

Shuichi Sato, Ph.D., ATC

Title Department Office Number Extension Email Address	Associate Professor/Assistant Director Kinesiology Bourgeois Hall 129-B 5841 sxs9151@louisiana.edu
Education	Ph.D., Applied Physiology, University of South Carolina MS, Exercise Science, University of Southern Mississippi MS, Chemistry, Sophia University BS, Athletic Training, University of Southern Mississippi BS, Chemistry, Sophia University
Teaching Philosophy	As a teacher, I aim to provide my students with the analytical skills useful in exercise science, including finding out up-to-date information, understanding that information, and making a constructive decision based on their analysis of issues. I believe logic and independent learning are essential, and I hope they will serve my students in whatever career path they choose in the future.
Bio	Dr. Sato is currently an assistant professor in Kinesiology/Exercise Science at the University of Louisiana at Lafayette. Dr. Sato began to investigate skeletal muscle atrophy/hypertrophy due to external stimuli such as exercise, chronic disease, hormonal change, and injury at the University of South Carolina for his Ph.D. and had additional research training at the University of Louisville School of Medicine as a post-doctoral research associate.
Courses Taught	KNES 303 – Physiology of Exercise KNES 304 – Physiology of Exercise Lab KNES 502 – Measurement and Evaluation Instrumentation in Exercise Physiology KNES 507 – Bioenergetics KNES 509 – Organization and Management of Exercise and Activity Programs KNES 510 – Research Methods in Kinesiology KNES 512 – Muscle physiology
Research Interests	My research interests lie in skeletal muscle biology to examine its plasticity due to aging, cancer cachexia, and exercise. I attempt to elucidate the mechanisms by molecular/cell biology techniques in vitro and in vivo system.
Advising	Average of 60-70 undergraduate advisees per semester.
Publications	Recent 5 years <ol style="list-style-type: none">1. Kurosaka M, Ogura Y, Sato S, Fujiya H, Kohda K, and Funabashi T. STAT6 is an inhibitory factor for differentiation and fusion of mouse myoblasts. Skelet Muscle. 2021 May 29;11(1):14. doi: 10.1186/s13395-021-00271-8.2. Ogura Y, Sato S, Kurosaka M, Kotani T, Fujiya H, and Funabashi, T. Age-related decrease in muscle satellite cells

	<p>is accompanied with diminished expression of early growth response 3 in mice. <i>Mol Biol Rep.</i> 2020 Feb;47(2):977-986. doi: 10.1007/s11033-019-05189-5.</p> <ol style="list-style-type: none"> 3. Sato S, Gao S, Puppa, MJ, Fayd, R, Kostek, MC, Wilson, LB, and Carson JA. Effects of high-frequency electric stimulation on skeletal muscle maintenance in female cachectic mice. <i>Med Sci Sports Exerc.</i> 2019 Sep;51(9):1828-1837. doi: 10.1249/MSS.0000000000001991. 4. Hindi SM, Sato S, Xiong G, Bohnert KR, Gibb AA, Gallot YS, McMillan JD, Hill BG, Uchida S, and Kumar A. TAK1 is a key regulator of skeletal muscle mass and mitochondrial function. <i>JCI Insight.</i> 2018 Feb 8;3(3). pii: 98441. doi: 10.1172/jci.insight.98441. 5. Bohnert KR, Gallot YS, Sato S, Xiong G, Hindi SM, Kumar A. Inhibition of ER stress and unfolding protein response pathways causes skeletal muscle wasting during cancer cachexia. <i>FASEB J.</i> 2016 May 20. 6. Hardee JP, Mangum J, Gao S, Sato S, Hetzler KL, Puppa MH, Fix D, and Carson JA. Effect of cachexia severity on eccentric contraction-induced myofiber growth in tumor-bearing mice. <i>J Appl Physiol</i> (1985). 2016 Jan 1;120(1):29-37. doi: 10.1152/jappphysiol.00416.2015.
Presentations	<p>Recent 5 years</p> <ol style="list-style-type: none"> 1. Sato S and Ogura Y. Decreased Yes-associated protein response to eccentric muscle contractions in cachectic mice: A time-course study. 6th Cancer Cachexia Conference: "Bridging Molecular Advances to Clinical Care." Gainesville, Florida (2021, changed to the virtual conference due to the pandemic). 2. Sato S, Yongue RT, Walker ER, and Ogura Y. Hippo signaling response to eccentric muscle contractions in cachectic mouse muscle. National ACSM annual meeting. Washington DC (2021, changed to the virtual conference due to the pandemic). 3. Yongue RT, Walker ER, and Sato S. Muscle contraction by high-frequency electrical stimulation induces Hippo signaling effector YAP response in <i>ApcMin/+</i> mice. SEACSM annual meeting (2021, Won 3rd place in the Master's student poster competition).

4. Yongue RT, Walker ER, Ogura Y, and **Sato S**. Increased sensitivity to systemic inflammation leads to elevated MMP-9 expression in mouse cachectic muscle. Cancer Cachexia Conference. (2020).
5. Yongue RT, Walker ER, Ogura Y, and **Sato S**. YAP Involves in Reduced Anabolic Response to Functional Overload in Lewis Lung Carcinoma-bearing Mice. Experimental Biology. San Diego, CA (2020).
6. Yongue RT, Walker ER, and **Sato S**. Reduced unfolded protein response is associated with anabolic resistance following mechanical overload in *Apc^{Min/+}* mice. SEACSM meeting. Jacksonville, FL (2020, Selected as a finalist for Master's student poster competition).
7. Walker ER, Yongue RT, Mehta M, and **Sato S**. Compromised anabolic response to mechanical overload leads to decreased muscle hypertrophy in tumor-implanted mice. SEACSM meeting. Jacksonville, FL (2020).
8. **Sato S**, Boudreaux SP, and Bellar DM. The Effect of Royal Jelly on Satellite Cell Activation in Aged Monkey Muscle Cells. Experimental Biology, Orland, FL (2019).
9. Anderson KA, Walker ER, Abston LH, and **Sato S**. Impaired compensatory muscle hypertrophy following 7 days of functional overload in *Apc^{Min/+}* mice. SEACSM annual meeting. Greenville, SC (2019, Selected as a finalist for undergraduate poster competition).
10. **Sato S**, Pecor IJ, Walker ER, and Nguyen TN. Potential involvement of Yes-Associated Protein in anabolic resistance during mechanical loading in cachectic mice. 11th International Conference on Cachexia, Sarcopenia & Muscle Wasting, Maastricht, Netherlands (2018).
11. Ogura Y, Kurosaka M, **Sato S**, Kotani T, Fujiya H, and Funabashi T. Possible involvement of early growth response 3 in age-related reduction of muscle satellite cells. New Directions in Biology and Disease of Skeletal Muscle Conference, New Orleans, LA (2018).
12. Gooden LJ, Lim BW, and **Sato S**. The Role of Hippo Signaling Pathway on Muscle Wasting in *Apc^{Min/+}* Mice: A Pilot Study. Experimental Biology, Chicago, IL (2017).

	<p>13. Sato S. Hindi SM, Xiong G, and Kumar A. Skeletal muscle-specific deletion of TAK1 activates AMPK and autophagy in mice. The Integrative Biology of Exercise VII, Phoenix, AZ (2016).</p> <p>14. Sato S, Hindi SM, Tajrishi MM Xiong G, and Kumar A. TAK1 is a key regulator of skeletal muscle maintenance in mice. National ACSM's Annual Meeting and World Congresses, Boston, MA (2016)</p> <p>15. Bohnert, K, Sato, S, Xiong, G, and Kumar, A. Unfolding Protein Response Pathways Attenuates Skeletal Muscle Wasting in Mouse Models of Cancer Cachexia. Advances in Skeletal Muscle Biology in Health and Disease Conference. Gainesville, FL (2016).</p>
Grants	<ul style="list-style-type: none"> • Louisiana Board of Regents Support Fund RCS, 2017-2020 • Yamada Research Grant, 2017 • Summer Research Award, UL Lafayette, 2016
Conferences Attended	See above
Professional Memberships	<ul style="list-style-type: none"> • Cancer Cachexia Society • American Physiological Society (APS) • American College of Sports Medicine (ACSM) • National Athletic Training Association (NATA)
Awards	<ul style="list-style-type: none"> • Joan D. and Alexander S. Haig/BORSF Endowed Professorship in Education (2018-Current) • Travel Grants for Emerging Faculty (TGEF), EPSCoR (2017) • Rising Star Award, UL Lafayette (2016) • Research!Louisville, 1st place in Postdoctoral Fellow Award (2014) • Norman J. Arnold Doctoral Student Fellowship (2012)
Additional Skills	<ul style="list-style-type: none"> • UL Certified Online Instructor • Certified Athletic Trainer (ATC) • Fluent in Japanese
Dissertation	The effect of sex and exercise training during the progression of cancer cachexia in the ApcMin/+ mouse, Adviser, James Carson, Ph.D. Professor
Other Professional Experience	Sales Representative, Tandem Computers Japan Ltd. (1996-1999)
Graduate Committees	Served as a chair of 4 committees and as a member of 13 committees