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PhD 2010, University of Virginia
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Recent Papers

F Yue, SN Oprescu, J Qiu, L Gu, L Zhang, J Chen, N Narayanan, M Deng, S Kuang. 2022. Lipid droplet dynamics regulate adult muscle stem cell fate. *Cell Reports* 38 (3), 110267.

MA Cano-Vega, M Deng, R Pinal. 2021. Modular solid dosage form design—Application to pH-independent release of a weak-base API. *International Journal of Pharmaceutics* 601, 120518.

N Narayanan, Z Jia, KH Kim, L Kuang, P Lengemann, G Shafer, V Bernal-Crespo, S Kuang, M Deng. 2021. Biomimetic glycosaminoglycan-based scaffolds improve skeletal muscle regeneration in a Murine volumetric muscle loss model. *Bioactive Materials* 6 (4), 1201-1213.

N Narayanan, P Lengemann, KH Kim, L Kuang, T Sobreira, V Hedrick, UK Aryal, S Kuang, M Deng. 2021. Harnessing nerve–muscle cell interactions for biomaterials-based skeletal muscle regeneration. *Journal of Biomedical Materials Research Part A* 109 (3), 289-299.

F Yue, C Song, D Huang, N Narayanan, J Qiu, Z Jia, Z Yuan, SN Oprescu, BT Roseguini, M Deng, S Kuang. 2021. PTEN inhibition ameliorates muscle degeneration and improves muscle function in a mouse model of Duchenne muscular dystrophy. *Molecular Therapy* 29 (1), 132-148.

Z Jia, F Yue, X Chen, N Narayanan, J Qiu, SA Syed, AN Imbalzano, M Deng, P Yu, C Hu, S Kuang. 2020. Protein arginine methyltransferase PRMT5 regulates fatty acid metabolism and lipid droplet biogenesis in white adipose tissues. *Advanced Science* 7 (23), 200260211.

D Huang, F Yue, J Qiu, M Deng, S Kuang. 2020. Polymeric nanoparticles functionalized with muscle-homing peptides for targeted delivery of phosphatase and tensin homolog inhibitor to skeletal muscle. *Acta Biomaterialia* 118, 196-206.

D Huang, J Qiu, S Kuang, M Deng. 2020. In Vitro Evaluation of Clinical Candidates of γ -Secretase

Inhibitors: Effects on Notch Inhibition and Promoting Beige Adipogenesis and Mitochondrial Biogenesis. *Pharmaceutical Research* 37 (10), 1-13.

D Huang, N Narayanan, MA Cano-Vega, Z Jia, KM Ajuwon, S Kuang, M Deng. 2020. Nanoparticle-mediated inhibition of Notch signaling promotes mitochondrial biogenesis and reduces subcutaneous adipose tissue expansion in pigs. *iScience* 23 (6), 101167.

D Chen, N Narayanan, E Federici, Z Yang, X Zuo, J Gao, F Fang, M Deng, OH Campanella, OG Jones. 2020. Electrospinning induced orientation of protein fibrils. *Biomacromolecules* 21 (7), 2772-2785.

N Narayanan, C Jiang, C Wang, G Uzunalli, N Whittorn, D Chen, OG Jones, S Kuang, M Deng. 2020. Harnessing fiber diameter-dependent effects of myoblasts toward biomimetic scaffold-based skeletal muscle regeneration. *Frontiers in Bioengineering and Biotechnology* 8, 203.

D Huang, M Deng, S Kuang. 2019. Polymeric carriers for controlled drug delivery in obesity treatment. *Trends in Endocrinology & Metabolism* 30 (12), 974-989.

Recent Patents

M Deng, L Kuang. Responsive elastic polymers and methods of making and using same. US Patent 11,491,233. 2022.

M Deng, D Qiu, JL Zuponic. Bioactive glass-polymer composite bone scaffolds. US Patent 11,331,409. 2022.

M Deng, S Kuang, N Narayanan, L Kuang. Skeletal muscle regeneration in volumetric muscle loss using biomimetic glycosaminoglycan-based hydrogel. US Patent App. 17/233,594. 2021.

M Deng, N Narayanan, S Kuang. Compositions and materials for regeneration of skeletal muscle. US Patent App. 17/184,231. 2021.