

[EXT] Thank you for your Abstract Submission



○ Muscle Biology 2023 Conference <muscle-biology@ufl.edu>

To: ⓘ Joshua Godwin

Wednesday, January 25, 2023 at 10:02 AM



CAUTION: Email Originated Outside of Auburn.

Thank you for submitting an abstract to the 2023 Advances in Skeletal Muscle Biology in Health and Disease Conference.

Below is the confirmation of your submission:

Name of Submitting Author	
Joshua Godwin	
Email of Submitting Author	
jsg0061@auburn.edu	
Submitting Authors University or Affiliation	
Auburn University	
Session Topic (drop down list)	
Muscle Hypertrophy and Regeneration	
Abstract Title	
Sarcolemmal Protein Adaptations Following 10-Weeks of Resistance Training in College Aged Females	
Author List	
Godwin, Joshua; Michel, J. Max; Sexton, Casey; Libardi, Cleiton; Mobley, C. Brooks; Roberts, Michael	
Abstract	

Introduction: Changes in sarcoplasmic and myofibrillar protein fractions following resistance training have been well documented, however little is known with regards to the sarcolemmal protein fraction. Therefore, the purpose of this study was to determine the effects of resistance training on sarcolemmal proteins and if changes in the sarcolemmal protein fraction relates to hypertrophic outcomes. Methods: 15 untrained college aged females (age: 21±2yr, BMI: 24.6±3.7kg/m2) participated in 10-weeks of resistance training. Prior to and 72hrs following training participants donated a vastus lateralis biopsy. Skeletal muscle tissue was subsequently subjected to a membrane protein extraction kit to isolate the sarcoplasmic and sarcolemmal protein fractions, followed by immunohistochemical staining to assess area occupied by myofibrillar protein. Following isolations, proteomics was performed on the sarcolemmal protein fraction using a nanoLC-MS/MS platform. Training adaptations for all dependent variables were analyzed using dependent samples t-tests. Associations between dependent variables were analyzed using Pearson correlations. For proteomic data, significance for up- or down-regulated proteins was set at 1.5-fold threshold (p<0.05). Results: Following 10-weeks of resistance training sarcoplasmic protein