, Sebastian; Lanner, Johanna; Wen, Yuan; von Walden, Ferdinand

53. **Otud1 in Exercise-Induced Skeletal Muscle Metabolic Adaptations**
    Krishnan, Velu; Wang, Yuqi; Pitzer, Christopher R.; Yan, Zhen

54. **NOX4 Drives Exercise-Induced Mitophagy**
    Mammel Rebecca; Specht, Kalyn; Nichenko, Anna; Addington, Adele; Bond, Jacob; Drake, Joshua; Craige, Siobhan

55. **AMPKa2(Thr172) activation is essential for exercise-induced mitochondrial adaptations in skeletal muscle but not for improved exercise capacity**
    Mao, Xuansong; Montalvo, Ryan; Shen, Grace; Zhang, Mei; Yu, Qing; Yan, Zhen

56. **Temporal changes in the skeletal muscle nuclear proteome after acute exercise.**
    Martin, Ryan A.; Viggars, Mark R.; Zhang, Xiping; Sanford, James A.; Adkins, Joshua N.; Douglas, Collin M.; Esser, Karyn A.

57. **Developing an Automated Pipeline Method for Serial Image Analysis of Muscle Biopsies**
    Megowan, Helia G.; Shuaib, Adam; Luu, Madeline; Augienello, Kaitlyn; Fries, Adam; Dreyer, Hans C.

58. **Investigating Estrogen's Influence on Human Skeletal Muscle Mechanics Independent of Age**
    Ortiz-Delatorre, Julissa; Ricci, Austin W.; Privett, Grace E.; Callahan, Damien M.

59. **The core circadian clock factor, Bmal1, transduces sex-specific differences in both rhythmic and non-rhythmic gene expression in the mouse heart**
Procopio, Spencer B.; Zhang, Xiping; Ding, Haocheng; Semel, Maya G.; Schroder, Elizabeth A.; Viggars, Mark R.; Seward, Tanya S.; Du, Ping; Wu, Kevin; Johnson, Sidney R.; Prabhat, Abhilash; Schneider, David J.; Stumpf, Isabel G.; Rozmus, Ezekiel R.; Huo, Zhiguang; Delisle, Brian P.; Esser, Karyn A

60. **Skeletal Muscle Microbiopsies in Children and Adults - Tolerability, Sample Yield and Analyzability**
Rydell Högelin, Emil; Edman, Sebastian; Löfgren, Axel; Janning R, Paulo; Thulin, Kajsa; Michno, Piotr; Norrbom, Jessica; Alkner A, Björn; von Walden, Ferdinand; Fornander, Lotta

61. **3-Dimensional Myonuclear Analysis on Single Muscle Fibers using Imaris**
Schroeder, Esben; Megowan, Helia G.; Fries, Adam; Godino, Lia; Sridhar, Mahathi; Gavaldon, Payton; Searcy, Jake; Dreyer, Hans C.

62. **Exercise-induced elevation of Cxcl14 observed in MoTrPAC data is required to improve exercise capacity after 4 weeks of exercise training in mice**
Silver, Stewart; Burgardt, Robb; Yan, Zhen

63. **Endurance Exercise Elevates Plasma Mature Brain-Derived Neurotrophic Factor in Youth and Adults, with Enhanced Effects in Adulthood**
Starck, Julia; Edman, Sebastian; Corell, Linnéa; Hangasjärvi, William; von Finkenstein, Amelie; Reimringer, Mikael; Reitzner, Stefan; Norrbom, Jessica; Moberg, Marcus; von Walden, Ferdinand

64. **Stretch activation combats force loss from fatigue in fast-contracting mouse skeletal muscle fibers**
Swank, Douglas M.; Woods, Philip C.; Miller, Mark S.

65. **Sympathetic modulation of skeletal muscle electrical activity, force, and fatigue**
Ward, Brittney; Ward, Patricia J.

66. **Cisplatin administration drives the accumulation of senescent-like cells and myonuclei, contributing to anabolic resistance in exercise trained mice**
Wells, Jaden M.; Daredia, Jainil; Wiggs, Michael P.; Dungan, Cory M.

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67. **Molecular signaling perturbations associated with skeletal muscle dysfunction in G93A*SOD1 overexpressing mouse model of ALS**
Aishwarya, Richa; Abdullah, Chowdhury S.; Remex, Naznin Sultana; Islam, Tamjid; Bhuiyan, Mohammad Alfrad Nobel; Bhuiyan, Md. Shenuarin

68. **Mitochondrial impairment in the skeletal muscle of Fibromyalgia patients.**
Santos-Alves, Estela; Ekenstam, Karolina; Sandor, Katalin; Linderoth, Emilie; Starck, Julia; Shorter, Emily; Rosén, Annelie; von Walden, Ferdinand; Löfgren, Monika; Kosek, Eva; Svensson, I. Camilla; Lanner, T. Johanna

69. **Fish Oil Supplementation Enhances Muscle Mass and Force Recovery in Old Rats Following Disuse Atrophy**
Baehr, Leslie M.; de Sousa, Luis G.O.; Bodine, Sue C.

70. **WITHDRAWN-No Poster**

71. **GPx4 Overexpression Mitigates Cancer Cachexia.**
Brown, Jacob

72. **Female mice are preferentially protected against the skeletal muscle dysfunction that occurs with aging and obesity**
Butler, Landon; Nunan, Emily; Butcher, Joshua

73. **Identifying FKBP5 as a novel mediator of cancer cachexia**
Cardona Polo, Felipe; Gonzalez Paola; Huot, R. Joshua

74. **Evaluation of the Skeletal Muscle Transcriptome during the Remobilization Phase after Disuse**
Choi, Sung Jun; Kao, Wei-Chun; Fliflet, Alex; Boppart, Marni

75. **Myonuclear RelA and Stat3 cooperatively promote tumor growth and inflammation in tumor bearing mice**
Counts, Brittany R; Correia, Rafael; Ostrowski, Michael; Guttridge, Denis; Koniaris, Leonidas; Zimmers, Teresa

76. **Acute CHOP chemotherapy leads to lower muscle size and satellite cell abundance in a pediatric mouse model**
Daredia, Jainil; Wells, Jaden M.; Nascimento, Carla M.C.; Dungan, Cory M.; Wiggs, Michael P.

77. **Estrogen-related receptors α/γ signaling in cancer cachexia and muscle atrophy**
DeBruine, Anna; Poliakova, Svitlana; Kolonin, Mikhail; Kumar, Ashok; Narkar, Vihang

78. **The impact of B-cell lymphoma 6 knockdown on skeletal muscle physiology**
Desjardins, Krystel; Leduc-Gaudet, Jean-Philippe; Usmani, Shirine; Cefis, Marina; Marcangeli, Vincent; Capobianco, Anthony; Woo, Mina; Gouspillou, Gilles

79. **Circadian transcriptomes in cardiorespiratory muscles are disrupted by KPC pancreatic cancer**
Ducharme, Jeremy B; Schonk, Martin M; Gutierrez-Monreal, Miguel A; Huo, Zhiguang; Esser, Karyn A; Judge, Sarah M; Judge, Andrew R.

80. **KPC pancreatic cancer disrupts the skeletal muscle circadian transcriptome in a FoxP1-dependent manner**
Ducharme, JB; Neyroud, D; Schonk, MM; Gutierrez-Monreal, MA; Huo, Z; Tucker, HO; Esser, KA; Judge, SM; Judge, AR

81. **Age as a driver of biological sex-specific adaptions to C26-induced cancer cachexia**
Wells, Jaden M; Rodriguez, Rebecca; Dao, Allen; Daredia, Jainil; Nascimento, Carla; Murach, Kevin A.; Wiggs, Michael P.; Law, Michelle L.; **Dungan, Cory M.**

82. **Investigating the role of Krüppel-Like Factor 10 (KLF10) in Pancreatic Ductal Adenocarcinoma (PDAC) associated cachexia**
Epstein, Savannah A.; Dasgupta, Aneesha,; Gibbard, Daniel F.; Schmitt, Rebecca E.; Arneson-Wissink, Paige C.; Ducharme, Alexandra M.; Bruinsma, Elizabeth S.; Hawse, John R.; Jatoi, Aminah; Doles, Jason D.

83. **Macrophage Metabolic Rewiring Alters Raman-Based Molecular Signatures and Functional Recovery Following Disuse Atrophy in Aged Mice**
Fennel, Zachary J.; Bourrant, Paul-Emile; Yee, Elena M.; Castro, Robert J.; Kurian, Anu S.; Palmer, Jonathan; Kosari, Nikki; Christensen, Morgan; Zhou, Anhong; Funai, Katsuhiko; O'Connell, Ryan M.; Drummond, Micah J.

84. **Development of a Human Extracellular Vesicle Therapy to Recover Skeletal Muscle Following Disuse**
Fliflet, Alexander; Barnes, Takeshi; Tan, Yanqi; Burd, Nicholas; Sweedler, Jonathon; Boppart, Marni

85. **Characterization of AICAR Effects on Muscle Regeneration in Cachectic Mice**
Funk, Zachary M.; Reid, Olivia G.; Brown, Jackson A.; Nichols, P. Grace; Foster, Daniel J.; Stark, Isaac S.; Thomson, David M.

86. **A comparison of cardiac right and left ventricular hemodynamics in dystrophin-deficient D2.mdx mice during early-stage disease**
Garibotti, Madison C.; Morris, Brooke A.; Brahmbhatt, Aditya N.; Khajehzadehshoushtar, Shahrzad; Rana, Ihtisham A.; Thuhan, Arshdeep K.; Debi, Ryan; Lakin, Robert; Backx, Peter H.; Perry, Christopher G. R.

87. **Interrogating the Myofiber-FAP GDNF-GFRA1 Signaling Axis to Maintain Neuromuscular Junction Integrity Following Injury**
Gonzalez-Velez, Sara; Keeble, Alexander R.; Thomas, Nicholas T.; Owen, Allison M.; Goh, Jensen; Johnson, Darren L.; Stone, Austin V.; Wen, Yuan; Noehren, Brian; Fry, Christopher S.

88. **Molecular clock suppressors promote myotube atrophy in vitro with direct relevance to limb muscle atrophy in response to androgen deprivation**
Gordon, Bradley S.; Laskin, Grant R.; Steiner, Jennifer L.; Ayers-Creech, Wayne A.; Dunlap, Kirsten R.; Vied, Cynthia; Lee, Choogon

89. **Prevention of Sarcopenic Obesity Restores Skeletal Muscle Regenerative Capacity Post Ischemic Injury**
Guilfoyle-Speese, Andrew C.; Rosewater, Cody L.; Padgett, Caleb A.; Sellars, Hunter; Mintz, James D.; Fulton, David J.; Stepp, David W.

90. **Sex differences in skeletal muscle atrophy induced by UBR5 suppression: a role for nuclear hormone receptor turnover?**
Hughes, David C.; Baehr, Leslie M.; Pranay, Atul.; Waddell, David S.; Deane, Colleen S.; Humphries, Kenneth M.; Sharples, Adam P.; Bodine, Sue C.

91. **Lung tumor-derived factors directly regulate circadian clock genes in cultured myotubes**
Jenkins, Tanner; Ramanathan, Chidambaram; Carson, James; Puppa, Melissa

92. **Effects of Adeno-associated Virus-mediated Overexpression of ABCB8 on Doxorubicin-induced Myotoxicity**
Ka, Soonjo; Wendler, Christopher C; Nguyen, Branden L; Smuder, Ashley J

93. **FOXO1-Driven Myonuclear Pathology in Chronic Kidney Disease Persists After Kidney Transplantation**
Keeble, Alexander R.; Gonzalez-Velez, Sara; Goh, Jensen Z.; Weiss, Helena C. King, Julia L.; Thomas Nicholas T.; Owen, Allison M.; Paredes, William; Duran, Sally; Zhang, Kehao; Abramowitz, Matthew K.; Fry, Christopher S.

94. **The mitochondrial-targeted antioxidant SkQ1 prevents mitochondrial-induced apoptosis but not atrophy or necroptosis in skeletal muscle during ovarian cancer**
Khajehzadehshoushtar, Shahrzad; Delfinis, Luca J.; Rahman, Fasih A.; Garibotti, Madison C.; Gandhi, Shivam; Brahmbhatt, Aditya; Morris, Brooke A.; Garlisi, Bianca; Lauks, Sylvia; Aitken, Caroline; Zhang, Zhu-Xu; Simpson, Jeremy A.; Quadrilatero, Joe; Petrik, Jim; Perry, Christopher G.R.

95. **Elucidating the Role of IL-6 in Ventilator-Induced Diaphragmatic Dysfunction**
Lang, Ryann; Liang, Feng; Ding, Jun; Petrof, Basil

96. **Characterization of DEPP1, a new player of autophagy that regulates skeletal muscle integrity**
Leduc-Gaudet, JP; Ayoub, MB; Cefis, M; Franco-Romero, A; Marcangeli, V; Maude, D; Wang, A; Sedraoui, S; Mayaki, D; Huck, L; Sandri M; Hussain, SNA; Gouspillou, G

97. **Muscle-Specific TAS1R2 Deletion Mitigates Obesity- and Weight Loss-Induced Atrophy**
Link, Grace M.; Serrano, Joan; Kyriazis, George A.

98. **Investigating the functions of mitochondrial phosphatase PPTC7 on maintaining skeletal muscle homeostasis**
Lochetto, Tessa; Menezes, Thiago; Ferey, Jeremie; Meyer, Gretchen A.; Niemi, Natalie M.

99. **MITOCHONDRIAL PERMEABILITY TRANSITION CAUSES SKELETAL MUSCLE ALTERATIONS COMMON IN SARCOPENIA, CACHEXIA AND WASTING DISORDERS**
Lukasiewicz, Cole; Skinner, Sarah; Cohen, Michael; Wolan, Dennis; Semel, Maya; Hepple, Russell T.

100. **The Effects of Leg Immobilization and Subsequent Resistance Training on Skeletal Muscle Adaptation in Trained vs. Untrained Adults**
Michel, J. Max; Godwin, Josh S.; Plotkin, Daniel L.; McIntosh, Mason C.; Mattingly, Madison L.; Agostinelli, Philip J.; Mueller, Breanna J.; Anglin, Derick A.; Kontos, Nicholas J.; Berry, Alexander C.; Vega, Marina Meyer; Pipkin, Autumn A.; Stock, Matt S.; Graham, Zachary A.; Baweja, Harsimran S.; Mobley, C. Brooks; Bamman, Marcas M.; Roberts, Michael D.

101. **Cancer-conditioned Media Exposure Induces Muscle Clock Disruptions in Myotubes**
Morena, Francielly; Gutierrez Monreal, Miguel A.; Schonk, Martin; Judge, Andrew R., Esser, Karyn A.

102. **Inflammation-Driven Transcriptional Signatures in Skeletal Muscle During Cancer-Cachexia**
Muhyudin, Ruqaiza; Morena da Silva, Francielly; Schrems, Eleanor R.; Cabrera, Ana Regina; Noga, Nicole N.; Washington, Tyrone A.; Greene, Nicholas P.

103. **Human septic serum induces gene expression changes in C2C12 myotubes**
Muller, Diana C; Azam, Armina; Mejia, Nathaniel; Efron, Philip; Laitano, Orlando

104. **Effect of neoadjuvant treatment on skeletal muscle mass in locally-advanced non-small cell lung cancer**
Neyroud, Daria; Becce, Fabio; Gonzalez, Miche; Baggish, Aaron L.; Forster Céline

105. **Effects of Azoxymethane-Induced Colorectal-associated Cancer and Chemotherapy in a Murine Model of Cachexia: A Pilot Study**
Noga, Nicole N.; Schrems, Eleanor R.; Muhyudin, Ruqaiza; Ahmed, Izzeldin Y.; Cabrera, Ana Regina; Relich, Morghan; Muldoon, Timothy J.; Washington, Tyrone A.; Greene, Nicholas P.

106. **Investigation of non-canonical NF-kB activation in response to skeletal muscle injury and pathophysiology**
Olateju, BS; Windisch, T; Carrel, W; Parvatiyar, K; Gordon, BS; MS, Parvatiyar

107. **Neuromuscular Dysfunction Precedes Muscle Atrophy and Bone Loss in Colorectal Cancer**
Ortiz Gonzalez, Paola Marie; Galiana-Melendez, Fabiola; Giffin, Davis B.; Clouse, Morgan; Pin, Fabrizio; Plotkin, Lilian; Huot, Joshua R.

108. **Altered Collagen 1 Dynamics During Post-Sepsis Skeletal Muscle Dysfunction**
Granada-Correa, Oriana**;** Keeble, Alexander R.; Ritchey, Avery S.; Thomas, Nicholas T.; Bates, Zane T; Fry, Christopher S.; **Owen, Allison M.**

109. **Tumor-derived Ctgf as an Indirect Driver of Pancreatic Cancer-Associated Cachexia**
Poole, Brittney; Calloway, Chandler; Schonk, Martin; Judge, Andrew R.; Judge, Sarah M.

110. **Inflammatory Cell Infiltration and Fibrotic Remodeling in Skeletal Muscle of Septic Aged Mice**
Reis, Gisienne; Boeno, Franccesco; Muller, Diana; Azam, Armina; Li, Zhuoxin; Ashley, Malaica; Mejia, Nathaniel; Moraes, Michele; Laitano, Orlando

111. **Simulated Anorexia Nervosa in Rats Affects Muscles of Different Functional and Metabolic Phenotypes Differently**
Rosa-Caldwell, Megan E.; Breithaupt, Lauren; Kaiser, Ursula B.; Garland, Eliza; Pinkham, Sheridyn; Hancock, Madisyn; Rutkove, Seward B.

112. **The effects of short-term environment-induced heat stress on muscle from male mice**
Roths, Missey; Vorwald, Morgan; Lee, Ji Heun; Selsby, Joshua

113. **Identification of non-myogenic mesenchymal cell (NMMC) populations which contribute to massive rotator cuff muscle tear pathologies**
Rueckert, Helen, Mirando, Anthony J.; Leinroth, Abigail P.; Ibarra, Juliana; Hilton; Matthew J.

114. **Complement component C5-signaling mediates pancreatic cancer-induced muscle pathologies**
Schonk, Martin M.; Ducharme, Jeremy B.; Al Zaeed, Nour; Judge, Sarah M.; Atkinson, Carl; Judge, Andrew R.

115. **Therapeutic targeting of mitochondrial permeability transition in a mouse model of pancreatic cancer cachexia**
Semel, Maya; Lukasiewicz, Cole; Mannings, Abbey; Austin, Rashad; Hepple, Russell T.

116. **Sex differences in genes associated with metabolic signaling, structural components and RNA homeostasis in muscles as a response to atrophy and recovery**
Sklivas, Alexander B; Hettinger, Zachary R; Miller, Benjamin F; Dupont-Versteegden, Esther E

117. **HDAC4 DNA binding disrupts muscle plasticity following joint injury and is rescued with muscle-specific Hdac4 deletion**
Thomas, Nicholas T.; Keeble, Alexander R.; Owen, Allison M.; Gonzalez-Velez, Sara; Brightwell, Camille R.; Johnson, Darren L.; Stone, Austin V.; Noehren, Brian; Wen, Yuan; Fry, Christopher S.

118. **BNIP3-dependent muscle atrophy in cancer cachexia promotes PDAC progression**
Ware, Alexandra S.; Foster, Elizabeth CS; Kwon, Jason; Demonbreun, Alexis; Macleod, Kay F.

119. **iPLA2: a novel intracellular Ca2+ regulator in triggering muscle weakness during denervation**
Xu, Hongyang; Bhaskaran, Shylesh; Thomason, Jessica; Kneuper, Kara; de Sousa, Gustavo; Brown, Jacob; Van Remmen, Holly

120. **Transient deletion of Rapsyn alters neuromuscular function**
Xu, Jing; Huot, Joshua R

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121. **Handheld, ultrasound-guided skeletal muscle needle-biopsy technique facilitates measurement of human muscle architecture and biochemical properties: procedure, details, and application**
Barber, Addison; Willbanks, Amber; Meza, Guadalupe; Dayanidhi, Sudarshan; Arnold, David; Lieber, Richard L.; Roy, Ishan

122. **RNA-sequencing and global proteomics of diaphragm weakness in female rats after myocardial infarction**
Baumfalk, Dryden R., Martinez, Jose C., McDonagh, Brian., Ferreira, Leonardo F.

123. **Voluntary Wheel Running or Donepezil Delays Early Neuromuscular Dysfunction in a Mouse Model of Alzheimer's Disease**
Brisendine, Matthew; Willoughby, Orion; Brown, Jack; Braxton, Daniel; Henry, Shelby; Amiri, Niloufar; McCoin, Colin; Thyfault, John; Poelzing, Steven; Grange, Robert; Drake, Joshua

124. **In silico analysis of conformational dynamics of the alpha-actinin-2 actin-binding domain in response to HCM and distal myopathy mutations**
Crawford, Rhiannon; Solís, Christopher

125. **Acute ankle joint inflammation affects adjacent muscle and is associated with ribosome heterogeneity**
Cui, Minying; Jude, Baptiste; Lanner, Johanna; von Walden, Ferdinand

126. **Differential pathology and susceptibility to MBNL loss across mouse muscles in a myotonic dystrophy model**
Davenport, Mackenzie L; Fong, Amaya; Montoya Vazquez, Gloria; Alves de Moura, Maria F; Bubenik, Jodi L; Swanson, Maurice S

127. **Spiny mice are primed but fail to regenerate volumetric skeletal muscle loss injuries**
Davenport, Mackenzie L; Fong, Amaya; Albury, Kaela N; Henley-Beasley, C Spencer; Barton, Elisabeth R; Maden, Malcolm; Swanson, Maurice S

128. **Mitochondrial Capacities in an Obesity Model of Duchenne Muscular Dystrophy Are Altered by Glucocorticoids**
DiSilvestro, Adrianna; Wesolowski, Lauren; Vorwald, Morgan; Roths, Melissa; Lee, Ji Heun; Selsby, Joshua; White-Springer, Sarah

129. **Dock7 is an essential driver of Skeletal Muscle Health and Function**
English, Katherine G.; Samani, Adrienne; Karupassamy, Muthukumar; Becker, Kathleen; Alexander, Matthew S.

130. **Retinoic acid drug delivery for muscle recovery from atrophy**
Cheung, Candice V.; Smuder, Ashley J.; **Gower, R. Michael**

131. **Metabolic remodeling of dystrophic muscle in mouse models of Duchenne muscular dystrophy.**
Hardee, Justin; Trieu, Jennifer; Narayana, Vinod; Chee, Annabel; Swiderski, Kristy; Haber, Emily; Chung, Jin; Naim, Timur; Plenderleith, Stuart; De Souza, David; Lynch, Gordon

132. **Immune responses in DMD gene therapy and investigation of rAAV transduction mechanisms**
Hobson, Orinda; Prima, Victor; Russ, Jenny; Sweeney, H. Lee; Hammers, David W.

133. **Nonclinical Data for PGN-EDODM1 Demonstrated Mechanistic and Meaningful Activity for the Potential Treatment of DM1**
Gilbert, J.; Klein, A.; Lonkar, P.; Foy, J.; Yu, Shaoxia.; Furling, D.; **Holland, A.**

134. **Single- and Repeat-Dose Nonclinical Data for PGN-EDO51 Demonstrated Favorable Pharmacology and Safety Profiles for the Treatment of DMD**
Sweeney, S.; Gilbert, J.; Lonkar, P.; Lamore, S.; Foy, J.; **Holland, A.**

135. **Estrogen-related receptor alpha promotes muscle regeneration and mitigates myopathy in a pre-clinical model of Duchenne Muscular Dystrophy**
Huang, Sophia; Nguyen, Thi Thu Hao; Poliakova, Svitlana; Sopariwala, Danesh; Narkar, Vihang

136. **Drug repurposing evaluation of lead autophagic antagonists in a novel XMEA mouse model**
Karuppasamy, Muthukumar; English, Katherine; Lopez, Michael; Huang, Lily; Dowling, James; Alexander, Matthew

137. **Time Release Ion Matrix Enhances Skeletal Muscle Following Injury**
Kendra, Jacob; Golpasandi, Shadi; Naman, Alexandra; Goble, Seth; Sudhagar, Nikitha; Morton, Aaron

138. **Long-term imoxin treatment did not ameliorate inflammation, ER stress or improve muscle function in dystrophic diaphragm**
Lee, Ji Heun; Vorwald, Morgan; Roths, Missey; Selsby, Joshua; Valentine, Rudy

139. **Skeletal muscle dysfunction and histopathology in a rat model of Duchenne muscular dystrophy**
Lee, Young il; Hart, Cora C.; Henley-Beasley, C. Spencer; Herr, Jeffrey S.; Walter, Glenn A.; Wiseman, Robert W.; Hammers, David; Barton, Elisabeth R.; Sweeney, H. Lee

140. **Elucidating mechanisms of kinesin-dependent RNA localization in mouse muscle**
Li, Zhuangyue; Valero, Carmen; Muscato, Derek; Olafson, Hailey; Niazi, Cameron; Davey, Emily; Wang, Eric T

141. **RKER-065, a novel ActRII ligand trap, reduced harmful inflammation and decreased markers of fibrosis in a mouse model of Duchenne muscular dystrophy**
Linzey, Michael; Zhen, Gehua; Nathan, Remya; Cahill, Morgan; Delong, Raine; Daman, Tyler; Macaluso, Savanna; Todorova, Radina; Grenha, Rosa; Lachey, Jenn; Lerner, Lorena; Seehra, Jasbir; and Fisher, Ffolliott Martin

142. **Conserved Roles of MCA-1 and PMCA in Regulating Early Calcium Dynamics in Muscle**
Marchiafava, Damiano; Fazyl, Adina; Engelke, Martin; Stein, Wolfgang; Vidal-Gadea, Andres

143. **Dystrophin Isoform Expression and Muscle Plasticity in C. elegans: Implications for DMD**
Marchiafava, Damiano; Fazyl, Adina; Vidal-Gadea, Andres

144. **Orchestrated sarcomeric protein regulation in donor-derived skeletal muscle microphysiological system**
Mariani, Vinicius M.; Caples, Karly A.; Barton, Elisabeth R.; Malany, Shiobhan.

145. **Investigation of statin ryanodine receptor 1 activation on mitochondrial function and amino acid balance in skeletal muscle**
Marlatt, Matthew; McCue, Meghan; Shaheed, Mena; MacLean, David; Hawke, Thomas; Rebalka, Irena

146. **Investigating the role of CD38 in spinal and bulbar muscular atrophy**
Davis, Gabrielle; Nissley, Elyse; Lozzi, Caroline; Ojo, Adetola; Goldsmith, Mariah; Ruck, Allison; Raubenstine, David; Goeckel, Fiona; Pennuto, Maria; **Montie, Heather**

147. **Targeting IMAT through small molecule therapeutics**
Noble, Christian D.; Appu, Ambili Bai; Liu, Xinyue; Palzkill, Victoria R.; Ryan, Terence; Kopinke, Daniel

148. **Tissue-specific Alternative splicing to Regulate GEne Therapy (TARGET) for X-linked myotubular myopathy**
O'Brien, Alana P; Scotti, Marina M; Jennings, Ethan T; Olafson, Hailey R; Valero, Carmen M; Adams, Leanne M; Muscato, Derek R; Wang, Xiaoxiao; Wang, Eric T

149. **Regulation of Sarcoplasmic Reticulum Calcium Leak in Skeletal Muscle**
Yee, Rachel; Lee, Chang Seok; Jung, Sung Yun; Yousif, Omar; Cavazos, Courtney; Chang, Ting; Hamilton, Susan L.; **Rodney, George G**.

150. **Mitochondrial dysfunction precedes decline in muscle contractile function in respiratory muscle of SOD1G93A ALS mice**
Rua, Michael; Kunz, Eric; Zhong, Renjia; Harris, Erin; Kim, Kyoungrae; Kapur, Kunal; Lim, Jace; Ryan, Terrence; Seven, Yasin; Wei-LaPierre, Lan

151. **AAV induced overexpression of IGFBP-3 is sufficient and necessary to promote skeletal muscle wasting via TGF-β dependent signaling in mice**
Sechrist, Zachary; Cole, Calvin

152. **Structural dynamics of slow skeletal myosin binding protein-C's N-terminus**
Seffrood, Morgan; Bunch, Tom; Lepak, Torie; Colson, Brett

153. **Functional, molecular, and histological characterisation of skeletal muscle in a murine model of peripheral artery disease**
Shorter, Emily.; Zhengye, Liu.; Santos Alves, Estela.; Vilhelmiina Kivimäki, Saima.; Cui, Minying.; Michaela Xanthopoulou, Emmanouella.; Jude, Baptiste.; Edman, Sebastian.; von Walden, Ferdinand.; Lanner T, Johanna

154. **Spatial Transcriptomics Analysis of Becker and Duchenne Muscular Dystrophy to Uncover Histopathological Changes in Dystrophinopathies**
Heezen, Laura GM; Mao, Qirong; Nicolau, Stefan; Novella Raussel, Claudio; van der Weerd, Julia; Kueckelhaus, Jan; Gokul Nath, Rasya; Manera-Diaz, Jordi; Kan, Hermien; Niks, Erik; van Putten, Maaike; Aartsma-Rus, Annemieke; Flanigan, Kevin; Mahfouz, Ahmed; **Spitali, Pietro**

155. **In silico analysis of conformational dynamics of the alpha-actinin-2 actin-binding domain upon phosphorylation**
Tigro, Helene; Salinas, Tiffany; Solís, Christopher

156. **In silico analysis of the desensitization mechanisms in the cardiac troponin complex by TnI phosphorylation and drug binding**
Tigro, Helene; Solis, Christopher

157. **Short term daily deflazacort decreases membrane permeability and increases maximum force in mdx mice**
Turner, K.D.; Qian, Y.; Claflin, D. R.; Newell-Stamper, B.L.; Peter, A.K.; Michele, D.M.; Russell, A.J.; Brooks, S.V.

158. **Chronic inflammation in skeletal muscle induces ER Stress and activation of the IRE1α pathway**
van Deventer, Alexander; Santos Alves, Estela; Ferreira, Duarte MS; Lanner, Johanna T

159. **Harnessing Endogenous Dystrophin Isoforms to Ameliorate Duchenne Muscular Dystrophy**
Vidal-Gadea, Andres; Marchiafava, Damiano; Fazyl, Adina; Jones, Mackenzie; Gomez, Margarita

160. **Isoform Interventions: Harnessing Endogenous Dystrophin Variants to Restore Muscle Function**
Vidal-Gadea, Andres; Marchiafava, Damiano; Fazyl, Adina; Jones, Mackenzie; Gomez, Margarita

161. **Glucocorticoid treatment further promoted metabolic dysregulation caused by DMD and insulin resistance**
Vorwald, Morgan E.; Lee, Ji Heun; Roths, Melissa; Valentine, Rudy J.; Selsby, Joshua T

162. **Inducible, Muscle-Specific Gene Editing in vivo: Combining myoAAV and Tet-ON Cas9**
Walton, Bonnie J; Coburn, Peyton T; Depa, Lauren A; El-Amouri, Salim; Peck, Bailey D; McCarthy, John J; Wen, Yuan

163. **Impact of B12 supplementation on mitochondrial biology in aged female mice**
Williamson, Abigail; Ma, Wenixa; Rorrer, Shelby; Field, Martha; Thalacker-Mercer, Anna

164. **Therapeutic interventions to reduce muscle decrements associated with anti-obesity treatments**
Zerpa, Eli; Ramick, Anton; Febo Tirado, Julian; Hammers, David W.

165. **RKER-065 demonstrated broader anti-inflammatory effects than prednisolone in a Duchenne muscular dystrophy (DMD) mouse model**
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