

## **Andrew R. Judge, Ph.D.**

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1275 Center Drive  
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Gainesville, FL 32610

### **EDUCATION**

1999 – 2003 University of Florida, Gainesville, FL  
*Ph.D. Exercise Physiology*  
*Advisor: Stephen Dodd, Ph.D.*

1997 – 1999 McNeese State University, Lake Charles, LA  
*M.Ed. Exercise Physiology*  
*Advisor: Robert Voight, Ph.D.*

1993 – 1996 Loughborough University, Leicestershire, England  
*B.S.*

### **POSTDOCTORAL TRAINING**

2004 – 2006 Boston University, Boston, MA  
*Postdoctoral Fellow, Muscle Biology*  
*Advisor: Susan Kandarian, Ph.D.*

### **PROFESSIONAL EXPERIENCE**

2020 – Present Professor, Department of Physical Therapy  
Affiliate, Department of Physiology & Functional Genomics  
University of Florida, Gainesville, FL

2021 – Present Vice President, Cancer Cachexia Society

2015 – Present Associate Director for Training, Myology Institute,  
University of Florida, Gainesville, FL

2020 – 2021 Treasurer, Cancer Cachexia Society

2018 – 2020 Member, Board of Directors, Cancer Cachexia Society

2014 – 2020 Associate Professor, Department of Physical Therapy  
Affiliate, Department of Physiology & Functional Genomics  
University of Florida, Gainesville, FL

2009 – 2014	Assistant Professor, Department of Physical Therapy Affiliate, Department of Physiology & Functional Genomics University of Florida, Gainesville, FL
2007 (Jan) - 2009	Research Assistant Professor Department of Applied Physiology and Kinesiology University of Florida, Gainesville, FL
2006 – 2007	Research Associate Scientist Department of Applied Physiology and Kinesiology University of Florida, Gainesville, FL
2003 - 2004	Visiting Assistant Professor, Department of Applied Physiology and Kinesiology University of Florida, Gainesville, FL

**A. RESEARCH**  
**RESEARCH FUNDING**

**Active:**

NIH, NCI	9/1/2023 – 8/31/2028
R01CA270025	
Matricellular proteins of the CCN family as regulators of tumor-induced cachexia	
Total costs: \$2,447,064	
Total direct costs: \$1,610,162	
<i>Role: Co-Investigator (10%)</i>	
<i>Principal Investigator: Sarah M. Judge</i>	

NIH, NCI	4/1/2023 – 3/31/2025
R44CA277853	
“Development of novel therapeutics for cancer cachexia”	
Total costs: \$1,981,214	
Total direct costs to UF: \$383,380	
<i>Role: Multi Principal Investigator (MPI) (20%)</i>	

NIH, NIAMS	8/1/2022 - 7/31/2027
R01AR081648	
“The Complement System and Cancer Cachexia”	
Total costs: \$2,362,135	
Total direct costs: \$1,548,940	
<i>Role: Multi (corresponding) Principal Investigator (20%)</i>	

NIH NIAMS	1/08/2021-7/31/2025
P50AR052646	
Understanding and Improving Therapies for the Muscular Dystrophies	
Total costs: \$1,588,673	
Total direct costs: \$1,210,167	
<i>Role: Training Core Co-Director</i>	
<i>Principal Investigator: H. Lee Sweeney</i>	

Florida Department of Health	6/01/2021-5/31/2024
Bankhead Coley Cancer Research Program	

Ursolic acid as a countermeasure to cancer cachexia

Total costs: \$530,880

Total direct costs: \$461,634

*Role: Principal Investigator (20%)*

NIH, NCI

4/01/2021-3/31/2026

T32CA257923

Team-based Interdisciplinary Cancer Research Training Program

*Role: Co-Investigator*

*Principal Investigator: Dietmar Siemann*

University of Florida Opportunity Seed Fund

6/1/2020-5/31/2023

"Role of Trim63 in cancer cachexia"

Total costs: \$80,157

Total direct costs: \$80,157

*Role: Co-Principal Investigator (with Glenn Walter) (0%)*

NIH, NIAMS

R01AR060209

9/01/2019 – 8/31/2023

Supplement to Advance Research (STAR)

FoxO signaling and skeletal muscle atrophy

Total costs: \$457,500

Total direct costs: \$300,000

*Role: Principal Investigator (5%)*

NIH, NICHD

5/1/2019 – 4/30/2024

T32HD043730-16

Interdisciplinary Training in Neuromuscular Plasticity and Rehabilitation

*Role: Co-investigator*

*Principle Investigator: David Fuller*

NIH, NIAMS

8/1/2017 - 8/31/2023

R01AR060209

"FoxO signaling and skeletal muscle atrophy"

Total costs: \$2,032,244

Total direct costs: \$1,341,899

*Role: Principal Investigator (30%)*

#### **Past Support:**

U54AR052646

8/1/2015 – 8/31/2021

NIH, NIAMS

"Failed regeneration in the muscular dystrophies: inflammation, fibrosis and fat"

Total costs: \$7,671,546

Total direct costs: \$6,128,698

*Role: Training Core Co-Director (10%)*

*Principal Investigator: Lee Sweeney*

R21AR073956

3/7/2019 – 2/28/2021

NIH, NIAMS

Ventilator-induced diaphragm dysfunction: role of calpain signaling

Total costs: \$419,375

Total direct costs: \$275,000

*Role: Other significant contributor (0%)*

*Principal Investigator: Scott Powers*

James & Esther King Research Program 8/1/2018 – 7/31/2021

“The Florida Pancreas Collaborative Next-Generation

Biobank: Reducing Health Disparities and Improving  
Survival for Pancreatic Cancer”

Total costs: \$1,360,000

Total direct costs: \$1,156,000

*Role: co-investigator (3%)*

7BC02

4/1/2017-12/31/2020

Bankhead-Coley Cancer Research Program

“Initiating Mechanisms of Cancer Cachexia”

Total costs: \$1,254,896

Total direct costs: \$1,091,214

*Role: Principal Investigator (20%)*

R01HL130318

1/1/2016 – 12/31/2020

NIH, NHLBI

“Reactive oxygen species and respiratory muscle dysfunction in heart failure”

Total costs: \$1,879,203

Total direct costs: \$1,252,802

*Role: co-investigator (10%)*

*Principal investigator: Leonardo Ferreira*

University of Florida Opportunity Seed Fund

6/1/2016-12/31/2018

“Progressive carcinomas secrete GDF11 to induce cachexia”

Total costs: \$89,000

Total direct costs: \$89,000

*Role: Co-Principal Investigator (with Jianrong Lu) (0%)*

University of Florida

6/2/2016-05/20/2018

Clinical and Translational Science Institute Pilot Award

“Respiratory muscle pathology in cachectic pancreatic cancer patients”

Total costs: \$22,500

Total direct costs: \$22,500

*Role: Principal Investigator (0%)*

University of Florida Health Cancer Center

5/1/2017-4/30/2018

Bridge Grant

FoxO signaling and skeletal muscle atrophy

Total costs: \$75,000

Total direct costs: \$75,000

*Role: Principal Investigator (0%)*

R21CA194118

4/1/2015 – 3/31/2018

NIH, NCI

"Dysregulation of sarcomere stabilizing proteins cause muscle atrophy and weakness during cancer cachexia"

Total costs: \$360,000

Total direct costs: \$240,000

*Role: Principal Investigator (20%)*

R01AR064189

4/1/2013 – 3/31/2018

NIH/NIAMS

"Mechanisms of exercise protection in ventilator-induced diaphragm dysfunction"

Total costs: \$1,856,802

Total direct costs: \$1,239,933

*Role: co-investigator (5%)*

*Principal Investigator: Scott Powers*

University of Florida Health

1/1/2016-12/31/2017

Cancer Center/Institute on Aging Cancer-Aging Collaborative Team Grant

"Common mechanisms and biomarkers in sarcopenia and cancer cachexia"

Total costs: \$60,000

Total direct costs: \$60,000

*Role: Co-Principal Investigator (with Lee Sweeney) (0%)*

The V Foundation

11/1/2015 – 10/31/2017

"The Role of Cachexia in Pancreatic Cancer"

Total costs: \$200,000

Total direct costs: \$200,000

*Role: co-investigator (3%)*

*Principal investigator: Jose Trevino*

1R01AR060209-01A1

8/1/2011-7/31/2016

NIH, NIAMS

"FoxO signaling and skeletal muscle atrophy"

Total costs: \$1,801,540

Total direct costs: \$1,250,000

*Role: Principal Investigator (40%)*

R21AR063805-01

9/12/2012-8/31/2014

NIH/NIAMS

"Ventilator-induced diaphragmatic atrophy: Role of FoxO signaling"

Total costs: \$600,975

Total direct costs: \$402,750

*Role: co-investigator (5%)*

*Principal Investigator: Scott Powers*

1R03AR056418-01A1

3/1/2009-2/28-2012

NIH, NIAMS

"The role of heat shock proteins in skeletal muscle disuse atrophy"

Total costs: \$219,750

Total direct costs: \$150,000

*Role: Principal Investigator (20%)*

09BN-09

7/1/2009-6/30/2012

Bankhead-Coley Cancer Research Program

"Role of NF kappa B and FoxO in the regulation of muscle atrophy genes and muscle atrophy during experimental cancer cachexia"

Total costs: \$375,000

Total direct costs: \$347,222

Role: *Principal Investigator (20%)*

08-KN-07

7/1/2008-12/31/2011

James and Esther King Biomedical Research Program

"Cytokine-induced muscle atrophy following exercise claudication"

Total costs: \$373,122

Total direct costs: \$345,483

Role: *Principal Investigator (20%)*

UF Pepper Institute

4/1/2009-3/31/2011

"The role of heat shock protein 70 overexpression on the recovery of muscle mass and function following cast immobilization in old rats"

Total direct costs: \$46,616

Role: *Principal Investigator (5%)*

National Space &

12/1/2004-9/30/2006

Biomedical Research

Institute (NSBRI) Post-doctoral Fellowship (PF00501) (100%),

"The use of aspirin and other NSAIDS to ameliorate muscle atrophy due to simulated weightlessness"

**PEER REVIEWED PUBLICATIONS (69 TOTAL)**

Underlined – senior author

\* - PhD student mentored by ARJ

† - Post-doc mentored by ARJ

The transcription regulator ATF4 is a mediator of skeletal muscle aging. Miller MJ, Marcotte GR, Basisty N, Wehrfritz C, Ryan ZC, Strub MD, McKeen AT, Stern JI, Nath KA, Rasmussen BB, **Judge AR**, Schilling B, Ebert SM, Adams CM. *Geroscience*. Apr, 2023

Low Muscle Mass and Radiodensity Associate with Impaired Pulmonary Function and Respiratory Complications in Patients with Esophageal Cancer. Cameron, ME\*, Ayzengart AL, Oduntan O, Judge SM, **Judge AR** and Awad ZT. *J Am Coll Surg*. Jan 5, 2023

Depleting Ly6G positive myeloid cells reduces pancreatic cancer-induced skeletal muscle atrophy.

Deyhle AR<sup>†</sup>, Callaway CS\*, Neyroud D<sup>†</sup>, D'Lugos AC<sup>†</sup>, Judge SM, **Judge AR**. *Cells*. June 10;11(12):1893, 2022

Biology of Activating Transcription Factor 4 (ATF4) and its role in skeletal muscle atrophy. Ebert SM, Rasmussen BB, **Judge AR**, Judge SM, Larsson L, Wek RC, Anthony TG, Marcotte GR, Miller MJ, Yorek MA, Vella A, Volpi E, Stern JI, Strub MD, Ryan Z, Talley JJ, Adams CM. *J Nutr*. Apr 1;152(4):926-938, 2022

Osteopenia is associated with wasting in pancreatic adenocarcinoma and predicts survival after surgery. Cameron ME\*, Underwood PW, Williams IE, George TJ, Judge SM, Yarrow JF, Trevino JG, **Judge AR**. *Cancer Med*. Nov 17, 2021

Phase II study of 5-Fluorouracil, Oxaliplatin plus Dasatinib (FOLFOX-D) in first-line metastatic pancreatic adenocarcinoma. George TJ, Ali A, Wang Y, Lee JH, Ivey AM, DeRemer D, Daily KC, Allegra CJ, Hughes SJ, Fan ZH, Cameron ME\*, **Judge AR**, Trevino JG. *Oncologist*. Oct;26(10):825-e1674, 2021

The Florida Pancreas Collaborative Next-Generation Biobank: Infrastructure to Reduce Disparities and Improve Survival for a Diverse Cohort of Patients with Pancreatic Cancer. Permuth JB, Dezsi KB, Vyas S, Ali KN, Basinski TL, Utuama OA, Denbo JW, Klapman J, Dam A, Carballido E, Kim DW, Pimiento JM, Powers BD, Otto AK, Choi JW, Chen DT, Teer JK, Beato F, Ward A, Cortizas EM, Whisner SY, Williams IE, Riner AN, Tardif K, Velanovich V, Karachristos A, Douglas WG, Legaspi A, Allan BJ, Meredith K, Molina-Vega MA, Bao P, St Julien J, Huguet KL, Green L, Odedina FT, Kumar NB, Simmons VN, George TJ, Vadaparampil ST, Hodul PJ, Arnoletti JP, Awad ZT, Bose D, Jiang K, Centeno BA, Gwede CK, Malafa M, Judge SM, **Judge AR**, Jeong D, Bloomston M, Merchant NB, Fleming JB, Trevino JG, On Behalf Of The Florida Pancreas Collaborative. *Cancers*. Feb 15;13(4):809, 2021

FoxP1 is a transcriptional repressor associated with cancer cachexia that induces skeletal muscle wasting and weakness. Neyroud D, Nosacka RL, Callaway CS, Trevino JG, Hu H, Judge SM, **Judge AR**. *J Cachexia Sarcopenia Muscle*. Apr;12(2):421-442, 2021

Pharmacological targeting of mitochondrial function and reactive oxygen species production prevents colon 26 cancer-induced cardiorespiratory muscle weakness. Smuder AJ, Roberts BM\*, Wiggs MP, Kwon OS, Yoo JK, Christou DD, Fuller DD, Szeto HH, **Judge AR**. *Oncotarget*. Sep 22;11(38):3502-3514, 2020

MEF2c-dependent downregulation of Myocilin mediates cancer-induced muscle wasting and is associated with decreased survival in PDAC patients. Judge SM, Deyhle MR<sup>†</sup>, Nosacka RL\*, Vohra RS, Roberts BM\*, Neyroud D<sup>†</sup>, D'Lugos AC<sup>†</sup>, Underwood PW, Chrzanowski SM, Batra A, Murphy ME, Heaven JD, Walter GA, Trevino JG, **Judge AR**. *Cancer Res*. Mar 4, 2020

Distinct cachexia profiles in response to human pancreatic tumors in mouse limb and respiratory muscle. Nosacka RL\*, Delitto AE, Delitto D, Patel R, Judge AM, Trevino JG and **Judge AR**. *J Cachexia Sarcopenia Muscle*, Feb 10, 2020

Nicotine Induces IL-8 Secretion from Pancreatic Cancer Stroma and Worsens Cancer-Induced Cachexia. Underwood PW, Zhang DY, Cameron ME\*, Gerber MH, Delitto D, Maduka MU, Cooper KJ, Han S, Hughes SJ, Judge SM, **Judge AR**, Trevino JG. *Cancers (Basel)*. Feb 1;12(2), 2020

IL-8 Released from Human Pancreatic Cancer and Tumor-Associated Stromal Cells Signals through a CXCR2-ERK1/2 Axis to Induce Muscle Atrophy. Callaway CS\*, Delitto AE, D'Lugos AC<sup>†</sup>, Patel R, Nosacka RL\*, Delitto D, Deyhle MR<sup>†</sup>, Trevino JG, Judge SM and **Judge AR**. *Cancers*, 11(12), 1863; 2019.

Racial and Ethnic Disparities in a State-wide Registry of Patients with Pancreatic Cancer and An Exploratory Investigation of Cancer Cachexia as a Contributor to Observed Inequities. Permuth J, Clark Daly A, Jeong D, Choi J, Cameron M, Chen TD, Teer J, Barnett T, Li J, Powers B, Kumar N,

George T, Ali K, Huynh T, Vyas S, Gwede C, Simmons V, Hodul P, Carballido E, **Judge AR**, Fleming J, Merchant N, Trevino JG. *Cancer Medicine*, Jun;8(6):3314-3324, 2019

Colon 26 adenocarcinoma (C26)-induced cancer cachexia impairs skeletal muscle mitochondrial function and content. Neyroud D, Nosacka RL\*, **Judge AR**, Hepple RT. *J Muscle Res Cell Motil*. Mar;40(1):59-65, 2019

Hodge BA, Zhang X, Gutierrez-Monreal MA, Cao Y, Hammers DW, Yao Z, Wolff CA, Du P, Kemler D, **Judge AR**, Esser KA. MYOD1 functions as a clock amplifier as well as a critical co-factor for downstream circadian gene expression in muscle. *eLife*, Feb 21;8. Pii:e43017, 2019.

Murphy K, Hossain M, Swiderski K, Chee A, Naim T, Trieu J, Stapleton D, Judge SM, Trevino JG, **Judge AR** and Lynch G. Mas receptor activation slows tumor growth and attenuates muscle wasting in cancer. *Cancer Res*. Feb 15;79(4):706-719, 2019

Gerber MH, Underwood PW, Judge SM, Delitto D, Delitto AE, Nosacka RL\*, DiVita BB, Thomas RM, Permuth JB, Hughes SJ, Wallet SM, **Judge AR**, Trevino JG. Local and Systemic Cytokine Profiling for Pancreatic Ductal Adenocarcinoma to Study Cancer Cachexia in an Era of Precision Medicine. *Int J Mol Sci*, Dec 1;19(12), 2018.

Judge SM, Nosacka RL\*, Delitto D, Gerber MH, Cameron ME, Trevino JG, **Judge AR**. Skeletal Muscle Fibrosis in Pancreatic Cancer Patients with Respect to Survival. *JNCI Cancer Spectr*. Jul;2(3), 2018

Kandarian, SC, Nosacka RL\*, Delitto AE, **Judge AR**, Judge SM, Ganey J, Moreira JD and Jackman R. Tumor-derived LIF is a major driver of cancer cachexia and mortality in C26 tumor-bearing mice. *J Cachexia Sarcopenia Muscle*. Dec;9(6):1109-1120, 2018.

Fields, DP, Roberts, BM\*, Simon, AK, **Judge, AR**, Fuller, DD and Mitchell, GS. Cancer cachexia impairs neural respiratory drive in hypoxia but not hypercapnia. *J Cachexia Sarcopenia Muscle*. Oct 25, 2018.

Van Pelt DW, Confides AL, **Judge AR**, Vanderklish PW, Dupont-Versteegden EE. Cold shock protein RBM3 attenuates atrophy and induces hypertrophy in skeletal muscle. *J Muscle Res Cell Motil*. Jul 26, 2018

Go KL, Delitto D, Judge SM, Gerber MH, George TJ, Behrns KE, Hughes SJ, **Judge AR** and Trevino JG. Orthotopic Patient-Derived Pancreatic Cancer Xenografts Engraft Into the Pancreatic Parenchyma, Metastasize and Induce Muscle Wasting to Recapitulate the Human Disease. *Pancreas*. Jul;46(6):813-819, 2017.

Ahn B, Coblenz P, Beharry AW\*, Patel N, **Judge AR**, Moylan JS, Hoopes CW, Bonnell MR and Ferreira LF. Diaphragm abnormalities in patients with end-stage heart failure: NADPH oxidase upregulation and protein oxidation. *Front. Physiol*. Jan 9;7:686, 2017.

Delitto D, Judge SM, George TJ, Wallet SM, Sarosi GA, Thomas RM, Behrns KE, Hughes SJ, **Judge AR** and Trevino JG. A Clinically Applicable Muscular Index Predicts Long-term Survival in Resectable Pancreatic Cancer. *Surgery*. Apr;161(4):930-938, 2017.

#Delitto D, #Judge SM, Knowlton AE, Nosacka RL\*, Rocha FB, DiVita BB, George TJ, Behrns KE, Hughes SJ, Wallet SM, **Judge AR** and Trevino JG. Human pancreatic cancer xenografts recapitulate



key aspects of cancer cachexia. *Oncotarget*. Jan 3;8(1):1177-1189, 2017. <sup>#</sup>*Authors contributed equally to this work*

Smith IJ, Roberts B\*, Beharry A\*, Godinez GL, Payan DG, Kinsella TM, **Judge AR** and Ferreira LF. Janus Kinase inhibition prevents cancer- and myocardial infarction-mediated diaphragm muscle weakness in mice. *Am J Physiol Regul Integr Comp Physiol*. Apr 15;310(8):R707-10, 2016.

Gonzalez-Rothi EJ, Armstrong GT, Cerreta AJ, Fitzpatrick GM, Reier PJ, Lane MA, **Judge AR**, Fuller DD. Forelimb muscle plasticity following unilateral cervical spinal cord injury. *Muscle and Nerve*. Dec 10, 2015

Beharry AW\* and **Judge AR**. Differential expression of *HDAC* and *HAT* genes in atrophying skeletal muscle. *Muscle and Nerve*. Sep 15, 2015

Ryder DJ<sup>†</sup>, Judge SM, Beharry AW\*, Farnsworth CL, Silva JC and **Judge AR**. Identification of the Acetylation and Ubiquitin-Modified Proteome during the Progression of Skeletal Muscle Atrophy. *PLoS ONE*. Aug 24;10(8), 2015

Ahn B, Beharry AW\*, Frye GS, **Judge AR**, Ferreira LF. NAD(P)H oxidase subunit p47phox is elevated, and p47phox knockout prevents diaphragm contractile dysfunction in heart failure. *Am J Physiol Lung Cell Mol Physiol*. Sep 1;309(5):L497-505, 2015

Judge SM, Wu CL, Beharry AW\*, Roberts BM\*, Ferreira LF, Kandarian SC and **Judge AR**. Genome-wide identification of FoxO-dependent gene networks in skeletal muscle during C26 cancer cachexia. *BMC Cancer*. Dec 24;14:997, 2014.

Reid MB, **Judge AR** and Bodine SC. CrossTalk opposing view: The dominant mechanism causing disuse muscle atrophy is proteolysis. *J Physiol*. 15 December; 592 (24), 2014.

Ye F, McCoy SC, Ross HH, Bernardo JA, Beharry AW\*, Senf SM<sup>†</sup>, **Judge AR**, Beck DT, Conover CF, Cannady DF, Smith BK, Yarrow JF, Borst SE. Transcriptional regulation of myotrophic actions by testosterone and trenbolone on androgen-responsive muscle. *Steroids*. Jun 10;87C:59-66, 2014.

Beharry AW\*, Sandesara PB, Roberts BM\*, Ferreira LF, Senf SM<sup>†</sup>, and **Judge AR**. HDAC1 activates FoxO and is both sufficient and required for skeletal muscle atrophy. *J Cell Sci*. Apr 1;127(Pt 7):1441-53, 2014

Gill LC, Ross HH, Lee KZ, Gonzalez-Rothi EJ, Dougherty BJ, **Judge AR**, Fuller DD. Rapid diaphragm atrophy following cervical spinal cord hemisection. *Respir Physiol Neurobiol*. Feb 1;192:66-73 2014.

Roberts BM\*, Frye GS, Ahn B, Ferreira LF and **Judge AR**. Cancer cachexia decreases specific force and accelerates fatigue in limb muscle. *Biochem Biophys Res Commun*. Jun 7;435(3):488-92, 2013

Welc SS, **Judge AR** and Clanton TL. Skeletal muscle interleukin-6 regulation in hyperthermia. *Am J Physiol. Cell Physiol*. Aug 15;305(4):C406-13, 2013

Senf SM<sup>†</sup>, Howard TM, Ahn B, Ferreira LF and **Judge AR**. Loss of the inducible Hsp70 delays the inflammatory response to skeletal muscle injury and severely impairs muscle regeneration. *PLoS ONE*. Apr 23;8(4), 2013

Diaphragm atrophy and contractile dysfunction in a murine model of pulmonary hypertension. Ahn B, Empinado HM, Al-Rajhi M, **Judge AR**, Ferreira LF. *PLoS ONE*. Apr 22;8(4), 2013

Roberts BM\*, Ahn B, Smuder AJ, Al-Rajhi M, Gill LC, Beharry AW\*, Powers SK, Fuller DD, Ferreira LF, **Judge AR**. Diaphragm and ventilatory dysfunction during cancer cachexia. *The FASEB J*. Jul;27(7):2600-10, 2013

**Judge AR**, Powers SK, Ferreira LF and Bamman MM. Meeting Synopsis: Advances in Skeletal Muscle Biology in Health and Disease Gainesville, Florida February 22nd to 24th 2012 Day 2: "Muscle diseases and regeneration" and "Clinical/translational research". *Frontiers in Physiology*. May, 2012 (Invited Meeting synopsis)

**Judge AR**, Powers SK, Ferreira LF and Bamman MM. Meeting Synopsis: Advances in Skeletal Muscle Biology in Health and Disease Gainesville, Florida February 22nd to 24th 2012 Day 2: "Muscle diseases and regeneration" and "Clinical/translational research". *Frontiers in Physiology*. May, 2012 (Invited Meeting synopsis)

Powers SK, Smuder AJ, **Judge AR**. Oxidative stress and disuse muscle atrophy: cause or consequence? *Curr Opin Clin Nutr Metab Care*. May; 15(3): 240–245, 2012 (Invited Review)

Falk DJ and **Judge AR**. Putting the spice in weaning. *Crit Care Med*. Mar;40(3):1022-3, 2012 (Invited Editorial)

Senf SM\* and **Judge AR**. Determination of gene promoter reporter activity in skeletal muscles in vivo. *Methods Mol Biol*. 798:461-472, 2012 (Invited Methods Paper)

Inhibition of FoxO transcriptional activity prevents muscle fiber atrophy during cachexia and induces hypertrophy. Reed SA<sup>†</sup>, Sandesara PB, Senf SM\* and **Judge AR**. *FASEB J*. Mar; 26(3):987-1000, 2012

Long-term perturbation of muscle iron homeostasis following hindlimb suspension in old rats is associated with high levels of oxidative stress and impaired recovery from atrophy. Xu J, Hwang JC, Lees HA, Wohlgemuth S, Knutson MD, **Judge AR**, Dupont-Versteegden E, Marzetti E and Leeuwenburgh L. *Exp Gerontol*, Jan 47(1):100-108, 2012

p300 Acetyltransferase Activity Differentially Regulates the Localization and Activity of the FOXO Homologues in Skeletal Muscle. Senf SM\*, Sandesara PB, Reed SA<sup>†</sup>, and **Judge AR**. *Am J Physiol. Cell Physiol*. Jun;300(6):C1490-501, 2011

Reed SA<sup>†</sup>, Senf SM\*, Cornwell EW, Kandarian SC, **Judge AR**. Inhibition of IkappaB kinase alpha (IKK $\alpha$ ) or IKKbeta (IKK $\beta$ ) plus forkhead box O (Foxo) abolishes skeletal muscle atrophy. *Biochem Biophys Res Commun*. Feb 18;405(3):491-6, 2011

Hain BA\*, Dodd SL and **Judge AR**. IkB $\alpha$  degradation is necessary for skeletal muscle atrophy associated with contractile claudication. *Am J Physiol: Regul Comp Physiol*. Mar;300(3):R595-604, 2011

- Buford TW, Anton SD, **Judge AR**, Marzetti E, Wohlgemuth SE, Carter CS, Leeuwenburgh C, Pahor M, Manini TM. Models of accelerated sarcopenia: Critical pieces for solving the puzzle of age-related muscle atrophy. *Ageing Res Rev.* Oct;9(4):369-83, 2010
- McClung JM, **Judge AR**, Powers SK, and Yan Z. p38 MAPK links oxidative stress to autophagy-related gene expression in cachectic muscle wasting. *Am J. Physiol. Cell Physiol.* Mar;298(3):C542-9, 2010
- Senf SM\*, Dodd SL and **Judge AR**. FOXO Signaling is Required for Disuse Muscle Atrophy and is Directly Regulated by Hsp70. *Am J. Physiol. Cell Physiol.* Jan;298(1):C38-45, 2010
- Dodd SL, Gagnon B, Senf SM\*, Hain BA\* and **Judge AR**. ROS-mediated activation of NF- $\kappa$ B and Foxo during muscle disuse. *Muscle & Nerve.* Jan;41(1):110-3, 2010
- Dodd SL, Hain BA\*, Senf SM\* and **Judge AR**. Hsp27 inhibits IKK $\beta$ -induced NF- $\kappa$ B activity and skeletal muscle atrophy. *FASEB J.* Oct;23(10):3415-23, 2009.
- McClung JM, **Judge AR**, Talbert EE, Powers SK. Calpain-1 is required for hydrogen Peroxide induced myotube atrophy. *Am J. Physiol. Cell Physiol.* Feb;296(2):C363-71, 2009
- Dodd SL, Hain BA\*, **Judge AR**. Hsp70 prevents disuse muscle atrophy in senescent rats. *Biogerontology.* Oct;10(5):605-11, 2009
- Senf SM\*, Dodd SL, McClung JM, **Judge AR**. Hsp70 overexpression inhibits NF- $\kappa$ B and Foxo3a transcriptional activities and prevents skeletal muscle atrophy. *FASEB J.* Nov;22(11):3836-45, 2008.
- Pickett A, O'Keeffe R, **Judge AR**, Dodd SL. The in vivo rat muscle force model is a reliable and clinically relevant test of consistency among botulinum toxin preparations. *Toxicon.* Sep 1;52(3):455-64, 2008
- Pipinos II, **Judge AR**, Selsby JT, Zhen Z, Swanson SA, Nella AA, Dodd SL. Basic science review: the myopathy of peripheral arterial occlusive disease: Part 2. Oxidative stress, neuropathy, and shift in muscle fiber type. *Vasc Endovascular Surg.* 42(2):101-12, 2008
- Judge AR**, Selsby JT, Dodd SL. Antioxidants attenuate oxidative damage in skeletal muscle during mild ischemia. *Exp Physiol.* 93(4):479-85, 2008
- Pipinos, II, **Judge AR**, Selsby JT, Zhu Z, Swanson SA, Nella AA, Dodd SL. The myopathy of peripheral arterial occlusive disease. Part 1: Functional and Histomorphological Changes and Evidence for Mitochondrial Dysfunction. *Vasc Endovascular Surg.* 41(6): 481-489, 2008
- Makris KJ, Nella AA, Zhu Z, Swanson SA, Casale GP, Gutti TL, **Judge AR**, Pipinos II. Mitochondriopathy of peripheral arterial disease. *Vascular.* 15(6):336-43, 2007
- Judge AR.**, Koncarevic A., Hunter R.B., Liou H.C., Jackman R., and Kandarian S.C. A role for I $\kappa$ B $\alpha$ , but not c-Rel, in skeletal muscle atrophy. *Am J. Physiol. Cell Physiol.* Aug 23, 2006
- Pipinos II, **Judge AR**, Zhu Z, Selsby JT, Swanson SA, Johanning JM, Baxter BT, Lynch TG and Dodd SL. Mitochondrial Defects and Oxidative Damage in Patients with Peripheral Arterial Disease. *Free Radic Biol Med.* Jul 15;41(2):262-9, 2006

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**Judge AR** and Dodd SL. Oxidative damage to skeletal muscle following an acute bout of contractile claudication. *Atherosclerosis*. 171(2): 219-224, 2003

## **LECTURES**

Host Murf1 deletion preserves muscle and slows pancreatic cancer progression. 7<sup>th</sup> Cancer Cachexia Conference. **Edinburgh, Scotland**. September 2023. *Invited Talk*

FoxP1 is a transcriptional repressor associated with cancer cachexia that induces skeletal muscle wasting and weakness. 16<sup>th</sup> International Conference on Cachexia, Sarcopenia and Muscle Wasting. **Stockholm, Sweden**. June 2023. *Invited Talk*

Targeting CXCR2 signaling counteracts cancer cachexia. 16<sup>th</sup> International Conference on Cachexia, Sarcopenia and Muscle Wasting. **Stockholm, Sweden**. June 2023. *Invited Talk*

Mechanisms of Cancer-Induced Muscle Wasting. University of Texas Health Medical School, **Houston, TX**. May 2023. *Invited Talk*

Blocking Muscle Wasting Impedes Tumor Growth. Central Florida Metabolism Triangle. **St Petersburg, FL**. March 2023. *Invited Talk*

MEF2c-dependent downregulation of myocilin mediates cancer-induced muscle wasting and associates with cachexia in patients with cancer. 15<sup>th</sup> International Conference on Cachexia, Sarcopenia and Muscle Wasting. **Lisbon, Portugal**. June 2022. *Invited Talk*

Mechanisms to counter cancer cachexia. International Biochemistry of Exercise. **Toronto, Canada**, May 2022. *Invited Talk*

Molecular mechanisms of cancer-induced muscle wasting. Padua Days on Muscle and Mobility Medicine. **Padua, Italy**. *Invited Talk*

Patient centered forward and reverse translation to advance cachexia research. Cancer Cachexia Retreat, Moffitt Cancer Center. **Tampa, USA**. *Invited Talk*

Mechanisms of cancer-induced muscle atrophy. 6<sup>th</sup> Cancer Cachexia Conference. **Virtual**. August

## 2021. Invited Talk

Role of FoxP1 in skeletal muscle pathology. Padua Days on Muscle and Mobility Medicine. **Virtual**. *Invited Talk*

Mechanisms of Muscle Wasting in Cancer Cachexia. **York University, Canada**, February, 2020. *Invited Talk*

Tumor-derived chemokines in cancer cachexia. Musculoskeletal Health Research Conference “Bone and Muscle Interaction: the Mechanical and Beyond”. **Indianapolis**, August 2019. *Invited Talk*

Intracellular mechanisms of cancer-induced muscle wasting. Development of Small Molecules to Reduce Muscle Atrophy and Weakness in Hospitalized Veteran Patients. **Iowa City**, June 2019. *Invited Talk*

Mouse avatars in cancer cachexia. 11<sup>th</sup> International Conference on Cachexia, Sarcopenia and Muscle Wasting. **Maastricht, Netherlands**. December 2018. *Invited talk*

Novel skeletal muscle pathology and cachexia-inducing circulating factors derived from pancreatic cancer patients. 4<sup>th</sup> International Cancer Cachexia Conference, **Philadelphia**, September 2018. *Invited talk*

Human xenografts as a suitable model for studying cancer cachexia. 10<sup>th</sup> International Conference on Cachexia, Sarcopenia and Muscle Wasting. **Rome, Italy**. December 2017. *Invited talk*

Investigating cellular processes that drive muscle wasting. 2017 Australian Physiological Society Conference. **Melbourne, Australia**. November, 2017. *Invited Talk*

Muscle pathology in pancreatic Cancer Cachexia. **West Virginia University** Cancer Institute, October 2017. *Invited Talk*

Foxo and Foxo regulation in the pathogenesis of muscle wasting. 9<sup>th</sup> International Conference on Cachexia, Sarcopenia and Muscle Wasting. **Berlin, Germany**. December 2016. *Invited talk*

Novel role of FoxO in initiating cancer-induced muscle pathology. 3<sup>rd</sup> International cachexia conference, **Washington D.C.**, September 2016. *Invited talk*

Intracellular Mechanisms of Skeletal Muscle Pathology in Cancer Cachexia. **University of Iowa** Fraternal Order of Eagles Diabetes Research Center, July 2016. *Invited talk*

Novel role of FoxO in initiating cancer-induced muscle pathology. **Indiana University** Simon Cancer Center Cachexia Working Group/IUPUI Center for Cachexia Research, Innovation and Therapy. **Indianapolis**, May 2016. *Invited talk*

Novel role of FoxO in initiating cancer-induced muscle pathology. **University of Nebraska Medical School**, February 2016. *Invited Talk*

Cancer-induced skeletal muscle pathology. Translational Research Institute for Metabolism and Diabetes, Florida Hospital, **Sanford/Burnham Institute, Orlando, FL**, Fall 2015. *Invited talk*

Cancer-induced skeletal muscle pathology. Department of Physiology & Functional Genomics, University of Florida, Fall 2015. *Invited talk*

Inhibition of FoxO prevents cancer induced diaphragm atrophy and inhibits cardiac pathology. <sup>2<sup>nd</sup></sup> International cachexia conference, **Montreal, Canada**, September 2014. *Selected Talk*

Novel gene networks and biological pathways regulated by FoxO in skeletal muscle during cancer cachexia. **13th International Congress on Neuromuscular Diseases**, Nice, France, July 2014. *Selected Talk*

FoxO signaling in muscle during cancer cachexia. **The Ohio State University**. May 2014. *Invited talk*

Targeting FoxO transcription factors to counter muscle wasting during cancer. **University of Louisville**. May 2014. *Invited talk*

Identification of novel FoxO target genes. Advances in Skeletal Muscle Biology in Health and Disease Biennial Conference, University of Florida, Spring 2014. *Invited talk*

New insights into the regulation of FoxO signaling in skeletal muscle. International Conference on Muscle Wasting. **Ascona, Switzerland**. September 2013. *Invited talk*

Skeletal Muscle Regeneration: The Role of Hsp70. Department of Biomedical Engineering, University of Florida, Fall 2012. *Invited talk*

Muscle Wasting in Cancer Cachexia. University of Florida Shands Cancer Center. Spring 2012

Role of Hsp70 in muscle regeneration, Department of Applied Physiology, **University of Delaware**, Fall 2011. *Invited talk*

Angiogenesis, Arteriogenesis, and muscle function: contributions of animal models to understanding peripheral arterial disease. **Experimental Biology, Washington DC**, April 2011. *Selected talk*

Regulation of skeletal muscle atrophy. **Southeast Chapter of the American College of Sports Medicine, Greenville, SC**, February 2011. *Symposium*

Regulation of FOXO signaling during skeletal muscle atrophy, Muscle Biology/Physiology seminar series, University of Florida, Spring 2010. *Invited talk*

The role of heat shock proteins in the regulation of skeletal muscle mass during, and following, cast immobilization. **Southeast Chapter of the American College of Sports Medicine, Greenville, SC**, February 2010. *Symposium*

Heat shock proteins and skeletal muscle atrophy, Department of Physiology, **University of Kentucky**, Fall 2009. *Invited talk*

Exercise & Peripheral Arterial Disease, Department of Physical Therapy, University of Florida, Fall 2009. *Invited talk*

OutFOXOing muscle atrophy: The role of Hsp70, Department of Applied Physiology & Kinesiology, University of Florida, Fall 2009

Transcriptional regulation of muscle mass, Department of Physiology & Functional Genomics, University of Florida, Fall 2009. *Invited talk*

Heat shock proteins: Regulators of cell signaling and skeletal muscle atrophy. **Beth Israel Deaconess Medical Center/Harvard Medical School, Boston**. Spring 2009. *Invited talk*

Heat shock proteins as signaling molecules. Department of Neuroscience, University of Florida, Spring 2009. *Invited talk*

Heat shock proteins and muscle atrophy. Advances in Skeletal Muscle Biology in Health and Disease Biennial Conference, University of Florida, Spring 2009. *Invited talk*

Heat shock proteins as signaling molecules in skeletal muscle during disuse and aging. The Interdisciplinary Research Seminar Series, College of Medicine, University of Florida, Fall 2008. *Invited talk*

Oxidative damage in the skeletal muscle of peripheral arterial disease patients. Advances in Skeletal Muscle Biology in Health and Disease Biennial Conference, University of Florida, Spring 2007. *Invited talk*

NF- $\kappa$ B signaling in disuse muscle atrophy. Department of Applied Physiology and Kinesiology, University of Florida, Spring 2007. *Invited talk*

NF- $\kappa$ B signaling in disuse muscle atrophy. Department of Exercise Science Seminar, **University of Massachusetts**, Fall 2006. *Invited talk*

Oxidative damage to skeletal muscle following exercise-induced claudication. Department of Exercise Science Seminar, **University of Massachusetts**, Fall 2003. *Invited talk*

Exercise and ischemia-reperfusion injury in skeletal muscle. Center for Exercise Science Seminar, University of Florida, Fall 2002. *Invited talk*

### **POSTER PRESENTATIONS OF DATA FROM JUDGE LAB**

Underlined - ARJ

Graduate Student - (g)

Post-Doctoral Associate/Fellow - (p)

Other Lab Associate - (&)

### **International**

The role of the complement in pancreatic cancer cachexia. Andrew D'Lugos (p). Cancer Cachexia Virtual Conference 2020. *Oral and poster presentation*

Forkhead Box P1 (FoxP1) upregulation is sufficient and required for skeletal muscle wasting. Daria Neyroud (p). Cancer Cachexia Virtual Conference 2020. *Poster presentation*

CXCL1 is released from pancreatic cancer cells and is sufficient to induce skeletal muscle wasting. Chandler Callaway (g). Cancer Cachexia Virtual Conference 2020. *Poster presentation*

Interleukin-8 is Released from Human Pancreatic Tumor and Stromal Cells, and Causative in Skeletal Muscle Atrophy. Andrew Judge. Experimental Biology Conference, Orlando, April 2019. *Poster presentation*

The role of Interleukin 8 (IL-8) in Pancreatic Cancer Cachexia. Chandler Callaway (g). Advances in Skeletal Muscle Biology in Health and Disease Conference, Gainesville, FL, March 2019. *Poster presentation*

IL-8 treatment induces muscle wasting and impairs muscle regeneration outcomes. Mike Deyhle (p). Advances in Skeletal Muscle Biology in Health and Disease Conference, Gainesville, FL, March 2019. *Poster presentation*

Proteomic profiling of skeletal muscle from cachectic pancreatic cancer patients. Andrew D'Lugos (p). Advances in Skeletal Muscle Biology in Health and Disease Conference, Gainesville, FL, March 2019. *Poster presentation and selected oral presentation*

Forkhead box P1 (FoxP1) is increased in the skeletal muscle of tumor bearing hosts and sufficient to cause wasting. Daria Neyroud (p). Advances in Skeletal Muscle Biology in Health and Disease Conference, Gainesville, FL, March 2019. *Poster presentation*

Mouse limb and diaphragm muscles show distinct cachexia profiles in response to human pancreatic tumors. Rachel Nosacka (g). Advances in Skeletal Muscle Biology in Health and Disease Conference, Gainesville, FL, March 2019. *Poster presentation*

Skeletal muscle fibrosis in cachectic pancreatic cancer patients positively correlates with body weight loss and associates with decreased survival. Sarah Judge. 4<sup>th</sup> Cancer Cachexia Conference, Philadelphia, September 2018. *Poster presentation*

Loss of Myocilin induces membrane fragility and skeletal muscle wasting and its overexpression deters muscle wasting in C26 tumor-bearing mice. Mike Deyhle (p). 4<sup>th</sup> Cancer Cachexia Conference, Philadelphia, September 2018. *Poster presentation*

Forkhead box P1 (FoxP1) is increased in the skeletal muscle of tumor bearing hosts and sufficient to cause wasting. Daria Neyroud (p). 4<sup>th</sup> Cancer Cachexia Conference, Philadelphia, September 2018. *Poster and selected oral presentation*

IL-8 and CXCL1 are released from primary human pancreatic cancer cells and cause atrophy of muscle cells. Chandler Callaway (g). 4<sup>th</sup> Cancer Cachexia Conference, Philadelphia, September 2018. *Poster presentation*

Proteomic profiling of skeletal muscle from cachectic pancreatic cancer patients. Andrew D'Lugos (p). 4<sup>th</sup> Cancer Cachexia Conference, Philadelphia, September 2018. *Poster presentation*

Mouse limb and diaphragm muscles show distinct cachexia profiles in response to human pancreatic tumors. Rachel Nosacka (g). 4<sup>th</sup> Cancer Cachexia Conference, Philadelphia, September 2018. *Poster presentation*

Modeling Pancreatic Cancer Cachexia Using Mouse Avatars. Rachel L. Nosacka (g). Advances in Skeletal Muscle Biology in Health and Disease Conference, Gainesville, FL, March 2017. *Poster presentation*



Parallel analysis of skeletal muscle from cachectic PDAC patients and their mouse avatars identifies novel transcriptional and proteomic signatures of cachexia with consistent fibrosis in PDAC patients. Rachel L. Nosacka (g). Cancer Cachexia Conference, Washington, DC, USA, September 2016. *Poster presentation*

Causative Role of MEF2C in Pre-Cachectic Downregulation of Muscle Structural Genes and Muscle Atrophy During Cancer Cachexia. Rachel L. Nosacka (g). Advances in Skeletal Muscle Biology in Health and Disease Conference, Gainesville, FL, January 2016. *Poster presentation*

Causative role of MEF2c in pre-cachectic downregulation of muscle structural genes and muscle atrophy in tumor-bearing mice. AR Judge. 8<sup>th</sup> International Cachexia Conference, Paris, France, December 2015. *Poster and oral presentation*

Cachexia mediates alterations in the neuromuscular junction in a murine model of colorectal cancer. DJ Falk. 8<sup>th</sup> International Cachexia Conference, Paris, France, December 2015. *Poster and oral presentation*

Inhibition of FoxO prevents cancer induced diaphragm atrophy and inhibits cardiac pathology. AW Beharry (g). 2<sup>nd</sup> International cachexia conference, Montreal, Canada, September 2014. *Poster and oral presentation*

Cebpb is a novel FoxO target gene during cancer cachexia. BM Roberts (g). 2<sup>nd</sup> International cachexia conference, Montreal, Canada, September 2014. *Poster presentation*

Hsp70 is a damage-associated molecular pattern (DAMP) that is sufficient to induce cytokine and chemokine expression from skeletal muscle cells. Sarah M. Senf (g). Molecular Mechanisms of Muscle

Growth and Wasting in Health and Disease Conference, Centro Stefano Franscini, Monte Verita-Ascona, Switzerland, September 2013. *Poster presentation*.

Skeletal Muscle-Derived Hsp70 is Necessary for the Inflammatory Response following Muscle Injury. Senf SM (g). Sixth International Symposium on Heat Shock Proteins in Biology and Medicine, Alexandria, Virginia, USA, November 2012. *Poster presentation*.

Hsp70 Activates the Skeletal Muscle Inflammatory Response Following Muscle Injury. SM Senf (p). Integrative Biology of Exercise, Westminster, Colorado, October 2012. *Poster presentation*

Skeletal muscle contractile dysfunction in C-26 tumor bearing mice. BM Roberts (g). Cancer Cachexia: Molecular Mechanisms and Therapeutic Approaches, Boston, MA. September 2012. *Poster presentation*

Diaphragm muscle fiber atrophy and contractile dysfunction, and ventilatory dysfunction in C-26 tumor bearing mice. AW Beharry (g). Cancer Cachexia: Molecular Mechanisms and Therapeutic Approaches, Boston, MA. September 2012. *Poster presentation*

Impaired muscle growth and regeneration in Hsp70 <sup>-/-</sup> mice. SM Senf (g). Advances in Skeletal Muscle Biology in Health and Disease, Gainesville, FL February 2012. *Poster presentation*

NF-κB binding and transcriptional changes in skeletal muscle of patients with Peripheral Arterial Disease. PB Sandesara (&). Advances in Skeletal Muscle Biology in Health and Disease, Gainesville, FL February 2012. *Poster presentation*

Hsp70 represses NF- $\kappa$ B-dependent signaling in skeletal muscle and is necessary for normal muscle growth. S.M. Senf (g). International Conference on Muscle Wasting. Ascona, Switzerland. September 2011. *Poster presentation*

Inhibition of Foxo transcriptional activity promotes hypertrophy and prevents muscle atrophy during cancer and sepsis. AR Judge. International Conference on Muscle Wasting. Ascona, Switzerland. September 2011. *Poster presentation*

NF- $\kappa$ B signaling and skeletal muscle fiber atrophy: a rodent model of exercise with restricted blood supply, and Peripheral Arterial Disease patients. Experimental Biology, Washington DC, April 2011. *Poster presentation*

Foxo signaling is required for muscle atrophy associated with sepsis. S.A. Reed (p). Integrative Physiology of Exercise, Miami Beach, FL. September 2010. *Poster presentation*

Foxo activity is required for the normal atrophy program during cancer induced cachexia. S.A. Reed (p). Integrative Physiology of Exercise, Miami Beach, FL. September 2010. *Poster presentation*

Pervanadate induces the expression of specific atrophy-related genes in C2C12 myotubes. P.B. Sandesara (&). Integrative Physiology of Exercise, Miami Beach, FL. September 2010. *Poster presentation*

p300 acetyltransferase activity is necessary and sufficient to repress FOXO in skeletal muscle. S.M. Senf (g). New directions in Biology and Disease of skeletal muscle, Ottawa, ON, Canada. May 2010. *Poster presentation*

Acetylation of Hsp70 and regulation of FOXO transactivation. S.M. Senf (g). 5<sup>th</sup> Cachexia Conference, Barcelona, Spain. December 2009. *Poster presentation*

Hsp70 Represses Disuse-Induced Acetylation and Modulates FOXO3a Protein-Protein Interactions in the Nucleus. S.M. Senf (g). Frontiers in Myogenesis and Skeletal Muscle Satellite and Stem Cells Conference, New York, NY, May 2009. *Poster presentation*

Common transcriptional changes in NF- $\kappa$ B signaling in skeletal muscle from Peripheral Arterial Disease patients and following repeated bouts of exercise claudication in a rat model. AR Judge. Frontiers in Myogenesis and Skeletal Muscle Satellite and Stem Cells Conference, New York, NY, May 2009. *Poster presentation*

Hsp70 associates with Foxo3a and inhibits Foxo3a-dependent transcription of atrogen-1 in skeletal muscle, in vivo. S.M. Senf (g). Integrative Biology of Exercise Conference, Hilton Head, SC. September 2008. *Poster presentation*

Hsp27 Overexpression is Sufficient to Inhibit NF- $\kappa$ B Activation During Skeletal Muscle Disuse. B.A. Hain (g). Integrative Biology of Exercise Conference, Hilton Head, SC. September 2008. *Poster presentation*

Overexpression of Hsp70 inhibits NF- $\kappa$ B activation and skeletal muscle atrophy. S.M. Senf (g). 4<sup>th</sup> Cachexia Conference, Tampa, FL. December 2007. *Poster presentation*

**National**

Skeletal Muscle Pathology in Cachectic Cancer Patients. Rachel L. Nosacka (g). Association for Clinical and Translational Science Conference, Washington, DC, USA, April 2016. *Poster presentation*

**Regional**

The effect of tumor burden on skeletal muscle during cancer cachexia. B Roberts (g). Southeastern American College of Sports Medicine, Jacksonville, FL. February 2012. *Poster presentation*

Exercise claudication-induced NF- $\kappa$ B activation is required for the associated skeletal muscle atrophy in a rodent model. B.A. Hain (g). Southeastern American College of Sports Medicine, Greenville, SC, February 2010. *Poster presentation*

**Local**

The role of Interleukin 8 (IL-8) in Pancreatic Cancer Cachexia. Chandler Callaway (g). Neuromuscular Plasticity Symposium, University of Florida, Gainesville, FL, March 2019. *Poster presentation*

IL-8 treatment induces muscle wasting and impairs muscle regeneration outcomes. Mike Deyhle (p). Neuromuscular Plasticity Symposium, University of Florida, Gainesville, FL, March 2019. *Poster presentation*

Proteomic profiling of skeletal muscle from cachectic pancreatic cancer patients. Andrew D'Lugos (p). Neuromuscular Plasticity Symposium, University of Florida, Gainesville, FL, March 2019. *Poster presentation*

Forkhead box P1 (FoxP1) is increased in the skeletal muscle of tumor bearing hosts and sufficient to cause wasting. Daria Neyroud (p). Neuromuscular Plasticity Symposium, University of Florida, Gainesville, FL, March 2019. *Poster presentation*

Mouse limb and diaphragm muscles show distinct cachexia profiles in response to human pancreatic tumors. Rachel Nosacka (g). Neuromuscular Plasticity Symposium, University of Florida, Gainesville, FL, March 2019. *Poster presentation*

Limb and Respiratory Muscles Show Distinct Transcriptional and Morphological Profiles in Cancer Cachexia. Rachel Nosacka (g). Neuromuscular Plasticity Symposium, University of Florida, Gainesville, FL, March 2018. *Poster presentation*

Role of Interleukin-8 in pancreatic cancer cachexia. Chandler Callaway (g). Neuromuscular Plasticity Symposium, University of Florida, Gainesville, FL, March 2018. *Poster presentation*

Modeling Pancreatic Cancer Cachexia Using Mouse Avatars. Rachel L. Nosacka (g). Neuromuscular Plasticity Symposium, University of Florida, Gainesville, FL, March 2017. *Poster presentation*

Cancer-Associated Muscle Pathology: The Role of MEF2c. Rachel L. Nosacka (g). Clinical and Translational Research Institute Research Day, University of Florida, Gainesville, FL, June 2016. *Poster presentation*

Identification of pre-cachectic downregulation of muscle structural genes during cancer cachexia and the causative role of MEF2C. Rachel L. Nosacka (g). Neuromuscular Plasticity Symposium, University of Florida, Gainesville, FL, March 2016. *Poster presentation*

Downregulation of Muscle Structural Proteins during Cancer Cachexia: Mechanisms and Implications. Sarah M. Judge. Neuromuscular Plasticity Symposium, University of Florida, Gainesville, FL, March 2015. *Poster presentation*

FoxO signaling during cancer cachexia in skeletal muscle. BM Roberts (g). Neuromuscular Plasticity Symposium, University of Florida, Gainesville, FL. March 2012. *Poster presentation*

Regenerative Deficits in Hsp70<sup>-/-</sup> Mice Following Muscle Injury are linked to Increased Pro-Inflammatory Signaling. SM Senf (g). Neuromuscular Plasticity Symposium, University of Florida, Gainesville, FL. March 2012. *Poster presentation*

The role of p300 in the regulation of FOXO signaling as it relates to skeletal muscle disuse atrophy. S.M. Senf (g). Neuromuscular Plasticity Symposium, University of Florida, Gainesville, FL. March 2010. *Poster presentation*

Role of Foxo signaling in muscle wasting due to sepsis. S.A. Reed (p). Neuromuscular Plasticity Symposium, University of Florida, Gainesville, FL. March 2012. *Poster presentation*

Foxo activation is required for muscle fiber atrophy during cancer. P.B. Sandesara (&). Neuromuscular Plasticity Symposium, University of Florida, Gainesville, FL. March 2012. *Poster presentation*

Hsp70 enhances skeletal muscle regrowth in old rats. B.A. Hain (g). Neuromuscular Plasticity Symposium, University of Florida, Gainesville, FL. March 2012. *Poster presentation*

Repression of Foxo3a-induced transcription by Hsp70 does not require Foxo3a nuclear export. S.M. Senf (g). Understanding Muscle: From Development to Disease, Columbus, OH, April 2009. *Poster presentation*

Transcriptional regulation of skeletal muscle atrophy genes in a rat exercise claudication model: Role of NF-κB. B.A. Hain (g). Understanding Muscle: From Development to Disease, Columbus, OH, April 2009. *Poster presentation*

Overexpression of Hsp27 attenuates disuse skeletal muscle atrophy. B.A. Hain (g). Neuromuscular Plasticity Symposium, University of Florida, Gainesville, FL. March 2008. *Poster presentation*

Hsp70 inhibits atrogen-1 transcription through specific modulation of Foxo3a signaling. S.M. Senf (g). Neuromuscular Plasticity Symposium, University of Florida, Gainesville, FL. March 2008. *Poster presentation*

Catalase Overexpression is Sufficient to Inhibit Disuse-Induced NF-κB and Foxo Activity. B.J. Gagnon (&). Neuromuscular Plasticity Symposium, University of Florida, Gainesville, FL. March 2008. *Poster presentation*

## **B. INSTRUCTION**

### **COURSE TEACHING AT UNIVERSITY OF FLORIDA**

#### **Graduate Level**

Seminar in Rehabilitation Sciences, PHT6935, Fall 2011,

Exercise Physiology,	PHT6152, Doctorate of Physical Therapy, Spring 2010-present
Physiology of Exercise Training,	PET6255C, Fall 2003,
Muscle Plasticity Journal Club	PET6935, Fall 2014; Spring 2016 – present

### **Undergraduate Level**

Applied Human Physiology,	APK2105C, Spring 2007,
Applied Human Physiology,	PET2350C, Summer 2004,
Applied Human Physiology,	PET2350C, Spring 2004,
Physiology of Exercise Training,	PET3351C, Spring 2004,
Neuromuscular Physiology,	PET4381, Fall 2003,

### **OTHER TEACHING ACTIVITIES AT UNIVERSITY OF FLORIDA**

Advanced Research,	RSD7979, 2011 - Present;
Doctoral Research,	RSD7980, 2011 - Present;
Senior Honors Thesis,	HSC4970, 2011 - Present,
Individual Work,	RSD6905, 2011 - Present;

### **MENTORING**

#### **Current Postdoctoral Fellows**

**Nour Al Zaeed**, PhD Debrecen University

Nour is joining the lab in September 2022 after completing her PhD in Molecular Cell and Immune Biology at Debrecen University in Hungary. She will focus on the role of the complement system in cancer induced cachexia, teasing out upstream initiating mechanisms and downstream effector mechanisms.

#### **Current PhD Students**

**Miles Cameron**, BS

Miles is an MD-PhD student, conducting his Ph.D. in the Rehabilitation Sciences doctorate program. He joined my lab in August 2019 and is currently correlating serum proteomics data from patients with clinical indices of cachexia. He is also exploring the cachexia that develops in patients with gastroesophageal cancer through the study of clinical data and tissue biopsies.

**Martin Schonk**, BS, MS

Martin is a PhD student in the Biomedical Sciences program, Physiology concentration. He joined the lab in June 2022 and is currently focused on understanding the role of FoxP1 in skeletal muscle atrophy and associated pathologies. He is looking for FoxP1 binding partners that facilitate its function

#### **Previous Postdoctoral Fellows**

**Andrew D'Lugos**, PhD University of Arizona

Andrew joined the lab in 2018 after receiving his Ph.D. in skeletal muscle physiology from Arizona State University. Andrew studied skeletal muscle pathology in pancreatic cancer patients and preclinical animal models, with an emphasis on immune system-muscle interactions. In addition, he used genetic mouse models to test the role of immune pathways in mediating cancer-induced muscle wasting. Andrew left in 2022 and is now an Assistant Professor in the Department of Kinesiology at California State University Chico

**Daria Neyroud**, PhD University of Geneva

Daria completed her PhD in Biology in 2015 at the University of Geneva and then conducted a post-doc in Muscle Biology at the University of Florida under Dr. Russel Hepple from 2016-2018. In 2018 Daria was awarded a post-doc mobility fellowship from the Swiss National Science Foundation to continue her postdoctoral training in my lab. During this time, Daria studied the role of FoxP1 in the regulation of muscle mass in tumor bearing hosts. Daria is currently a Senior Researcher at the Institute of Sport Sciences, University of Lausanne

**Mike Deyhle**, PhD Brigham Young University

Mike completed his PhD in Kinesiology in 2018 at Brigham Young University and was a post-doc in my lab from August 2018 to August 2020 studying the role of the CXCR2 receptor in skeletal muscle pathology associated with cancer as well as muscle damage. He is currently a tenure track Assistant Professor at University of New Mexico.

**Dan Ryder**, PhD University of Texas

Dan completed his PhD in Biochemistry and Molecular Biology at the University of Texas in 2009. He completed a two-year post-doc in my lab from 2012-2014, and is currently working for Thomas Reuters in Boston, MA.

**Sarah Senf**, PhD University of Florida

Sarah conducted her PhD in Exercise Physiology in my lab from 2007-2012 and then her post-doc in my lab from 2012-2015. She is now a Research Assistant Professor in the Department of Physical Therapy at the University of Florida.

**Sarah Reed**, PhD University of Florida

Sarah completed her PhD with Dr. Sally Johnson in Animal Sciences and joined the lab in August 2009. She worked on developing our experimental models of sepsis and cancer cachexia and determined the requirement of FoxO activation for muscle atrophy during these conditions. Sarah left the lab for a position as a tenure track Assistant Professor at the University of Connecticut.

**Previous PhD Students:****Chandler Callaway**, BS

Chandler conducted his PhD in the Biomedical Sciences Program with a concentration in Cancer Biology. He joined my lab in March 2018 to study the response of skeletal muscle cells to tumor derived factors. Chandler graduated in Summer 2022 and started a post-doc at University of Colorado Anschutz Medical Campus.

**Rachel Nosacka**, PhD University of Florida

Rachel conducted her PhD in Biomedical Sciences, Cancer Biology concentration from 2014-2019. She is currently a Lead Scientist in Upstream Process Development in the Viral Vector Services Division at Thermo Fisher Scientific in Alachua, Florida.

**Brandon Roberts**, PhD University of Florida

Brandon conducted his PhD in the Rehabilitation Sciences Doctoral program from 2012-2016. He is currently a Captain in the US Army working at the Research Institute of Environmental Medicine in Natick, MA.

**Adam Beharry**, PhD University of Florida

Adam conducted his PhD in Rehabilitation Sciences in my lab from 2011-2015. He currently works at Flagship Biosciences in Westminster, CO.

**Sarah Senf**, PhD University of Florida

Sarah conducted her PhD in Exercise Physiology in my lab from 2007-2012. She is currently a Research Assistant Professor in the Department of Physical Therapy at the University of Florida.

**Current Undergraduate Students:**

**Isabella Santos**, 2021-

Bella is assisting with many of our RNA-seq studies and histological analysis of tissues from tumor bearing hosts.

**Previous Undergraduate Students:**

**Enrique Trevino**, 2019-2022

Enrique assisted with our studies to establish potential mechanisms and timing of skeletal muscle damage, remodeling and fibrosis within diaphragm muscles of mice bearing human (PDAC-PDX) or mouse (KPC) pancreatic tumors. Enrique was awarded an NIH Diversity Supplement in 2019.

**Lam Le**, 2020-2022

Lam assisted with our studies analyzing muscularity and muscle quality from CT scans of people with cancer.

**Jacqueline Lamm**, 2020-2022

Jacqueline assisted with our studies focused on understanding the role of the CXCR2 receptor in tumor-induced muscle wasting

**Justina Brantley**, 2020-2021

Justina assisted with our studies focused on understanding the role of the CXCR2 receptor in tumor-induced muscle wasting

**Rohan Patel**, B.S. Health Science Honors Student, 2017-2018

Rohan assisted with our projects on the role of tumor derived factors in driving skeletal muscle atrophy.

**Meghan Murphy**, B.S. Health Science Honors Student, 2016-2017

Meghan is assisting with our projects on the role of the protein Myocilin in the regulation of skeletal muscle health in tumor bearing hosts.

**Jonathan Heaven**, B.S. Health Science Honors Student, 2016-2017

Meghan is assisting with our projects on the role of the protein Kyphoscoliosis Peptidase in the regulation of skeletal muscle health in tumor bearing hosts.

**Uttav Sandesara**, B.S. Health Science Honors Student, 2013-2014

Uttav assisted with our projects on heat shock protein 70 and skeletal muscle plasticity. He is currently applying to the Medical School.

**Travis Howard**, B.S. Health Science Honors Student, 2011-2012,

Travis assisted with our projects on heat shock protein 70 and skeletal muscle plasticity. He is entering Medical School Fall 2012 at Georgetown

**Jaina Morar**, B.S. Health Science Honors Student, 2010-2011

Jaina's project focused on the role of heat shock proteins in regulating nuclear factor  $\kappa$ B in skeletal muscle cells. Jaina is currently in the Physician's Assistant Program at Yale University

**Brittany Gagnon**, B.S. Exercise Physiology, Spring 2009

Brittany collected data on the role of oxidants as upstream activators of nuclear factor  $\kappa$ B and Forkhead BoxO during muscle disuse. She gained authorship on the resulting manuscript published in Muscle & Nerve. Brittany is currently in the Physician's Assistant Program at the University of Florida.

**Ph.D. Committee Member**

Ryan Montalvo, Applied Physiology, University of Florida

Marley Palmer, Immunology, University of Florida

Sarah Skinner, (Graduated Spring 2022) Rehabilitation Sciences, University of Florida

Andrew Koutnik, (Graduated Spring 2021) Biomedical Sciences, University of South Florida

Lance Riley (Graduated Summer 2019), Physiology & Pharmacology, University of Florida

James Thomas (Graduated Summer 2017), Genetics, University of Florida

Philip Coblentz (Graduated Spring 2017), Applied Physiology, University of Florida

Bumsoo Ahnn (Graduated Spring 2014), Exercise Physiology, University of Florida

Erin Talbert ((Graduated Spring, 2013) Exercise Physiology, University of Florida

Eliza Rothi-Gonzalez (Graduated Spring, 2013), Rehabilitation Sciences, University of Florida

Luther Gill (Graduated Fall, 2012), Rehabilitation Sciences, University of Florida

**Masters Committee Member:**

Brandon Roberts M.S. Human Performance, (Graduated Spring 2012), University of Florida

Anoop Balchandran, M.S. Human Performance, (Graduated Fall, 2007), University of Florida

Om Prakash, M.S. Human Performance, (Graduated Spring, 2007), University of Florida

Rupa Nair, M.S. Human Performance, (Graduated Spring, 2007), University of Florida

**STUDENT AWARDS**

Chandler Callaway, 2020, UFHCC Predoctoral Award

Rohan Patel, 2019 Undergraduate Dean's Scholar Award

Daria Neyroud, 2019, Outstanding Post-Doc Poster Award, Neuromuscular Plasticity Symposium, University of Florida

Chandler Callaway, 2019, Outstanding Pre-Doc Poster Award, Neuromuscular Plasticity Symposium, University of Florida

Rachel Nosacka, 2018, Outstanding Pre-Doc Poster Award, Neuromuscular Plasticity Symposium, University of Florida

Rohan Patel, 2018-2019 University Scholars Program Award, University of Florida

Rachel Nosacka, 2017, UFHCC Predoctoral Award

Rachel Nosacka, 2016, Outstanding Research Presentation, International Cancer Cachexia Conference, Washington DC

Jonathan Heaven, 2016-2017 University Scholars Program Award, University of Florida

Meghan Murphy, 2016-2017 University Scholars Program Award, University of Florida

Rachel Nosacka, 2016, Outstanding Pre-Doc Poster Award, Neuromuscular Plasticity Symposium, University of Florida



Sarah Senf, 2015, Outstanding Post-Doc Poster Award, Neuromuscular Plasticity Symposium, University of Florida

Uttav Sandesara, 2014, Undergraduate Dean's Scholar Award

Adam Beharry, 2014, Top 8 Abstract (\$300 travel award), College of Public Health & Health Professions Research Day

Brandon Roberts, 2014, Top 15 Abstract (\$300 travel award), College of Public Health & Health Professions Research Day

Dan Ryder, 2013, Outstanding Post-Doc Poster Award, Neuromuscular Plasticity Symposium, University of Florida

Dan Ryder, 2013, Runner-up, Best poster, Post-doctoral research day, University of Florida

Brandon Roberts, 2013, Highest Ranking Abstract (\$1,000 travel award), College of Public Health & Health Professions Research Day

Sarah Senf, 2012, Best Poster Award, Sixth International Symposium on Heat Shock Proteins in Biology and Medicine, Alexandria, Virginia

Brandon Roberts, Graduate School Fellowship, 2012-2016

Travis Howard, 2012, Undergraduate Dean's Scholar Award

Travis Howard, 2012, Undergraduate Dean's Scholar Award

Travis Howard, 2012, Outstanding Undergraduate Research Award, College of Public Health & Health Professions Research Day

Adam Beharry, 2012, Outstanding Graduate Student Poster Award, Neuromuscular Plasticity Symposium, University of Florida

Sarah Senf, 2011, Best Contribution Award, International Conference on Muscle Wasting, Ascona, Switzerland

Adam Beharry, National Institute of Health, T32 Fellowship, Interdisciplinary Training in Rehabilitation and Neuromuscular Plasticity Program, University of Florida, August 2011-Present

Sarah Senf, 2011, Outstanding Graduate Student Poster Award, Neuromuscular Plasticity Symposium, University of Florida

Sarah Reed, 2011, Outstanding Post-Doc Poster Award, Neuromuscular Plasticity Symposium, University of Florida

Sarah Reed, 2011, Outstanding Post-Doc Poster Award, College of Public Health & Health Professions Research Day

Travis Howard, 2011, College of Public Health and Health Professions University Scholar Award

Jaina Morar, 2011, Undergraduate Dean's Scholar Award

Jaina Morar, 2011, Outstanding Undergraduate Research Award, College of Public Health & Health Professions Research Day

Sarah Senf, National Institute of Health, T32 Fellowship, Interdisciplinary Training in Rehabilitation and Neuromuscular Plasticity Program, University of Florida, August 2008-April 2012

### **C. SERVICE**

#### **Grant Review**

2008	US Army Research Office, Division of Life Sciences, Reviewer, August
2009	NASA/NSBRI Skeletal Muscle/Cardiovascular Physiology study section, February, ad hoc,
2009	AFM Telethon, Reviewer, January
2011	NSBRI Postdoctoral Fellowship Applications study section, August
2012	NIH, SMEP study section, February, ad hoc
2012	NIH, Special Emphasis Panel/Scientific Review Group, ZRG1 MOSS-Q (14) B study section, November
2013	NIH, Special Emphasis Panel/Scientific Review Group ZRG1 MOSS-C (03) S, July
2013	NIH, Special Emphasis Panel/Scientific Review Group, ZRG1 MOSS-Q (14) B study section, November
2013	NIH, Special Emphasis Panel/Scientific Review Group ZCA1 SRLB-C (J1) R - Provocative Questions: Cancer Therapy & Outcomes study section, November
2014	AFM Telethon, Molecular & Physiopathological Basis of Other NM Diseases reviewer, January
2014	NIH, SMEP study section, June, ad hoc
2014	NIH, SMEP study section, October, ad hoc
2015	NIH, "Aging and Neuromuscular Junctions" Review Committee
2015	NIH, ZRG1 MOSS-V(03) Special Emphasis Panel on Skeletal Muscle Physiology
2015	NIH, NCI Special Emphasis Panel/Scientific Review Group 2016/01 ZCA1 RPRB-C (J1) P meeting
2016	NIH, ZRG1 MOSS-V(03) Special Emphasis Panel on Skeletal Muscle Physiology
2016	NIH, SMEP study section, June, ad hoc
2016-2017	VA, CAMM study section, ad hoc
2018	NIH, ZRG1 MOSS-V(03) Special Emphasis Panel on Skeletal Muscle Physiology
2018-2022	VA, CAMM study section, regular member
2019	Austrian Science Fund ad hoc reviewer
2020	NIH, SMEP study section, Feb, ad hoc
2020	NIH, NCCIH Training and Education Review Panel
2021-	NIH, SMEP study section, regular member

#### **Editorial Advisory Board**

2016-	American Journal of Physiology: Cell Physiology
2016-2019	Comprehensive Physiology

#### **Journal Peer Reviewer**

*Acta Physiologica*  
*Age and Ageing*

*American Journal of Physiology: Cell Physiology*  
*American Journal of Physiology: Endocrinology and Metabolism*  
*American Journal of Physiology: Regulatory, Integrative and Comparative Physiology*  
*Cancer Research*  
*European Journal of Applied Physiology*  
*European Journal of Cancer*  
*The FASEB J*  
*International Journal of Biochemistry and Cell Biology*  
*Journal of Anatomy*  
*Journal of Applied Physiology*  
*Journal of Cachexia, Sarcopenia and Muscle Wasting Disorders*  
*Journal of Experimental Zoology Part A: Comparative Experimental Biology*  
*Medicine & Science in Sport & Exercise*  
*Pflügers Archiv European Journal of Physiology*  
*PLoS ONE*

#### **ACADEMIC COMMITTEES AND SERVICE**

2012/14/16	International Conference on Advances in Skeletal Muscle Biology in Health and
2017/2019,	Disease, Scientific Organizing Committee
2019	Member, HHP Search Committee for Assistant Professor and Open Rank
2018-present	College of PHHP Tenure Review Committee
2018	Chair, PHHP Search Committee for Assistant/Associate Professor
2016	Member, Search Committee for Research Assistant Professor
2014	Member, Search Committee for Research Assistant Professor
2011-present	Neuromuscular Plasticity Symposium, Organizing Committee
2010-2018	Rehabilitation Sciences Doctorate Committee
2010-2017	Rehabilitation Research Seminar co-Chair
2010-present	Myology Institute Seminar co-Chair
2011	Member, Search Committee for Research Assistant Professor
2009-2014	Abstract Review for PHHP Research Day

#### **MEMBERSHIP IN PROFESSIONAL AND SCIENTIFIC SOCIETIES**

Cancer Cachexia Society (Board Member and Treasurer)  
 Society for Muscle Biology  
 Society on Sarcopenia , Cachexia and Wasting Disorders