

Shihuan Kuang, PhD, Chair Professor

Department of Animal Sciences, Purdue University
2070 Creighton Hall of Animal Sciences
270 S. Russell Rd., West Lafayette, IN 47907, USA
Phone: 765-494-8283
Email: skuang@purdue.edu

EDUCATION

- 1985-1989 **Department of Biology, Nanchang (formerly Jiangxi) University, Nanchang, China**
B. Sc. in Biology (07/1989)
- 1989-1992 **Institute of Oceanology, Chinese Academy of Sciences, Qingdao, China**
M.Sc. in Marine Biology (07/1992)
- 1997-2002 **Department of Biological Sciences, University of Alberta, Edmonton, Canada**
Ph.D. in Physiology and Cell Biology (11/2002)

POSITIONS AND HONORS

Positions

- 1989-1992 Research Assistant (M.Sc. Thesis), Institute of Oceanology, Chinese Academy of Sciences
Thesis: *Effects of Cr⁶⁺ on embryonic development of bay scallops (Argopecten irradians)*
Advisor: Prof. Fusui Zhang, Member, Chinese Academy of Engineering
- 1992-1997 Assistant – Associate Scientist, Chinese Academy of Fishery Sciences
Yellow Sea Fishery Research Institute, Qingdao, China
Shellfish Development & Physiology, pioneered carrying capacity study in China
Advances in Science & Technology Award (2nd class prize), China Ministry of Agriculture (1998)
- 1997-2002 Research Assistant (Ph. D. Dissertation), University of Alberta, Canada
Thesis: *Cellular and molecular basis of a behavioral response to hypoxia in pond snail embryos*
Awarded the best PhD Thesis (Cameron Award), Canadian Society of Zoologists (2004)
Advisor: Jeffrey I. Goldberg, Ph. D.
- 2002-2004 Postdoctoral Fellow, Washington University School of Medicine, St. Louis
National Science & Engineering Research Council Postdoctoral Fellowship Award (Canada)
Skeletal muscle and motor neuron development
Mentor: Joshua R. Sanes, Ph.D. (Member of the National Academy of Sciences, USA)
- 2004-2007 Research Associate Scientist, Ottawa Hospital Research Institute, Ottawa, Canada
Stem cell biology, gene regulation of muscle stem cells
Mentor: Michael A. Rudnicki, Ph.D. (Fellow of the Royal Society)
- 2008-2013 Assistant Professor, Department of Animal Sciences, Purdue University**
2008-present Faculty Member, Purdue University Interdisciplinary Life Science (PULSe) Program
2010-present Member, Purdue University Center for Cancer Research
2012-present Member, Purdue University Center for Drug Discovery
2013-present Faculty Member, Purdue University Interdepartmental Nutrition Program (INP)
- 2013-2016 Associate Professor, Department of Animal Sciences, Purdue University**
2014-present Courtesy faculty appointment, Department of Health and Kinesiology, Purdue University
- 2016-present Professor, Department of Animal Sciences, Purdue University**
Muscle/adipose stem cells and muscle-fat interaction; neuromuscular diseases; obesity
- 2016-present Member, Purdue Institute of Inflammation, Immunology, and Infectious Diseases (PI4D)
2016-present Member, Purdue Institute for Integrative Neuroscience (PIIN)
2016-present Courtesy faculty appointment, Department of Biological Sciences, Purdue University
2019-present Leader, Stem Cell Group, Purdue University
2020-present Scientific Advisor, Adipo Therapeutics LLC, IN, USA
- 2022-present Cancer Center Chair in Stem Cell Biology (named professor), Purdue University**
2023-present Faculty Associate, Center on Aging and the Life Course (CALC), Purdue University

Awards/honors

1997–2001 FS Chia Doctoral Scholarship, University of Alberta
 1997–2002 GTA Scholarship, University of Alberta Faculty of Science
 1999 Mary Louise Imrie Graduate Student Award, University of Alberta Faculty of Graduate Studies
 2001 Letter of commendation in teaching excellence, Dept. of Biological Sciences, University of Alberta
 2004 TWM Cameron Outstanding PhD Thesis Award, Canadian Society of Zoologists
 2003–2005 Postdoctoral Fellowship Award, Natural Science & Engineering Council of Canada
 2005 Fellowship Award, Canadian Institute of Health Research – Health Canada (declined)
 2006 Stem Cell Niche Summer Conference Travel Award, American Society for Cell Biology
 2008 Purdue Research Foundation XR grant
 2009 Purdue Research Foundation IT grant
 2010 Canada Research Chair (Tier II) in Stem Cell Biology (Declined)
 2010 Purdue Research Foundation XR grant
 2010 Seed for Success Award, Purdue University
 2011 Millionaire’s Club Award, College of Agriculture, Purdue University
 2011 Purdue Research Foundation IT grant
 2013 Purdue University College of Agriculture, AgResearch Spotlight Featured Faculty
 2014 AG Research Award, College of Agriculture, Purdue University
 2014 Purdue University College of Agriculture, Agricultures Magazine, Featured Faculty
 2014 Purdue University Laboratory and University Core Facility Research Equipment Program Award
 2015 University Faculty Scholar, Purdue University
 2016 Showalter Faculty Scholar
 2017 Seed for Success Award, Purdue University (Received two awards in the same year)
 2018 Millionaire’s Club Award, College of Agriculture, Purdue University (two awards)
 2021 Top 2% highly cited researcher in the field of Development/Biochemistry/Biomedicine
 2022 Millionaire’s Club Award, College of Agriculture, Purdue University
 2022 Top 10 Professors in H-Index Increase, College of Agriculture, Purdue University
 2023 Millionaire’s Club Award, College of Agriculture, Purdue University
 2023 Top 10 Professors in H-Index Increase, College of Agriculture, Purdue University

Editorial Board

2013–2022 Associate Editor, [Frontiers in Stem Cell Research](#), Frontiers Media
 2013–2022 Review Editor, [Frontiers in Molecular Medicine](#), Frontiers Media
 2014– Editorial Board, [Adipocyte](#), Taylor & Francis
 2015– Editor, [Molecular Genetics and Genomics](#), Springer
 2018– Editorial Board, [Journal of Animal Science and Biotechnology](#), BMC, Springer Nature
 2020– Editorial Board, [Cell Regeneration](#), Springer Nature
 2020– Co-Editor (with Dr. Meng Deng) of a Theme Issue, [Pharmacological Research](#), Springer
 2020– Editorial Board, [Cancer Letters](#), Elsevier.
 2020– Editorial Board, [Journal of Cellular Biochemistry](#), Wiley
 2023– Editorial Board, [The Innovation Life](#), Cell Press

Ad Hoc Journal Review (for 60+ journal titles)

Adipocyte; *AGE – journal of American Aging Association*; *Advanced Science*; *Aging Cell*; *American Journal of Physiology Cell Physiology*; *American Journal of Physiology Endocrinology and Metabolism*; *Animal Genetics*; *Animal Science Journal*; *Annals of Medicine*; *Aquaculture*; *BBA*; *Bioinformatics*; *Biomaterials*; *BMC Biology*; *Cell & Bioscience*; *Cell Biochemistry and Biophysics*; *Biomedical Research International*; *Cell Calcium*; *Cell Death & Disease*; *Cell Discovery*; *Cell Proliferation*; *Cell Regeneration*; *Cell Reports*; *Cell Research*; *Cellular and Molecular Life Sciences*; *Cells*; *Communicational Biology*; *Current Protein and Peptide Sciences*; *Development*; *Developmental Biology*; *Developmental Cell*; *Diabetes*; *Diabetes, Obesity and Metabolism*; *Disease Models & Mechanisms*; *DNA & Cell Biology*; *eBiomedicine*; *eLife*; *Endocrinology*; *Epigenetics*; *FASEB Journal*; *FASEB Bio*; *FEBS Journal*; *FEBS Letters*; *Fish and Shellfish Immunology*; *Frontiers in Molecular Medicine*; *Frontiers in Physiology*; *Frontiers in Stem Cell Research*; *Gene*; *Histology and histopathology*; *In Vitro Cellular & Developmental Biology – Animal*; *International Journal of Biological Sciences*; *International Journal of Developmental Biology*; *International Journal of Obesity*; *In Vitro Cellular & Developmental Biology*; *iScience*; *Journal of Anatomy*; *Journal of Animal Science*; *Journal of Cachexia, Sarcopenia and Muscle*; *Journal of Cell Biology*; *Journal of Cell Sciences*; *Journal of Cellular and Molecular*

Medicine; Journal of Clinical Endocrinology & Metabolism; Journal of Clinical Investigation; Journal of Experimental Medicine; Journal of Genetics and Genomics; Journal of Lipid Research; Journal of Molecular Cell Biology; Journal of Nutrition; Journal of Physiology (London); Journal of Physiology and Biochemistry; Journal of Visualized Experiments; Life Sciences; Lipids; Molecular and Cellular Biochemistry; Molecular and Cellular Endocrinology; Molecular Biology Reports; Molecular Biotechnology; Molecular Endocrinology; Molecular Genetics and Genomics; Molecular Therapy; Molecular Therapy–Nucleic Acid; Molecules; Nature Communications; Nature Foods; Nucleic Acids Research; Obesity Reviews; Physiological Reports; Plos ONE; Proceedings of the National Academy of Sciences; RNA Biology; Sarcoma; Science Advances; Science Signaling; Science Translational Medicine; Scientific Reports; Skeletal Muscle; Stem Cell Reports; Stem Cell Research; Stem Cell Research & Therapy; Stem Cell Reviews and Reports; Stem Cells; Stem Cells Translational Medicine; Translational Research

Grant Review Panels

2008/10 Scientific Reviewer, New York Stem Cell (NYStem) Board, Stem Cell Lineage Study Panel
 2009/06 Reviewer, NIH Special Emphasis Panel/Scientific Review Group 2009/10 ZRG1 SBIB-V (58) R
 2009/11 Scientific Reviewer, New York Stem Cell (NYStem) Board, Cardiac Stem Cell Study Panel
 2010/12 Scientific Reviewer, Kansas IDEa Network of Biomedical Research Excellence (K-INBRE)
 2011/07 Scientific evaluator, Exploratory Research Projects, National Plan for Research, Development and Innovation, Romanian National Council for Scientific Research
 2012/02 Panel Member, Skeletal Muscle Exercise Physiology (SMEP) study section, NIH
 2012/05 Grant reviewer, Association Française contre les Myopathies (AFM), France
 2012/08 External Reviewer, Canada Research Chairs Program, Canada
 2013/05 Grant reviewer, Association Française contre les Myopathies (AFM), France
 2013/09 Grant reviewer, NIH Mouse Metabolic Phenotyping Center, Initiative for Collaborative Research on the Mouse (MicroMouse)
 2014/01 Grant reviewer, Joint Applied Research Projects - PCCA 2013, National Plan for Research, Development and Innovation, Romanian National Council for Scientific Research
 2014/01 Grant Reviewer, KUMC Center of Biomedical Research Excellence Pilot Grant
 2014/06 Panel Member, NIH Skeletal Muscle Exercise Physiology (SMEP) study section, Annapolis, MD
 2014/06 Evaluator, Canada Research Chairs Program
 2014/12 Grant Reviewer, National Center of Science and Technology Evaluation, Kazakhstan
 2014/12 Grant Reviewer, Medical Research Council (MRC), United Kingdom
 2015/03 Panel Member, NIH ZRG1 F10B-B (20) Fellowship: Physiology and Pathobiology of Musculoskeletal, Oral, and Skin Systems, Washington DC
 2015/06 Panel Member, NIH ZRG1 F10B-B (20) Fellowship: Physiology and Pathobiology of Musculoskeletal, Oral, and Skin Systems, online web-based review.
 2015/10 Panel Member, NIH Cellular Mechanisms in Aging and Development, Washington DC
 2016/03 Panel Member, NIH ZRG1 F10B-B (20) Fellowship: Physiology and Pathobiology of Musculoskeletal, Oral, and Skin Systems, Washington DC
 2016/06 Panel Member, NIH Cellular Mechanisms in Aging and Development, Washington DC
 2017/02 Panel Member, NIH Cellular Mechanisms in Aging and Development, San Francisco, CA
 2017/03 Panel Member, NIH ZRG1 F10B-B(20)L Fellowship: Physiology and Pathobiology of Musculoskeletal, Oral, and Skin Systems, Washington DC
2017–2021 Standing member, Skeletal Muscle Exercise Physiology (SMEP) Panel, NIH (attended 12 review panels, 3 panels/year during the 4-year service period 10/2017 – 07/2021)
 2017/01-10 Reviewer, KUMC COBRE (2) and K-INBRE DRPP, American Institute of Biological Sciences
 2017/09 Reviewer, Congressionally Directed Medical Research Programs, Discovery Award, DoD
 2017/10 Reviewer, Association Française contre les Myopathies (AFM), France
 2018/08 Reviewer, Czech Science Foundation, Czech
 2018/12 Reviewer, Kansas IDEa Network of Biomedical Research Excellence Bridging Grant Program
 2019/02 Reviewer, University of Kansas Medical Center: COBRE Pilot Grant Program
 2019/07 Reviewer, Research Impact Fund (RIF), Research Grants Council (RGC) of Hong Kong.
 2019/12 Reviewer, K-INBRE20 Bridging Grants and DRPPs, American Institute of Biological Sciences
 2020/02 Reviewer, General Research Fund (GRF), Research Grants Council (RGC) of Hong Kong.
 2020/08 Reviewer, French National Research Agency/Research Grants Council of Hong Kong Joint Research Scheme (JRS) 2020/21

2020/09 Panel Member, 2021/01 ZCA1 RTRB-F (J1) SEP-6: Answers to NCI Provocative Questions
 2020/11 Reviewer, Health and Medical Research Fund (HMRF), Hong Kong
 2020/12 Reviewer, K-INBRE20 Bridging Grants and DRPPs, American Institute of Biological Sciences
 2021/01 Reviewer, Research Grants Council (RGC) of Hong Kong
 2021/05 Reviewer, AFM-TELETHON, FUNDAMENTAL MYOLOGY – 2021
 2021/06 Reviewer, EPSCoR and RII Track-4, National Science Foundation (NSF)
 2021/07 Reviewer, Health and Medical Research Fund (HMRF), Hong Kong
 2021/08 Reviewer, Research Grants Council (RGC) of Hong Kong
 2022/01 Reviewer, Research Grants Council (RGC) of Hong Kong
 2022/04 Panel Member, NIH special emphasis panel 2022/05 ZRG1 CFS-N (80)
 2022/05 Reviewer, AFM-TELETHON and the STEM CELLS Scientific Committee
 2022/05 Reviewer, NJDOH 2023 Cancer Program
 2022/06 Panel Member, Meat and Poultry Processing Expansion Program (MPPEP), USDA
 2022/06 Panel Member, ZRG1-MOSS-C(80)A or R15 Special Emphasis Panel (SEP), NIH
 2022/11 Panel Member, ZRG1 MOSS C(02), NIH
 2022/12 Reviewer, K-INBRE20 Bridging Grants and DRPPs, American Institute of Biological Sciences
 2023/01 Abstract Reviewer, American Diabetes Association's 83rd Scientific Sessions
 2023/03 NIH 2023/05 ZNS1 SRB-E (07), Wellstone Centers Review

Featured media coverage/commentary on my research

2007/05 Oriented Cell Divisions and Muscle Satellite Cell Heterogeneity, [Cell 129:859-61](#). Existence of muscle-building stem cells points to regenerative therapies for muscular disease, [Science Daily](#). Newfound stem cells may lead to regenerative therapies for damaged muscles, [Scientific American](#). (Related to #27, Kuang et al. 2007. *Cell* 129:999-1010)

2008/08 How Now, Brown Fat? [Science 321:1048-9](#). (Related to #32, Seale et al. 2008. *Nature* 454:961-7)

2008/12 Breakthrough of the Year: 8 Fat of a Different Color, [Science 322:1768](#). (Related to #32)

2012/08 Less Air, More Muscle Repair, [Development 139: e1601](#). Low oxygen boosts stem cell survival in muscular dystrophy therapy, [Purdue News](#). (Related to #48, Liu et al. 2012. *Development* 139:2857-68)

2013/08 Shihuan Kuang. [Purdue Ag Research Spotlight](#).

2014/05 Animal Scientist Kuang earns Purdue Agricultural Research Award, [Purdue News](#).

2014/08 Lightening up a notch: Notch regulation of energy metabolism, [Nature Medicine 20:811-2](#). Going a Notch More Beige, [Science Signaling 7:ec211](#). Cell signaling pathway linked to obesity, Type 2 diabetes, [Purdue News](#); [Science Daily](#); [Medical Xpress](#); [News Medical](#); [Bioscience Technology](#); [Bioon](#). (Related to #65, Bi et al. 2014. *Nature Medicine*)

2014/10 Research award winner focused on future. [Purdue Agriculture Connections](#).

2014/11 Science on Tap talk to focus on the health benefits of promoting beige adipocytes. [Purdue News](#).

2014/12 Muscular Mysteries. [Agricultures Magazine](#).

2016/08 Purdue researchers discover signaling cascade that drives fatty tumors. [Purdue News](#); [Science Daily](#); [Chemie.DE](#); [Medical News Today](#); [Medical Times](#), [Science Newslines](#), [Thenewscrack](#). (Related to #88, Bi et al. 2016. *J Exp Med*)

2017/01 Tumor suppressor key in maintaining stem cell status in muscle. [Purdue News](#); [World News](#); [SciFeeds](#); [Medical Xpress](#); [Medical News Today](#) (Related to #92, #96, Yue et al, 2017. *Nat Commun*; Yue et al, 2016. *Cell Rep*).

2017/08 Nanoparticle-drug combo turns white fat to brown fat with potential to treat obesity, diabetes. [Purdue News](#); [Biodiscovery](#); [Medical News Today](#); [New Atlas](#); [Reliawire](#); [The Pharma Times](#) (Related to #103, Jiang et al, 2017. *Mol Ther*).

2017/09 A larger BAT improves metabolism but whiffs on safety. [eBiomedicine](#). BAT expansion: a panacea against obesity? Lessons from LKB1. [eBiomedicine](#). (Related to #107, Xiong et al, 2017. *eBiomedicine*)

2017/11 A novel regulator for the generation of muscle stem cells. [Altas of Science](#) (Related to #93, Wang et al, 2017. *Development*)

2018/09 Bad fat to good fat: Purdue-based startup developing technology aimed at helping treat obesity, diabetes. [Purdue Research Park News](#).

- 2020/08 Managing Weight With Technology, *IEEE Pulse*. 11(4): 26-31. DOI: [10.1109/MPULS.2020.3008449](https://doi.org/10.1109/MPULS.2020.3008449)
- 2021/06 Discovery of new type of stem cells leads to \$2.3 million grant, *Purdue News*, *Inside Indiana Business*
- 2022/01 Fat's unexpected role in muscle stem cell fate, *Purdue News*, *Science Net China* (Related to #158, Yue et al, 2022. *Cell Reports*)
- 2022/02 Dr. Kuang Named Cancer Center Chair in Stem Cell Biology, *Purdue News*, *Agriculture News*.
- 2022/02 Knight R: Faculty Opinions Recommendation of [Yue F et al., *Cell Rep* 2022 38(3):110267]. In Faculty Opinions, 15 Feb 2022; <https://doi.org/10.3410/f.741490621.793591435>
- 2022/11 Distinguished and Named Professorship Ceremony honors faculty, administrators. *Purdue News*.
- 2023/02 National Institutes of Health grant funds interdisciplinary stem cell research. *Purdue News*.

RESEARCH

Publications (*corresponding author; trainees of Dr. Kuang; H-index: 56, IF: journal Impact Factor)

- 170) Opreescu SN, Baumann, N, Chen X, Zhao Y, Yue F, Wang H. **Kuang S***. Sox11 is enriched in myogenic progenitors but dispensable for development and regeneration of the skeletal muscle. Submitted. <https://biorxiv.org/cgi/content/short/2023.03.30.534956v1>
- 169) Kim KH, Jia Z, Snyder MM, Chen J, Qiu J, Opreescu SN, Chen X, Yue F, Roseguini BT, Imbalzano AN, Hu C, **Kuang S**. PRMT5 links lipid metabolism to contractile function of skeletal muscles. Submitted. <https://biorxiv.org/cgi/content/short/2022.11.04.515165v1>
- 168) Chen X, CR Ferreira, **Kuang S***. 2023. Targeted lipid profiling of adipose and skeletal muscle tissues. *Methods Mol Biol*. 2640:351-368. https://doi.org/10.1007/978-1-0716-3036-5_25
- 167) Unsihuay D, Hu H, Qiu J, Latorre-Palomino A, Yang M, Yue F, Yin R, **Kuang S**, Laskin J. 2023. Multimodal high-resolution nano-DESI MSI and immunofluorescence imaging reveal molecular signatures of individual skeletal muscle myofibers. *Chemical Science*, DOI: 10.1039/D2SC06020E. IF: 10. <https://pubs.rsc.org/en/content/articlepdf/2023/SC/D2SC06020E?page=search>
- 166) Kargal CK, Sullivan BP, Middleton D, York A, Burton L, Brault JJ, **Kuang S**, Gavin TP. 2023. Peroxisome proliferator-activated receptor γ coactivator 1- α overexpression improves angiogenic signaling potential of skeletal muscle-derived extracellular vesicles. *Exp Physiol*. 108:240-52. <https://doi.org/10.1113/EP090874>
- 165) Ma Z, Huang Z, Zhang C, Liu X, Zhang J, Shu H, Ma Y, Liu Z, Feng Y, Chen X, **Kuang S**, Zhang Y, Jia Z*. 2023. Hepatic Acat2 overexpression promotes systemic cholesterol metabolism and adipose lipid metabolism in mice. *Diabetologia*. 66:390-405. <https://doi.org/10.1007/s00125-022-05829-9> IF: 10.5
- 164) Chen J, Yue F, **Kuang S***. 2022. Labeling and analyzing lipid droplets in muscle stem cells. *Star Protocol*. 3(4): 101849. <https://doi.org/10.1016/j.xpro.2022.101849> IF: 1.3
- 163) Huang K, Jia Z, Li H, Peng Y, Chen X, Luo N, Song T, Wang Y, Shi X, **Kuang S**, Yang G*. 2022. Proto-oncogene FAM83A contributes to casein kinase 1-mediated mitochondrial maintenance and white adipocyte differentiation. *J Biol Chem*. 298(10): 102339. <https://doi.org/10.1016/j.jbc.2022.102339> PMID:35931121. IF:5.5
- 162) Garner RT, Weiss JA, Nie Y, Sullivan BP, Kargl C, Drohan CJ, **Kuang S**, Stout J, Gavin TP. 2022. Effects of obesity and acute resistance exercise on skeletal muscle angiogenic communication pathways. *Exp Physiol*. 107:906-18. <https://doi.org/10.1113/EP090152> IF: 3.0
- 161) Chang Y#, Syahirah R#, Opreescu SN#, Wang X#, Jung J, Cooper SH, Torregrosa-Allen S, Elzey BD, Hsu AY, Randolph LN, Sun Y, **Kuang S**, Broxmeyer HE, Deng Q*, Lian X*, Bao X*. 2022. Chemically-defined generation of human homogenic endothelium and definitive hematopoietic progenitor cells. *Biomaterials*. 285:121569. <https://doi.org/10.1016/j.biomaterials.2022.121569> In press. IF: 15.3
- 160) Sullivan BP, Nie Y, Evans S, Kargl C, Hettinger R, Garner RT, Hubal MJ, **Kuang S**, Stout J, Gavin TP*. 2022. Obesity and Exercise Training Alter Inflammatory Pathway Skeletal Muscle Small Extracellular Vesicle miRNAs. *Exp Physiol*. 107: 462-75. <https://doi.org/10.1113/EP090062> IF: 3.0
- 159) Xia W*, Qiu J, Peng Y, Snyder MM, Gu L, Huang K, Luo N, Yue F, **Kuang S***. 2022. Chchd10 is dispensable for myogenesis but critical for adipose browning. *Cell Regen*. 11(1):14. <https://doi.org/10.1186/s13619-022-00111-0>
- 158) Yue F*, Opreescu SN, Qiu J, Gu L, Zhang L, Chen J, Narayanan N, Deng M, **Kuang S***. 2022. Lipid droplet dynamics regulate adult muscle stem cell fate. *Cell Rep* 38: 110267. IF: 9.9 <https://doi.org/10.1016/j.celrep.2021.110267> Highlighted in [F1000 Faculty Opinion](#)

- 157) Jia Z, Chen X, Chen J, Zhang L, Oprescu SN, Luo N, Xiong Y, Yue F, **Kuang S***. 2022. ACSS3 in brown fat drives propionate metabolism and its deficiency leads to autophagy and systemic metabolic dysfunction. *Clin Transl Med*. 12: e665. <https://doi.org/10.1002/ctm2.665> . IF: 8.6
- 156) Snyder MM, Yue F, Zhang L, Shang R, Qiu J, Chen J, Kim KH, Peng Y, Oprescu SN, Donkin SS, Bi P, **Kuang S***. 2021. LETMD1 is required for mitochondrial structure and thermogenic function of brown adipocytes. *FASEB J*. 35:e21965. <https://doi.org/10.1096/fj.202100597R>. IF: 5.2
- 155) Huang X, **Kuang S**, Applegate TJ, Lin TL, Cheng HW. 2021. Prenatal Serotonin Fluctuation Affects Serotonergic Development and Related Neural Circuits in Chicken Embryos. *Neuroscience* 473, 66-80. <https://doi.org/10.1016/j.neuroscience.2021.08.011> IF: 3.6
- 154) Hettinger Z, Kargl C, Shannahan J, **Kuang S**, Gavin TP. 2021. Extracellular vesicles released from stress-induced premature senescent myoblasts impair endothelial function and proliferation. *Exp Physiol*. <https://doi.org/10.1113/EP089423> IF: 3.0
- 153) Unsihuay DM, Su P, Hu H, Qiu J, **Kuang S**, Li Y, Sun X, Dey SK, Laskin J*. 2021. Imaging and analysis of isomeric unsaturated lipids through online photochemical derivatization of C=C bonds. *Angew. Chem. Int. Ed*. <https://doi.org/10.1002/anie.202016734> IF: 16.8
- 152) Luo N, Yue F, Jia Z, Chen J, Deng Q, Zhao Y, **Kuang S***. 2021. Reduced electron transport chain complex I protein abundance and function in Mfn2-deficient myogenic progenitors lead to oxidative stress and mitochondria swelling. *FASEB J*, 35(4): e21426. <https://doi.org/10.1096/fj.202002464R>
- 151) Narayanan N, Lengamann P, Kim KH, Kuang L, Sobreira T, Hedrick V, Aryal U, **Kuang S**, Deng M*. 2021. Harnessing Nerve-Muscle Cell Interactions for Biomaterials-based Skeletal Muscle Regeneration. *J Biomed Mater Res*. 109A:289–99. <https://doi.org/10.1002/jbm.a.37022> IF: 3.5
- 150) Narayanan N, Jia Z, Kim KH, Kuang L, Lengemann P, Shafer G, Bernal-Crespo VA, **Kuang S**, Deng M*. 2021. Biomimetic glycosaminoglycan-based scaffolds improve skeletal muscle regeneration in a Murine volumetric muscle loss model. *Bioact Mater*, 6(4):1201-13. <https://doi.org/10.1016/j.bioactmat.2020.10.012> IF: 16.9
- 149) Yue F*, Song C, Huang D, Narayanan N, Qiu J, Jia Z, Yuan Z, Oprescu SN, Roseguini BT, Deng M, **Kuang S***. 2021. Pten Inhibition Ameliorates Muscle Pathology and Function in a Mouse Model of Duchenne Muscular Dystrophy. *Mol Ther*, 29(1):132-48. <https://doi.org/10.1016/j.ymthe.2020.09.029>. Featured in: Parveen et al (2021) *Mol Ther*. <https://doi.org/10.1016/j.ymthe.2020.12.014> IF: 12.9
- 148) Peng Y, Yue F, Chen J, Xia W, Huang K, Yang G*, **Kuang S***. 2021. Phosphatase orphan 1 inhibits myoblast proliferation and promotes myogenic differentiation. *FASEB J*. 35:e21154. <http://doi.org/10.1096/fj.202001672R> IF: 5.4
- 147) Jia Z, Yue F, Chen X, Narayanan N, Qiu J, Syed SA, Imbalzano AN, Deng M, Yu P, Hu CD, **Kuang S***. 2020. Protein arginine methyltransferase PRMT5 regulates fatty acid metabolism and lipid droplet biogenesis in white adipose tissues. *Adv Sci*. 7(23): 2002602. <https://doi.org/10.1002/advs.202002602> IF: 17.5
- 146) Quan M, **Kuang S***. 2020. Exosomal secretion of adipose tissue during various physiological states. *Pharm Res*. 37: 221. <https://doi.org/10.1007/s11095-020-02941-6> IF: 4.6
- 145) Huang D, **Kuang S***, Deng M*. 2020. In vitro evaluation of clinical candidates of γ -secretase inhibitors: effects on Notch inhibition and promoting beige adipogenesis and mitochondrial biogenesis. *Pharm Res*. 37: 185. <https://doi.org/10.1007/s11095-020-02916-7> IF: 4.6
- 144) Huang D, Yue F*, Qiu J, Deng M, **Kuang S***. 2020. Polymeric nanoparticles functionalized with muscle-homing peptides for targeted delivery of phosphatase and tensin homolog inhibitor to skeletal muscle. *Acta Biomater*. 118:196-206. <https://doi.org/10.1016/j.actbio.2020.10.009> IF: 10.6
- 143) Tien PC, Quan M, **Kuang S***. 2020. Sustained activation of Notch signaling maintains tumor-initiating cells in a murine model of liposarcoma. *Can Lett*. 494: 27-39. <https://doi.org/10.1016/j.canlet.2020.08.029> IF: 9.8
- 142) Sullivan BP, Nie Y, Weiss J, Garner RT, Drohan CJ, **Kuang S**, Stout J, Gavin TP. 2020. Skeletal Muscle IGF-1 is Lower at Rest and Following Acute Resistance Exercise in Humans with Obesity. *Eur J App Physiol*. 120(12): 2835–46. <https://doi.org/10.1007/s00421-020-04509-z> IF: 3.3
- 141) Oprescu SN, Yue F, **Kuang S***. 2020. Single-cell isolation and RNA-sequencing from regenerating murine muscle. *Star Protoc*. 1:100051. <https://doi.org/10.1016/j.xpro.2020.100051>
- 140) Huff K, Suárez-Trujillo A, **Kuang S**, Plaut K, and Casey T. 2020. One-to-one relationships between milk miRNA content to protein abundance in neonate duodenum support the potential for milk miRNAs in regulating neonate development. *Funct Integr Genomics*. 20(5): 645-56. IF: 3.7 <https://doi.org/10.1007/s10142-020-00743-y>

- 139) Kim KH, Qiu J, **Kuang S***. 2020. Isolation, culture, and differentiation of muscle satellite cells. *Bio-Protocol*. 10(14): e3686. <https://doi.org/10.21769/BioProtoc.3686> IF: NA
- 138) Huang D, Narayanan N, Cano-Vega MA, Jia Z, Ajuwon KM, **Kuang S***, Deng M*. 2020. Nanoparticle-mediated inhibition of Notch signaling promotes mitochondrial biogenesis and reduces subcutaneous adipose tissue expansion in pigs. *iScience*. 23(6):101167. <https://doi.org/10.1016/j.isci.2020.101167> IF: 4.4
- 137) Narayanan N, Jiang C, Wang C, Uzunalli G, Whittern N, Chen D, Jones OG, **Kuang S**, Deng M*. 2020. Harnessing Fiber Diameter-Dependent Effects of Myoblasts Towards Biomimetic Scaffold-based Skeletal Muscle Regeneration. *Front. Bioeng. Biotechnol.* 8:203. IF: 4.2
<https://doi.org/10.3389/fbioe.2020.00203>
- 136) Opreescu SN, Yue F, Qiu J, Brito LF, **Kuang S***. 2020. Temporal dynamics and heterogeneity of cell populations during skeletal muscle regeneration. *iScience*. 23:100993. IF: 6.1
<https://doi.org/10.1016/j.isci.2020.100993>
- 135) Kim K, Reid B, Casey C, Bender B, Ro B, Song Q, Trewin A, Petersen A, **Kuang S**, Gavin T, Roseguini B. 2020. Effects of repeated local heat therapy on skeletal muscle structure and function in humans. *J Appl Physiol*. 128(3):483-92. PMID: 31971474. <https://doi.org/10.1152/jappphysiol.00701.2019> IF: 3.9
- 134) Garner RT, Solfest JS, Nie Y, **Kuang S**, Stout J, Gavin TP. 2020. Multivesicular Body and Exosome Pathway Responses to Acute Exercise. *Exp Physiol*. 105(3):511-21. PMID: 31917487. IF: 3.0
<https://doi.org/10.1113/EP088017>
- 133) Unsihuay DM, Qiu J, Swaroop S, Nagornov KO, Kozhinov AN, Tsybin YO, **Kuang S**, Laskin J. 2020. Imaging of triglycerides in tissues using nanospray desorption electrospray ionization (Nano-DESI) mass spectrometry. *Int J Mass Spectrom*. 448(2020):116269. IF: 2.1
<https://doi.org/10.1016/j.ijms.2019.116269>
- 132) Song T, **Kuang S***. 2019. Adipocyte dedifferentiation in health and diseases. *Clin Sci*. 133(20):2107-19. <https://doi.org/10.1042/CS20190128> IF: 6.9
- 131) Huang D, Deng M*, **Kuang S***. 2019. Polymeric carriers for controlled drug delivery in obesity treatment. *Trends Endocrinol Metab*. 30 (12), 974-89. <https://doi.org/10.1016/j.tem.2019.09.004> IF: 10.6
- 130) Kargl CC, Nie Y, Evans S, Stout J, Shannahan JH, **Kuang S**, Gavin TP. 2019. Factors secreted from high glucose treated endothelial cells impair expansion and differentiation of human skeletal muscle satellite cells. *J Physiol*. 597(20): 5109-24. <https://doi.org/10.1113/JP278165> IF: 6.2
- 129) Patel SH, Yue F, Saw SK, Foguth R, Cannon JR, Shannahan JH, **Kuang S**, Sabbaghi A, Carroll CC*. 2019. Advanced Glycation End-Products Suppress Mitochondrial Function and Proliferative Capacity of Achilles Tendon-Derived Fibroblasts. *Sci Rep*. 9(1):12614. <https://doi.org/10.1038/s41598-019-49062-8> IF: 5.0
- 128) Jia Z, Nie Y, Yue F, Kong Y, Gu L, Gavin TP, Liu X, **Kuang S***. 2019. A requirement of Polo-like kinase 1 in murine embryonic myogenesis and adult muscle regeneration. *eLife*, 8:e47097. IF: 8.7
<https://doi.org/10.7554/eLife.47097>
- 127) Huang X, **Kuang S**, Applegate TJ, Lin TL, Cheng HW. 2019. The development of the serotonergic and dopaminergic systems during chicken mid-late embryogenesis. *Mol Cell Endocrinol*. 493:110472. <https://doi.org/10.1016/j.mce.2019.110472> IF: 4.4
- 126) Wang C, Arrington J, Ratcliff AC, Chen J, Horton HE, Nie Y, Yue F, Hrycyna CA, Tao WA, **Kuang S***. 2019. Methyltransferase like 21c methylates and stabilizes Hspa8 in mature type I myofibers. *J Biol Chem*. <https://doi.org/10.1074/jbc.RA119.008430> IF: 5.5
- 125) Suarez-Trujillo A, Chen Y, Aduwari C, Cummings S, **Kuang S**, Buhman, K, Plaut K, Sobreira T, Aryal U, and Casey T. 2019. Maternal high fat diet exposure during gestation, lactation, or gestation and lactation differentially affects intestinal duodenum morphology and proteome of neonatal mice. *Nutr Res*. 66:48-60. <https://doi.org/10.1016/j.nutres.2019.03.014> IF: 3.9
- 124) Vadlamani A, Nie Y, Detwiler DA, Dhanabal A, Kraft AM, **Kuang S**, Gavin TP, Garner AL*. 2019. Nanosecond Electric Pulse Induced Proliferation and Differentiation of Osteoblasts and Myoblasts. *J Royal Soc Interface*. 16(155):20190079. <https://doi.org/10.1098/rsif.2019.0079> IF: 4.3
- 123) Nie Y, Sato Y, Garner RT, Kargi C, Wang C, **Kuang S**, Gilpin CJ, Gavin TP*. 2019. Skeletal muscle derived exosomes regulate endothelial cell functions via reactive oxygen species activated NF- κ B signaling. *Exp Physiol*. 104(8): 1262-73. <https://doi.org/10.1113/EP087396> IF: 3.0
- 122) Kim K, Reid BA, Ro B, Casey CA, Song Q, **Kuang S**, Roseguini BT*. 2019 Heat therapy improves soleus muscle force in a mouse model of ischemia-induced muscle damage. *J Appl Physiol*. 127(1): 215-28. <https://doi.org/10.1152/jappphysiol.00115.2019> IF: 3.9

- 121) Wang C, Zhang B, Ratliff AC, Arrington J, Chen J, Xiong Y, Yue F, Nie Y, Hu K, Jin W, Tao WA, Hrycyna CA, Sun X, **Kuang S***. 2019. Methyltransferase like 21e inhibits 26S proteasome activity to facilitate hypertrophy of type IIb myofibers. *FASEB J*, 33(8):9672-84. IF: 5.8
<https://doi.org/10.1096/fj.201900582R>
- 120) Xiong Y, Wu Z, Zhang B, Wang C, Mao F, Liu X, Hu K, Sun X, Jin W*, **Kuang S***. 2019. Fndc5 loss-of-function attenuates exercise induced browning of white adipose tissue in mice. *FASEB J*, 33(5):5876-86. <https://doi.org/10.1096/fj.201801754RR> IF: 5.8
- 119) Kim K, **Kuang S**, Song Q, Gavin T, Roseguini BT. 2019. Impact of heat therapy on recovery following eccentric exercise in humans. *J Appl Physiol*. 126(4):965-976. IF: 3.9
<https://doi.org/10.1152/jappphysiol.00910.2018>
- 118) Chen J, Wang C, **Kuang S***. 2019. Transdifferentiation of Muscle Satellite Cells to Adipose Cells Using CRISPR/Cas9-Mediated Targeting of MyoD. *Methods Mol Biol*. 1889:25-41. PMID: 30367407. IF: 10.7
https://doi.org/10.1007/978-1-4939-8897-6_3
- 117) Solfest JS, Nie Y, Weiss JA, Garner RT, **Kuang S**, Stout J, Gavin TP. 2019. Effects of acute aerobic and concurrent exercise on skeletal muscle metabolic enzymes in untrained men. *Sport Sci Health*. 15(2): 417-26. <https://doi.org/10.1007/s11332-019-00547-z> IF: 0.8
- 116) Zhang B, Zhang J, Zhang C, Zhang X, Ye J, **Kuang S**, Sun G, Sun X. 2018. Notoginsenoside R1 protects against diabetic cardiomyopathy through activating estrogen receptor α and its downstream signaling. *Front Pharmacol*. 9:1227. <https://doi.org/10.3389/fphar.2018.01227> IF: 4.4
- 115) Sadri B, Goswami D, Sala de Medeiros M, Pal A, Castro B, **Kuang S**, Martinez RV*. 2018. Wearable and Implantable Epidermal Paper-based Electronics. *ACS Appl Mater Interfaces*. 10(37):31061- 8. PMID: 30141320. <https://doi.org/10.1021/acsami.8b11020> IF: 10.4
- 114) Kong Y, Cheng L, Mao F, Zhang Z, Zhang Y, Farah E, Bosler J, Bai Y, Ahmad N, **Kuang S**, Li L, Liu X*. 2018. Inhibition of cholesterol biosynthesis overcomes enzalutamide resistance in castration-resistant prostate cancer (CRPC). *J Biol Chem*. 293(37):14328-41. <https://doi.org/10.1074/jbc.RA118.004442> IF: 5.5
- 113) Opreescu SN, Horzmann KA, Yue F, Freeman JL, **Kuang S***. 2018. Microarray, IPA and GSEA Analysis in Mice Models. *Bio-Protoc*. 8(17): e2999. <https://doi.org/10.21769/BioProtoc.2999> IF: NA
- 112) Pal A, Goswami D, Cuellar HE, Castro B, **Kuang S**, Martinez RV*. 2018. Early detection and monitoring of chronic wounds using low-cost, omniphobic paper-based smart bandages. *Biosens Bioelectron*. 117:696-705. <https://doi.org/10.1016/j.bios.2018.06.060> PMID: 30014943. IF: 12.5
- 111) Liu Z, Wang C, Liu X, **Kuang S***. 2018. Shisa2 regulates the fusion of muscle progenitors. *Stem Cell Res*. 31:31-41. <https://doi.org/10.1016/j.scr.2018.07.004> PMID: 30007221 IF: 4.5
- 110) Yu H, Waddell JN, **Kuang S**, Tellam RL, Cockett NE, Bidwell CA. 2018. Identification of genes directly responding to DLK1 signaling in Callipyge sheep. *BMC Genomics*. 19(1):283. PMID: 29690867. <https://doi.org/10.1186/s12864-018-4682-1> IF: 3.5
- 109) Xiong Y, Xu Z, Wang Y, **Kuang S***, T Shan*. 2018. Adipocyte-specific DKO of Lkb1 and mTOR protects mice against high-fat diet induced obesity but results in insulin resistance. *J Lipid Res*. 59(6): 974-81. PMID: 29636366. <https://doi.org/10.1194/jlr.M081463> IF: 6.7
- 108) Yin F, Xu R, Hu S, Zhao K, Yang S, **Kuang S**, Li Q, Han Q. 2018. Enhanced Mechanical and Biological Performances of an Extremely Fine Nanograined 316L Stainless Steel Cell-Substrate Interface Fabricated by Ultrasonic Shot Peening. *ACS Biomater Sci Eng*. 4(5): 1609-21. IF: 5.4
<https://doi.org/10.1021/acsbiomaterials.8b00173>
- 107) Xiong Y, Yue F, Jia Z, Yun Gao, Jin W, Hu K, Zhang Y, Zhu D, Yang G, **Kuang S***. 2018. A novel brown adipocyte-enriched long non-coding RNA that is required for brown adipocyte differentiation and sufficient to drive thermogenic gene program in white adipocytes. *Biochim Biophys Acta*, 1863(2018):409-19. PMID: 29341928. <https://doi.org/10.1016/j.bbaliip.2018.01.008> IF: 5.2
- 106) Gavin TP, Ernst JM, Kwak HB, Caudill SE, Reed MA, Garner RT, Nie Y, Weiss JA, Pories WJ, Dar M, Lin CT, Hubal MJ, Neuffer PD, **Kuang S**, Dohm GL. 2018. High incomplete skeletal muscle fatty acid oxidation explains low muscle insulin sensitivity in poorly controlled T2DM. *J Clin Endocrinol Metab*, 103(3):882-9. PMID: 29155999. <https://doi.org/10.1210/jc.2017-01727> IF: 6.1
- 105) Chen Y, Wang J, Yang S, Utturkar S, Crodian J, Cummings S, Thimmapuram J, San Miguel P, **Kuang S**, Gribskov M, Plaut K, Casey T. 2017. The Effect of High Fat Diet on Secreted Milk Transcriptome in Mid-lactation Mice. *Physiol Genomics*, 49(12): 747-62. (APSSelect Award). PMID: 29093195. IF: 4.3
<https://doi.org/10.1152/physiolgenomics.00080.2017>

- 104) Xiong Y, Page JC, Narayanan N, Wang C, Jia Z, Yue F, Shi X, Jin W, Hu K, Deng M, Shi R, Shan T, Yang G, Kuang S*. 2017. Peripheral neuropathy and hindlimb paralysis in a mouse model of adipocyte-specific knockout of *Lkb1*. *eBioMedicine*. 24:127-36. PMID: 29032027. IF: 11.2 <http://dx.doi.org/10.1016/j.ebiom.2017.09.017>
- 103) Jiang C, Cano Vega MA, Yue F, Kuang L, Narayanan N, Uzunalli G, Merkel MP, Kuang S*, Deng M*. 2017. Dibenzazepine-loaded Nanoparticles Induce Local Browning of White Adipose Tissue to Counteract Obesity. *Mol Ther*. 25(7):1718-29. <https://doi.org/10.1016/j.ymthe.2017.05.020> PMID: 28624262. IF: 12.9
- 102) Wang C, Yue F, Kuang S*. 2017. Muscle Histology Characterization Using H&E Staining and Muscle Fiber Type Classification Using Immunofluorescence Staining. *Bio-Protocol*. 7(10): e2279. <https://doi.org/10.21769/BioProtoc.2279> PMID: 28752107. IF: NA
- 101) Castro B, Kuang S*. 2017. Evaluation of Muscle Performance in Mice by using the Treadmill Exhaustion Test and the Whole-Limb Grip Strength Assay. *Bio-Protocol*. 7(8): e2237. <https://doi.org/10.21769/BioProtoc.2237> PMID: 28713848. IF: NA
- 100) Yang X, Yang S, Wang C, Kuang S*. 2017. The hypoxia inducible factors HIF1 α and HIF2 α are dispensable for embryonic muscle development but essential for postnatal muscle regeneration. *J Biol Chem*. 292(14):5981-91. <https://doi.org/10.1074/jbc.M116.756312> PMID: 28232488. IF: 5.5
- 99) Wang X, Yu C, Chen J, Jiang Q, Kuang S, Wang Y. 2017. Depot-specific differences in fat mass expansion in WT and ob/ob mice. *Oncotarget*. 8(28):46326-36. doi: 10.18632/oncotarget.17938. PMID: 28564636. IF: 3.7
- 98) Zhang B, Shen Q, Chen Y, Pan R, Kuang S, Liu G, Sun G, Sun X. 2017. Myricitrin alleviates oxidative stress-induced inflammation and apoptosis and protects mice against diabetic cardiomyopathy. *Sci Rep*. 7:44239. doi: 10.1038/srep44239. PMID: 28287141. IF: 4.0
- 97) Wang C, Liu W, Nie Y, Qaher M, Horton HE, Yue F, Asakura A, Kuang S*. 2017. Loss of MyoD promotes fate transdifferentiation of myoblasts into brown adipocytes. *eBioMedicine*. 16:212-23. PMID: 28117277. IF: 11.2
- 96) Yue F, Bi P, Yang X, Wang C, Shan T, Nie Y, Ratliff TL, Gavin TP, Kuang S*. 2017. Pten is necessary for the quiescence and maintenance of adult muscle stem cells. *Nat Commun*. 8:14328. PMID: 28094257. IF: 17.1
- 95) Yin F, Yang S, Hu S, Kuang S*, Han Q*. 2017. Enhanced human osteoblast cell functions by "net-like" nanostructured cell-substrate interface in orthopedic applications. *Mater Lett*. 189:275-8. IF: 3.6 <https://doi.org/10.1016/j.matlet.2016.11.077>
- 94) Zhang C, Huang KC, Rajwa B, Li J, Yang S, Lin H, Liao CS, Eakina G, Kuang S, Patsekina V, Robinson JP, Cheng JX. 2017. Stimulated Raman Scattering Flow Cytometry for Label-Free Single-Particle Analysis. *Optica*. 4(1): 103-9. <https://doi.org/10.1364/OPTICA.4.000103> IF: 9.8
- 93) Wang C, Wang M, Arrington J, Shan T, Yue F, Nie Y, Tao WA, Kuang S*. 2017. Ascl2 inhibits myogenesis by antagonizing the transcriptional activity of myogenic regulatory factors. *Development*. 144(2):235-247. <https://doi.org/10.1242/dev.138099>. PMID: 27993983. IF: 5.6
- 92) Yue F, Bi P, Wang C, Li J, Liu X, Kuang S*. 2016. Conditional loss of *Pten* in myogenic progenitors leads to postnatal skeletal muscle hypertrophy but age-dependent exhaustion of satellite cells. *Cell Rep*. 17(9):2340-53. <https://doi.org/10.1016/j.celrep.2016.11.002> PMID: 27880908. IF: 8.1
- 91) Shan T*, Xiong Y, Kuang S*. 2016. Deletion of *Lkb1* in adult mice results in body weight reduction and lethality. *Sci Rep*. 6:36561. doi: 10.1038/srep36561. PMID: 27824128. IF: 4.0
- 90) Zhai W, Hu H, Le L, Zhuang F, Wang K, Zhao Y, Wang K, Liu X, Sun D, Wang X, Kuang S, Hu K. 2016. Generation and analysis of the Rett syndrome-associated MeCP2-null rat model. *Hereditas*. 38(11):1004-11. DOI: 10.16288/j.yczs.16-180. IF: 2.4
- 89) Bi P, Yue F, Sato Y, Wirbisky SE, Liu W, Shan T, Wen Y, Zhou D, Freeman JL, Kuang S*. 2016. Stage-specific effects of Notch activation during skeletal myogenesis. *eLife*. 10.7554/eLife.17355. PMID: 27644105. IF: 8.6
- 88) Bi P, Yue F, Karki A, Castro B, Wirbisky SE, Wang C, Durkes A, Elzey BD, Andrisani OM, Bidwell CA, Freeman JL, Konieczny SF, Kuang S*. 2016. Notch activation drives adipocyte dedifferentiation and tumorigenic transformation in mice. *J Exp Med*. 213(10): 2019-37. PMID: 27573812. IF: 17.6 <https://doi.org/10.1084/jem.20160157>
- 87) Shan T*, Xiong Y, Zhang P, Li Z, Jiang Q, Bi P, Yue F, Yang G, Wang Y, Liu X, Kuang S*. 2016. *Lkb1* controls brown fat growth and thermogenesis through regulating intracellular localization of CRT3. *Nat Commun*. 7:12205. <https://doi.org/10.1038/ncomms12205> PMID: 27461402. IF: 12.1

- 86) Kuhlendoeltern AM, Kim K, Neff D, Nie Y, Blaize AN, Wong BJ, **Kuang S**, Stout J, Song Q, Gavin TP, Roseguini BT*. 2016. Heat therapy promotes the expression of angiogenic regulators in human skeletal muscle. *Am J Physiol*. 311(2):R377-91. doi: 10.1152/ajpregu.00134.2016. PMID: 27357800. IF: 3.5
- 85) Nie Y, Sato Y, Wang C, Yue F, **Kuang S***, Gavin TP*. 2016. Impaired exercise tolerance in miR-133a deficient mice through AKT mediated inhibition of mitochondrial biogenesis. *FASEB J*. 30(11):3745-58. PMID: 27458245. IF: 5.3
- 84) Shan T*, Zhang P, Jiang Q, Xiong Y, **Kuang S***. 2016. Adipocyte-specific deletion of mTOR inhibits adipose development and causes insulin resistance. *Diabetologia*. 59(9): 1995-2004. PMID: 27294611. IF: 7.0
- 83) Lubecka K, Kurzava L, Flower K, Buvala H, Zhang H, Teegarden D, Camarillo I, Suderman M, **Kuang S**, Andrisani O, Flanagan J, Stefanska B*. 2016. Stilbenoids remodel the DNA methylation patterns in breast cancer cells and inhibit oncogenic NOTCH signaling through epigenetic regulation of MAML2 transcriptional activity. *Carcinogenesis*. 37(7): 656-68. PMID: 27207652. IF: 4.6
- 82) Wu Z, Hu X, Mao F, Wang C, Zhang B, Zhuang F, Hu K, Sun X, **Kuang S**, Jin W. 2016. Construction of a Fndc5 knockout mouse model by TALEN-mediated DNA targeting. *Chin J Comp Med*. 26(6): 37-41.
- 81) Shan T*, Zhang P, Xiong Y, Wang Y, **Kuang S***. 2016. Lkb1 deletion upregulates Pax7 expression through activating Notch signaling pathway in myoblasts. *Int J Biochem Cell Biol*. 76(2016): 31–38. PMID: 27131604. IF: 3.7
- 80) Jiang C, Wang JH, Yue F, **Kuang S***. 2016. The brain expressed x-linked gene 1 (Bex1) regulates myoblast fusion. *Dev Biol*. 409(1): 16-25. PMID: 26586200. IF: 2.9
- 79) Jiang C, Kuang L, Merkel MP, Yue F, Cano-Vega MA, Narayanan N, **Kuang S***, Deng M*. 2015. Biodegradable polymeric microsphere-based drug delivery for inductive browning of fat. *Front Endocrinol*. 6: 169. doi: 10.3389/fendo.2015.00169. PMID: 26617571 IF: 3.6
- 78) Wang C, Liu W, Liu Z, Chen L, Liu X, **Kuang S***. 2015. Hypoxia inhibits myogenic differentiation through p53-dependent induction of Bhlhe40. *J Biol Chem*. 290(50):29707-16. PMID: 26468276
- 77) Nie Y, Gavin TP, **Kuang S***. 2015. Measurement of resting energy metabolism in mice using Oxymax Open Circuit indirect calorimetry. *Bio Protoc*. 5(18): e1602. PMID: 26878029
- 76) Li YH, Luo J, Mosley YY, Hedrick VE, Paul LN, Chang J, Zhang G, Wang YK, Banko MR, Brunet A, **Kuang S**, Wu JL, Chang CJ, Scott MP, Yang JY*. 2015. AMP-activated protein kinase directly phosphorylates and destabilizes Hedgehog pathway transcription factor GLI1 in medulloblastoma. *Cell Rep*. 12(4): 599-609. PMID: 26190112. IF: 8.1
- 75) Zhang P, Liang X, Shan T, Jiang Q, Deng C, Zheng R, **Kuang S***. 2015. mTOR is necessary for proper satellite cell activity and skeletal muscle regeneration. *Biochem Biophys Res Commun*. 463(1-2): 102-8. PMID: 25998386. IF: 3.0
- 74) Bi P*, **Kuang S***. 2015. Notch signaling as a novel regulator of energy metabolism. *Trends Endocrinol Metab*. 26(5):248-55. PMID: 25805408. IF: 11.7
- 73) Wang JH, Wang Q, Wang C, Reinholt B, Grant AL, Gerrard DE, **Kuang S***. 2015. Heterogeneous activation of a slow myosin gene in proliferating myoblasts and differentiated single myofibers. *Dev Biol*. 402(1):72-80. PMID: 25794679. IF: 2.9
- 72) Shao C, Ahmad N, Hodges K, **Kuang S**, Ratliff T, Liu X*. 2015. Inhibition of Polo-like Kinase 1 (Plk1) Enhances the Anti-neoplastic Activity of Metformin in Prostate Cancer. *J Biol Chem*. 290(4): 2024-33. PMID: 25505174. IF: 4.2
- 71) Shan T, Zhang P, Bi P, **Kuang S***. 2015. Lkb1 deletion promotes ectopic lipid accumulation in muscle progenitor cells and mature muscles. *J Cell Physiol*. 230(5): 1033-41. PMID: 25251157. IF: 4.0
- 70) Yang X, Bi P, **Kuang S***. 2014. Fighting Obesity: When muscle meets fat. *Adipocyte*. 3(4): 371-80. PMID: 26317052. IF: 1.6
- 69) Zhang Z, Hou X, Shao C, Li J, Cheng JX, **Kuang S**, Ratliff T, Liu X*. 2014. Inhibition of Plk1 enhances the efficacy of androgen signaling inhibitors in castration-resistant prostate cancer. *Cancer Res*. 74(22):6635-47. PMID: 25252916. IF: 9.7
- 68) Zhang P, Shan T, Liang X, Deng C, **Kuang S***. 2014. Mammalian target of rapamycin is essential for cardiomyocyte survival and heart development in mice. *Biochem Biophys Res Commun*. 452(1):53-9. PMID: 25139234. IF: 3.0
- 67) Li Z, Li J, Bi P, Burcham G, Elzey BD, Ratliff T, **Kuang S**, Liu X*. 2014. Plk1 Phosphorylation of PTEN Causes a Tumor-Promoting Metabolic State. *Mol Cell Biol*. 34(19):3642-61. PMID: 25047839. IF: 4.0

- 66) Shan T, Zhang P, Liang X, Bi P, Kuang S*. 2014. Lkb1 is indispensable for skeletal muscle development, regeneration and satellite cell homeostasis. *Stem Cells*. 32(11):2893-907. PMID: 25069613. IF: 6.0
- 65) Bi P, Shan T, Liu W, Yue F, Yang X, Liang X, Wang J, Li J, Carlesso N, Liu X, Kuang S*. 2014. Inhibition of Notch signaling promotes browning of white adipose tissue and ameliorates obesity. *Nat Med*. 20(8): 911-8. (Featured by "News & Views") PMID: 25038826. IF: 87.2
- 64) Jiang C, Wen Y, Kuroda K, Hannon K, Rudnicki MA, Kuang S*. 2014. Notch signaling deficiency underlies age-dependent depletion of satellite cells in muscular dystrophy. *Dis Model Mech*. 7(8): 997-1004. (Featured by "In This Issue") PMID: 24906372. IF: 4.7
- 63) Yu H, Waddell JN, Kuang S and Bidwell CA*. 2014. Park7 expression influences myotube size and myosin expression in muscle. *Plos ONE*. 9(3): e92030. PMID: 24637782
- 62) Ogura Y, Mishra V, Hindi SM, Kuang S, Kumar A*. 2013. Proinflammatory cytokine TWEAK suppresses satellite cell self-renewal through inversely modulating Notch and NF-kappa B signaling pathways. *J Biol Chem*. 288(49):35159-69. PMID: 24151074
- 61) Liu W*, Kuang S*. 2013. miR-133 links to energy balance through Prdm16. *J Mol Cell Biol*. 5(6):432-4. PMID: 24085747. IF: 4.0
- 60) Zhu H, Park S, Scheffler JM, Kuang S, Grant AL, Gerrard DE*. 2013. Porcine satellite cells are restricted to a phenotype resembling their muscle origin. *J Anim Sci*. 91(10):4684-91. PMID: 23893979
- 59) Liu W, Shan T, Yang X, Liu Y, Kuang S*. 2013. Heterogeneous lineage origin underlies phenotypic and functional differences of white and beige adipocytes. *J Cell Sci*. 126(16):3527-32. PMID: 23781029
- 58) Shan T, Liang X, Bi P, Zhang P, Liu W, Kuang S*. 2013. Distinct populations of adipogenic and myogenic Myf5-lineage progenitors in white adipose tissues. *J. Lipid Res*. 54(8):2214-24. PMID: 23740968
- 57) Liu W, Bi P, T Shan, X Yang, Yin H, Wang YX, Liu N, Rudnicki MA, Kuang S*. 2013. miR-133a regulates adipocyte browning in vivo. *Plos Genet*. 9(7):e1003626. PMID: 23874225. IF: 5.2
- 56) Hou X, Huang W, Li J, Staiger C, Kuang S, Ratliff T, Liu X*. 2013. Polo-like Kinase 1-dependent microtubule dynamics promotes androgen receptor signaling in prostate cancer. *Prostate*. 73(12):1352-63. PMID: 23661607. IF: 3.0
- 55) Kuroda K, Kuang S, Makoto TM, Rudnicki MA*. 2013. Canonical Wnt signaling induces BMP-4 to specify slow myofibrogenesis of embryonic myoblasts. *Skelet Muscle* 3(1):5. PMID: 23497616. IF: 4.2
- 54) Shan T, Liang X, Bi P, Kuang S*. 2013. Myostatin knockout drives browning of white adipose through activating the AMPK-PGC1a-Fndc5 pathway in muscle. *FASEB J*. 27(5): 1981-9. PMID: 23362117
- 53) Song B, Liu XS, Rice S, Kuang S, Elzey B, Konieczny SF, Ratliff T, Hazbun T, Chiorean EG, Liu X*. 2013. Plk1 phosphorylation of Orc2 and Hbo1 contributes to gemcitabine resistance in pancreatic cancer. *Mol Cancer Ther*. 12(1):58-68. PMID: 23188630. IF: 5.0
- 52) Shan T, Liu W, Kuang S*. 2013. Fatty acid binding protein 4 expression marks a population of adipocyte progenitors in white and brown adipose tissues. *FASEB J*. 27(1):277-87. PMID: 23047894
- 51) Hindi S, Paul P, Dahiya S, Mishra V, Bhatnagar S, Kuang S, Choi Y, Kumar A*. 2012. Reciprocal Interaction between TRAF6 and Notch signaling regulates adult myofiber regeneration upon injury. *Mol Cell Biol*. 32(23):4833-45. PMID: 23028045
- 50) Wang M, Yu H, Kim YS, Bidwell CA, Kuang S*. 2012. Myostatin facilitates slow and inhibits fast myosin heavy chain expression during myogenic differentiation. *Biochem Biophys Res Commun*. 426(1):83-8. PMID: 22910409
- 49) Liu XS, Tang J, Song B, Liu W, Kuang S, Liu X*. 2012. Plk1 phosphorylates Sgt1 at the kinetochores to promote kinetochore-microtubule attachment. *Mol Cell Biol*. 32(19):4053-67. PMID: 22869522
- 48) Liu W, Wen Y, Bi P, Lai X, Liu XS, Liu X, Kuang S*. 2012. Hypoxia promotes satellite cell self-renewal and enhances the efficiency of myoblast transplantation. *Development*. 139:2857-2865. (Highlighted by "IN THIS ISSUE") PMID: 22764051
- 47) Wen Y, Bi P, Liu W, Asakura A, Keller C, Kuang S*. 2012. Constitutive Notch activation upregulates Pax7 and promotes the self-renewal of skeletal muscle satellite cells. *Mol. Cell. Biol*. 32(12):2300-11. PMID: 22493066
- 46) Nicklas S, Otto A, Wu X, Miller P, Stelzer S, Wen Y, Kuang S, Wrogemann K, Patel K, Ding H*, Schwamborn J*. 2012. TRIM32 regulates skeletal muscle stem cell differentiation and is necessary for normal adult muscle regeneration. *PLoS ONE* 7(1): e30445. PMID: 22299041
- 45) Bi P, Kuang S*. 2012. Stem cell niche and postnatal muscle growth. *J Anim Sci*. 90(3): 924-35. PMID: 22100594

- 44) Liu W, Liu Y, Lai X, Kuang S*. 2012. Intramuscular adipose is fiber type specific, derived from a non-Pax3 lineage and required for efficient muscle regeneration. *Dev Biol.* 361(1):27-38. PMID: 22037676
- 43) Chakkalakal JV, **Kuang S**, Buffelli M, Lichtman JW, Sanes JR*. 2012. Mouse transgenic lines that selectively label slow (type I), intermediate (Type IIa) and fast (types IIx and IIb) skeletal muscle fibers. *Genesis.* 50(1): 50-8. PMID: 21898764
- 42) Angione A, Jiang C, Pan D, Wang Y, Kuang S*. 2011. PPAR α regulates satellite cell proliferation and skeletal muscle regeneration. *Skelet Muscle.* 1(1): 33. PMID: 22040534
- 41) Dahiya S, Bhatnagar S, Jiang C, Paul PK, **Kuang S**, Kumar A*. 2011. Elevated levels of active matrix metalloproteinase-9 cause hypertrophy and limit fibrosis in skeletal muscle of normal and dystrophin-deficient mdx mice. *Hum Mol Genet.* 20(22): 4345-59. PMID: 21846793
- 40) Goldberg JL*, Rich DR, Muruganathan SP, Liu MB, Pon JR, Tam R, Diefenbach TJ, **Kuang S**. 2011. Identification of neurotransmitter-ciliary interactions underlying the behavioral response to hypoxia in encapsulated embryos of the pond snail *Lymnaea stagnalis*. *J Exp Biol.* 214:2660-70. PMID: 21795561
- 39) Waddell JN, Zhang P, Wen Y, Gupta SK, Yevtodiyanenko A, Schmidt JV, Bidwell CA, Kumar A, **Kuang S***. 2010. Dlk1 is necessary for proper skeletal muscle development and regeneration. *Plos ONE.* 5(11):e15055. PMID: 21124733
- 38) Zhao D, Pond A, Watkins B, Gerrard D, Wen Y, Kuang S, Hannon K*. 2010. Peripheral endocannabinoids regulate skeletal muscle development and maintenance. *European Journal Translational Myology - Basic Applied Myology* 1(4):167-79.
- 37) **Kuang S**, Rudnicki MA*. 2010. Muscle Stem Cells. In: Giordano A, Galderisi U (Eds) Cell Cycle Regulation and Differentiation in Cardiovascular and Neural Systems. Humana Press - Springer, NJ. pp105-120. ISBN: 978-1-60327-152-3
- 36) Mittal A, Bhatnagar S, Kumar A, Paul PK, **Kuang S**, Kumar A*. 2010. Genetic ablation of TWEAK augments regeneration and post-injury growth of skeletal muscle in mice. *Am J Pathol.* 177(4):1732-42. PMID: 20724600
- 35) Gillespie MA, Le Grand F, Scimè A, **Kuang S**, von Maltzahn J, Seale V, Cuenda A, Ranish JA, Rudnicki MA*. 2009. p38 γ -dependent gene silencing restricts entry into the myogenic differentiation program. *J Cell Biol.* 187:991-1005. PMID: 20026657
- 34) Scheffler JM, Gerrard DE, **Kuang S**, Grant AL*. 2009. Achievements of Research in the Field of Animal Growth and Development. In: Rosati A, Tewolde A & Mosconi C (Eds) Animal Production and Animal Science Worldwide. World Association for Animal Production. Wageningen Academic Publishers, The-Netherlands. pp67-75. ISSN 1574-1125.
- 33) Rudnicki MA*, Le Grand F, McKinnell I, **Kuang S**. 2009. The molecular regulation of muscle stem cell function. *Cold Spring Harb Symp Quant Biol.* 73:323-31.
- 32) Seale P, Bjork B, Yang W, Kajimura S, Chin S, **Kuang S**, Scimè A, Devarakonda S, Conroe HM, Erdjument-Bromage H, Tempst P, Rudnicki MA, Beier DR, Spiegelman BM*. 2008. PRDM16 controls a brown fat/skeletal muscle switch. *Nature.* 454:961-967. (**Article; Cover Picture; Selected by Science magazine as one of the top 10 breakthroughs of 2008**) PMID: 18719582
- 31) Goldberg JL*, Doran SA, Shartau RB, Pon JR, Ali DW, Tam R, **Kuang S**. 2008. Integrative biology of an embryonic respiratory behavior in pond snails: the “embryonic stirbar hypothesis”. *J Exp Biol* 211:1729-1736. PMID: 18490388
- 30) **Kuang S**, Rudnicki MA*. 2008. Emerging biology of satellite cells and their therapeutic potentials. *Trends Mol Med* 14:82-91. (**Cover Picture**) PMID: 18218339
- 29) **Kuang S**, Gillespie M, Rudnicki MA*. 2008. Niche regulation of muscle satellite cell self-renewal and differentiation. *Cell Stem Cell* 2:22-31. PMID: 18371418
- 28) Holterman CE, Le Grand F, **Kuang S**, Seale P, Rudnicki MA*. 2007. Megef10 regulates the progression of the satellite cell myogenic program. *J Cell Biol* 179:911-922. PMID: 18056409
- 27) **Kuang S**, Kuroda K, Le Grand F, Rudnicki MA*. 2007. Asymmetric self-renewal and commitment of satellite stem cells in muscle. *Cell* 129:999-1010. (**featured by a preview article in the same issue of Cell**) PMID: 17540178
- 26) **Kuang S**, Charge SB, Seale P, Huh M, Rudnicki MA*. 2006. Distinct roles for Pax7 and Pax3 in adult regenerative myogenesis. *J Cell Biol* 172:103-113. PMID: 16391000
- 25) Johnson JD, **Kuang S**, Mislser S, Polonsky KS*. 2004. Ryanodine receptors in human pancreatic beta cells: localization and effects on insulin secretion. *FASEB J* 18:878-880. PMID: 15033925

- 24) Koss R, Diefenbach TJ, **Kuang S**, Doran SA, Goldberg JI*. 2003. Coordinated development of identified serotonergic neurons and their target ciliary cells in *Helisoma trivolvis* embryos. *J Com. Neurol* 457:313-325. PMID: 12561073
- 23) **Kuang S**, Regnier M, Goldberg JI*. 2002. Long-term culture of decapsulated gastropod embryos: A transplantation study. *Biol Bull* 203:278-288. (**Cover Picture**) PMID: 12480719
- 22) **Kuang S**, Doran SA, Wilson RJA, Goss GG, Goldberg JI*. 2002. Serotonergic sensory-motor neurons mediate a behavioral response to hypoxia in *Helisoma trivolvis* embryos. *J Neurobiol* 52:73-83. PMID: 12115895
- 21) **Kuang S**, Goldberg JI*. 2001. Laser ablation reveals regulation of ciliary activity by serotonergic neurons in molluscan embryos. *J Neurobiol* 47:1-15. PMID: 11257609
- 20) Sun Y*, Fang J, Sun H, Song Y, **Kuang S**. 2000. Distribution and features of particulate organic carbon in cultivating waters of Sanggou bay. *J Fish Chin* 24(4): 329-333.
- 19) Fang J*, Sun H, **Kuang S**, Liang X, Niu X, Liu Z, Li F. 1999. Study on the infiltration and ingestion rate of the bloody clam larvae *Tegillarca granosa*. *Oceanol Limnol Sinica* 30(2):167-171.
- 18) Fang J*, **Kuang S**, Sun H, Liang X, Liu Z, Li F, Niu X. 1999. Inducement of settlement and metamorphosis by chemical cues in larval *Tegillarca granosa*. *J Fish Sci Chin* 6:41-44.
- 17) Sun Y*, Zhao J, Zhou S, Song Y, Cui Y, Chen J, Fang J, Sun H, **Kuang S**. 1998. Environmental features of cultural waters in Sanggou bay. *J Fish Sci Chin* 5: 69–75
- 16) **Kuang S***, Fang J, Sun H, Niu X, Li F. 1997. Seasonal studies of filtration rate and absorption efficiency in scallop *Chlamys farreri*. *J Shellfish Res* 16:39-46.
- 15) Sun H*, Fang J, **Kuang S**, Li F, Wang X, Tang T. 1996. Filtration rate of sea squirts *Styeia clava* and *Coina intestinalis* (Ascidiacea) in different seasons. *Mar Fish Res* 17:103-107.
- 14) Fang J*, **Kuang S**, Sun H, Li F, Zhang A, Wang X, Tang T. 1996. Mariculture status and optimizing measurements for the culture of scallop *Chlamys farreri* and kelp *Laminaria japonica* in Sungo bay. *Mar Fish Res* 17:95-102.
- 13) **Kuang S***, Sun H, Li F, Fang J. 1996. Comparative feeding physiology of cultured and wild Pacific oyster populations. *Mar Fish Res* 17:87-94.
- 12) **Kuang S***, Sun H, Li F, Fang J. 1996. Feeding and growth of scallop *Chlamys farreri* before and after spawning. *Mar Fish Res* 17:80-86.
- 11) **Kuang S***, Fang J, Sun H, Li F. 1996. Seston dynamics in Sungo bay. *Mar Fish Res* 17:60-67.
- 10) Song Y*, Cui Y, Sun Y, Fang J, Sun H, **Kuang S**. 1996. Study on nutrient state and influencing factors in Sungo bay. *Mar Fish Res* 17:41-51.
- 9) Fang J*, **Kuang S**, Sun H, Sun Y, Zhou S, Song Y, Cui Y, Zhao J, Yang Q, Li F, Grant J, Emersom C, Zhang A, Wang X, Tang T. 1996. Study on the carrying capacity of Sungo bay for the culture of scallop *Chlamys farreri*. *Mar Fish Res* 17:18-31.
- 8) Fang J*, Sun H, **Kuang S**, Sun Y, Zhou S, Song Y, Cui Y, Zhao J, Yang Q, Li F, Grant J, Emersom C, Wang X, Tang T. 1996. Assessing the carrying capacity of Sungo bay for culture of kelp *Laminaria japonica*. *Mar Fish Res* 17:7-17.
- 7) Fang J*, Sun H, Yan J, **Kuang S**, Li F, Newkirk GF, Grant J. 1996. Polyculture of scallop *Chlamys farreri* and kelp *Laminaria japonica* in Sungo bay. *Chin J Oceanogr Limnol* (English Version) 14:322-329.
- 6) **Kuang S***, Zhang F. 1996. Effect of hexavalent chromium on the early development of the bay scallop *Argopecten irradians*. *Acta Oceanol Sinica* (English Version) 15:273-280.
- 5) **Kuang S***. 1996. Metallothioneins in shellfish. In: Dai M, Sun P, Zhen X (editors), *Adv Marine Sci*. Science Press, Beijing. pp29-36.
- 4) **Kuang S***, Fang J, Sun H, Niu X, Li F. 1996. Seasonal variations of filtration rate and assimilation efficiency of the scallop *Chlamys farreri* in Sungo bay. *Oceanol Limnol Sinica* 27(2):194-199.
- 3) **Kuang S***, Zhang F. 1996. Cr⁶⁺ and the development of bay scallop *Argopecten irradians*. *Acta Oceanol Sinica* 18:88-95.
- 2) Sun H*, **Kuang S**, Fang J, Li F. 1996. Studies on suitable culture depths and methods for scallop in Sanggou bay. *J Fish Sci Chin* 3:60–65.
- 1) Sun H*, Fang J, **Kuang S**, Li F. 1995. Filtration rate of scallop (*Chlamys farreri*) cultivated in simulated natural environment. *J Fish Sci Chin* 2:16-21.

Patents/Disclosures

Rudnicki MA, **Kuang S**, Holterman C. 2005. Novel Stem Cells, Nucleotide Sequences and Proteins Therefrom. Canadian Pat CA 2,524,619; WO Patent 2,007,059,612; US Patent 20,120,213,751

Deng M, Kuang L, Jiang C, **Kuang S**. 10/2015. Polymer-Based Therapeutics for Inductive Browning of Fat. PCT/US16/58997. Provisional patent licensed to found Adipo Therapeutics LLC.

Deng M, Narayanan N, **Kuang S**. 04/2020. Methods and Materials for Biomaterials-Based Skeletal Muscle Regeneration by Harnessing Nerve-Muscle Cell Interactions. US63/016,386, provisional patent.

Deng M, Narayanan N, **Kuang S**, Kuang L. 06/2020. Skeletal Muscle Regeneration in Volumetric Muscle Loss using Biomimetic Glycosaminoglycan-Based Hydrogel. US63/040,590, provisional patent.

Deng M, Huang D, **Kuang S**. 07/2020. Notch Signaling Inhibitors for Treating Obesity and Metabolic Disorders. PCT/US21/42867. US63/055,410, provisional patent licensed to Adipo Therapeutics, LLC.

Datasets deposited to Gene Expression Omnibus, National Center for Biotechnology Information (12)

[Single cell RNA-seq comparing regeneration of young and aged skeletal muscles](#)

Organism: Mus musculus, Type: Expression profiling by high throughput sequencing
Platform: GPL24247, 2 Samples, Accession: GSE226907

[Effect of Notch over-expression on murine liposarcoma cells](#)

Organism: Mus musculus, Type: Expression profiling by high throughput sequencing
Platform: GPL28330, 6 Samples, Accession: GSE210457

[Next Generation Sequencing Identifies the Heterogeneity of Human Pluripotent Stem Cell-Derived AGM-like Cells](#)

Organism: Homo sapiens, Type: Expression profiling by high throughput sequencing
Platform: GPL24676, 2 Samples, Accession: GSE157944

[Pnpla2 knockout in muscle stem cells](#)

Organism: Mus musculus, Type: Expression profiling by high throughput sequencing
Platform: [GPL13112](#), [6 Samples](#), Accession: GSE150632

[Effects of Pten knockout in dystrophic skeletal muscles of mdx mouse](#)

Organism: Mus musculus, Type: Expression profiling by high throughput sequencing
Platform: [GPL13112](#), [6 Samples](#), Accession: GSE150220

[10X skeletal muscle regeneration scRNA-seq](#)

Organism: Mus musculus, Type: Expression profiling by high throughput sequencing
Platform: [GPL24247](#), [7 Samples](#), Accession: GSE138826

[Gene expression profile in mouse skeletal muscle after Mettl21e deletion](#)

Organism: Mus musculus, Type: Expression profiling by high throughput sequencing
Platform: [GPL21103](#), [6 Samples](#), Accession: GSE122024

[Liver kinase B1 deletion effect on brown adipose tissue](#)

Organism: Mus musculus. Type: Expression profiling by array
Platform: [GPL13912](#), [3 Samples](#), Accession: GSE89348

[Gene expression of skeletal muscles in response to overexpression of Notch1 intracellular domain \(N1ICD\)](#)

Organism: Mus musculus. Type: Expression profiling by array
Platform: [GPL13912](#), [6 Samples](#), Accession: GSE81242

[Transformation of mature adipocytes to liposarcoma in Ad/NICD mice](#)

Organism: Mus musculus. Type: Expression profiling by high throughput sequencing
Platform: [GPL17021](#), [12 Samples](#), Accession: GSE80433

[N1ICD overexpression effect on white adipose tissue](#)

Organism: Mus musculus. Type: Expression profiling by array
Platform: [GPL10787](#), [8 Samples](#), Accession: GSE80215

[Stilbenoids remodel the DNA methylation patterns in breast cancer cells and inhibit oncogenic NOTCH signaling through epigenetic regulation of MAML2 transcriptional activity](#)

Organism: Homo sapiens. Type: Methylation profiling by genome tiling array

Platform: [GPL13534](#), [12 Samples](#), Accession: GSE80794

Invited Talks (Over 100, since 2008)

- 2008.05 Department of Biochemistry and Medical Genetics, University of Manitoba, Winnipeg, Canada.
- 2009.07 WACBE World Congress on Bioengineering 2009, Hong Kong, China.
- 2009.07 Institute of Oceanology, Chinese Academy of Sciences, Qingdao, China.
- 2009.08 21st IUBMB International Congress of Biochemistry and Molecular Biology, Shanghai, China
- 2010.03 Kumamoto University, Institute of Molecular Embryology and Genetics, Global Center-of-Excellence (COE) Seminar. Kumamoto, Japan.
- 2010.04 Lady Davis Institute, McGill University, Montreal, QC, Canada
- 2010.04 Purdue University Center for Cancer Research, Cell Growth and Differentiation Group Meeting
- 2010.09 Purdue University Center for Cancer Research Annual Scientific Retreat
- 2011.01 Biomedical Engineering Seminar Series, Purdue University
- 2011.04 Department of Cellular and Integrative Physiology, Indiana University School of Medicine
- 2011.06 Department of Pediatrics, Indiana University School of Medicine
- 2011.07 ASAS Annual Meeting-Extracellular matrix in skeletal muscle development and meat quality symposium. New Orleans, USA.
- 2011.10 Virginia Tech Fralin Life Science Institute, Molecular Cell Biology and Biotechnology (MCBB) Seminars. Blacksburg, USA.
- 2012.02 University of Louisville School of Medicine, Department of Anatomical Sciences and Neurobiology Seminars. Louisville, USA.
- 2012.05 College of Animal Sciences, Zhejiang University, Hangzhou, China
- 2012.08 FASEB Summer Research Conference on Skeletal Muscle Satellite and Stem Cells. Il Ciocco, Barga (Lucca), Italy
- 2012.10 Department of Animal and Avian Sciences, University of Maryland. College Park, MD, USA
- 2012.10 International Conference and Exhibition on Emerging Cell Therapies, Chicago, USA
- 2012.12 Peking Union Medical College, Beijing, China
- 2012.12 Institute of Medicinal Plant Development, Chinese Academy of Medical Sciences, Beijing, China
- 2013.05 Northwest A&F University, Yangling, China
- 2013.05 State Key Laboratory of Cardiovascular Diseases, Fuwai Hospital, Beijing, China
- 2013.07 International Conference on Animal and Dairy Sciences. Las Vegas, NV
- 2013.08 Featured Faculty Presentation, China Heart Congress. Beijing, China.
- 2013.08 Institute of Molecular Medicine, Peking University. Beijing, China
- 2013.09 Chinese Academy of Medical Sciences, Beijing, China
- 2013.09 Innovate 2013 – Innovations in animal and human health: The next generation of growth biology, Atlanta, GA
- 2014.01 Novo Nordisk Union Diabetes Research Talent Foundation, Beijing, China
- 2014.03 School of Life Science and Technology, Tongji University, Shanghai, China.
- 2014.03 Queenstown Molecular Biology Meeting, Shanghai, China.
- 2014.04 Center for Diabetes Research, Indiana University School of Medicine, Indianapolis, IN
- 2014.04 Purdue University Center for Cancer Research Seminar Series. West Lafayette, IN
- 2014.05 2014 Agriculture Research Award Seminar. West Lafayette, IN
- 2014.07 Eli Lilly Grand Rounds. Indianapolis, IN
- 2014.10 Nutrition 695 seminar series. Purdue University.
- 2014.10 College of Animal Sciences, Zhejiang University, Hangzhou, China.
- 2014.10 Ningbo University, Ningbo, China.
- 2014.10 Plenary Talk, 7th China Academic Symposium of Feed Nutrition, Zhengzhou, China
- 2014.10 School of Life Sciences, Tsinghua University, Beijing, China
- 2014.11 College of Biological Sciences, China Agriculture University, Beijing, China
- 2014.11 Overcoming obesity: changing the color of your fat. Science on Tap Lafayette, IN, USA.
- 2014.12 Institute of Basic Medical Sciences, Peking Union Medical College, Beijing, China.
- 2014.12 The 7th Guangzhou International Symposium on Stem Cells and Regenerative Medicine, China.
- 2015.02 Department of Animal and Avian Sciences, University of Maryland, USA.

- 2015.04 Huazhong Agriculture University, Wuhan, China.
2015.06 Northwest A&F University, Yanglin, China.
2015.07 ASAS Annual Meeting-Mitochondria Symposium. Orlando, USA.
2015.09 EMBO Workshop in Muscle Growth and Wasting. Ascona, Switzerland.
2015.10 The 1st Traditional Chinese Medicinal Resources and Health Products Summit. Guiyang, China.
2016.01 State Key Laboratory of Agrobiotechnology, China Agriculture University, Beijing, China
2016.02 The Ohio State University, Columbus, OH, USA
2016.05 Eli Lilly China Research and Development Center, Shanghai, China
2016.07 Institute of Subtropical Agriculture, Chinese Academy of Sciences, Changsha, China
2016.10 Institute of Medicinal Plant Development, Chinese Academy of Medical Sciences, Beijing, China
2016.11 College of Animal Science and Technology, Huazhong Agriculture University, Wuhan, China
2016.11 The 9th International Symposium on AMP-activated Protein Kinase, Xiamen, China
2016.11 Chinese University of Hong Kong, Hong Kong, China
2016.12 College of Animal Sciences, Zhejiang University, Hangzhou, China
2017.05 College of Animal Sciences and Veterinary Medicine, China Agricultural University, Beijing, China
2017.05 College of Animal Sciences, Jilin University, Changchun, China
2017.06 Institute of Subtropical Agriculture, Chinese Academy of Sciences, Changsha, China
2017.06 College of Life Sciences, Hunan Normal University, Changsha, China
2017.07 Yellow Sea Fishery Research Institute, Chinese Academy of Fishery Sciences, Qingdao, China
2017.07 College of Marine Life Science, Ocean University of China, Qingdao, China
2017.10 Chinese Society of Cell Biology 2017 Annual Meeting, Xiamen, China
2017.10 TEDA Institute of Biological Sciences and Biotechnology, Nankai University, Tianjin, China
2017.10 Department of Pathology, University of Michigan, Ann Arbor, MI
2017.12 Ottawa Hospital Research Institute Seminar Series, Ottawa, Canada
2018.05 Division of Life Sciences, Hong Kong University of Science & Technology, Hong Kong, China
2018.06 College of Life Sciences, Nanchang University, Nanchang, China
2018.06 College of Animal Sciences, Jiangxi Agriculture University, Nanchang, China
2018.07 Center for Freshwater Fisheries, Chinese Academy of Fishery Sciences, Wuxi, China
2018.08 College of Animal Sciences and Technology, Northwest University of Agriculture and Forestry, Yangling, China

2018.08 Department of Biochemistry and Pharmacology, Ohio State University, Columbus, OH
2018.09 College of Veterinary Medicine, Nanjing Agricultural University, Nanjing, China
2018.09 Huazhong Agriculture University, Wuhan, China
2018.10 Institute of Marine and Environmental Technology, University of Maryland, Baltimore, MD
2018.11 Institute of Subtropical Agriculture, Chinese Academy of Sciences, Changsha, China
2019.01 Dept. of Integrative Biology and Pharmacology, University of Texas Health Science Center at Houston, TX

2019.02 Department of Pathology, Johns Hopkins University School of Medicine, Baltimore, MD
2019.03 Interdepartmental Nutrition Program Seminars, Purdue University, West Lafayette, IN
2019.04 Department of Anatomy and Cell Biology, University of Louisville, Louisville, KY
2019.05 Huazhong Agriculture University, Wuhan, China
2019.07 Southeast University, Nanjing, China
2019.07 Indiana Center for Diabetes and Metabolic Diseases Annual Symposium, Indianapolis, IN
2019.10 Cell Metabolism Meeting, Chinese Society of Cell Biology, Nanjing, China
2019.10 Max-Planck Institute Guangdong Laboratory of Regenerative Medicine, Guangzhou, China
2019.11 Marshall Institute for Interdisciplinary Research (MIIR), Huntington, WV
2020.03 International Symposium on Animal Germplasm Innovation and Welfare Production, Chongqing, China (postponed)

2020.06 Chinese Society of Cell Biology 2020 Annual Meeting, Suzhou, China (canceled)
2020.07 Virtual Seminar, Zhejiang University, Hangzhou, China
2020.09 Virtual Seminar, Cincinnati Children's Hospital, Cincinnati, OH
2020.10 Virtual Seminar, Fulcrum Therapeutics, Cambridge, MA
2020.11 Invited Talk (virtual), Chinese Diabetes Society 2020 Annual Scientific Meeting, Shanghai, China
2021.07 Invited Talk, American Society of Animal Science Annual Meeting, Louisville, KY
2021.08 Invited Talk (Virtual), College of Animal Science and Technology, Zhejiang University, China

- 2021.11 Seminar Speaker (virtual), Department of Biochemistry and Molecular Biology, Wright State University Boonshoft School of Medicine, MI
- 2021.12 Invited Talk (Virtual). The 7th Symposium on Skeletal Muscle Biology, Shunde, Guangdong, China
- 2022.01 Departmental Seminar, Department of Pharmacological and Pharmaceutical Sciences, University of Houston, Houston, TX
- 2022.04 Seminar Speaker (virtual), Regenerative and Rehabilitation Sciences Seminar series, University of Tennessee Health Sciences Center, Memphis, TN
- 2022.05 Virtual Seminar, Department of Chemistry, Cleveland State University, Cleveland, OH
- 2022.05 EMBO Workshop: Reversible phosphorylation, signal integration and drug discovery. Athens, Greece
- 2022.07 FASEB Summer Research Conference on Skeletal Muscle Stem Cells and Regeneration, New Orleans, MS
- 2022.09 PTEN inhibition to treat muscular dystrophy. Molecular mechanisms of muscle wasting during aging and disease. Ascona, Switzerland
- 2022.09 Matthew Kauffman memorial stem cell lecture, the 20th Annual Workshop on the Pathology of Mouse Models for Human Disease. Bar Harbor, ME.
- 2022.10 Regenerative Medicine Lecture, West Michigan University School of Medicine. Kalamazoo, MI.
- 2022.11 Seminar for Neurotrauma and Diseases, Center for Paralysis Research, Purdue University, IN
- 2023.02 Stem cells and regenerative medicine, President's Council Back to Class. Naples, FL
- 2023.06 Gordon Research Conference on Myogenesis

TEACHING

Courses taught

- 2010 – 2015 ANSC55600 Stem Cell Biology
- 2009 – 2015 ANSC55500 Animal Growth and Development (guest lecturer, 2 lectures/yr)
- 2008 – 2016 ANSC69800 Graduate Research (M. Sc.)
- 2008 – Present ANSC69900 Graduate Research (Ph. D.), currently advising 6.
- 2009 – Present ANSC49100 Undergraduate Research
- 2010 – Present BIOL29400, 39400, 49400 Undergraduate Research; Currently advising 4.
- 2016 BCHM61501 Pathways (guest lecturer)
- 2017 – Present BIOL69900 Graduate Research (Ph. D.); Currently advising 3.
- 2019 – Present BCHM29400/49400 Undergraduate Research; Currently advising 1.
- 2017 – Present ANSC55500 Animal Growth and Development**
- 2018 – Present BIOL69600 Neurological and Neuropsychiatric Disorders (guest lecturer)
- 2019 – 2020 NUTR 60500/ANSC62400: Nutritional Biochemistry and Physiology (guest lecturer)