



华南农业大学
South China Agricultural University

研究生院

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| 最后学历 | 博士研究生毕业 | 最后学位 | 农学博士学位 |
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| 个人主页 | | | |

个人简介

张世海 副教授，动物营养学博士，硕士生导师。North Carolina State University (NCSU) 联合培养博士。2019-2020年在美国德州大学西南医学中心任客座副教授。研究方向包括：1. 母仔猪营养、2. 泌乳营养调控。先后主持国家自然科学基金青年基金项目1项，十三五国家重点研发计划重点专项子课题1项，广东省自然科学基金1项，华南农业大学青年科技人才专项培育基金1项。同时，参与国家自然科学基金、十三五国家重点研发计划等多项国家和省部级项目。以第一或通讯作者在Journal of Agricultural and Food chemistry, Food & Function, Nutrition Research Reviews等杂志发表SCI论文30余篇。是 Journal of Agricultural and Food chemistry, Journal of Animal Science, Food and Functions, Frontiers in Immunology, Frontiers in

Microbiology, Animals, Scientific Reports, Livestock Science, Animal Nutrition, Genomics, Food Bioscience等杂志审稿人。主讲《动物营养学》、《饲料学》等专业课课程。Email: zhangshihai@scau.edu.cn

工作经历

2016-2019: 华南农业大学, 动物科学, 首聘副教授

2020- : 华南农业大学, 动物科学, 副教授

2019-2020: 美国德州大学西南医学中心, 分子生物学, 客座副教授

教育经历

2014-2015: North Carolina State University, 动物科学, 联合培养博士

2011-2016: 中国农业大学, 动物营养与饲料科学, 博士

2007-2011: 中国农业大学, 动物科学, 学士

获奖、荣誉称号

2018年 华南农业大学“青年教师教学优秀奖”一等奖

2018年 华南农业大学 动物科学学院“教学十佳”

2019年 华南农业大学 动物科学学院“青年教师成长奖”

社会、学会及学术兼职

中国高科技产业化研究会饲料分会理事

研究领域

主要研究方向包括母仔猪营养、氨基酸营养、仔猪肠道健康与功能等

科研项目

主要主持项目

1 肠道氨基酸感知受体介导支链氨基酸调控仔猪采食量的机制研(31802067)，国家自然科学基金委，25W，2019.1-2021.12

（主持人）

2 肠道和大脑氨基酸感知受体介导支链氨基酸调控仔猪采食量的机制研究 (2018A030310201) 广东省自然科学基金，10 W，2018.5.1-2021.4.30（主持人）

3 胃肠道氨基酸感知受体影响仔猪采食量的作用机制，华南农业大学青年科技人才培养专项基金，20W，2017.1-2018.12（主持人）

主要参与项目

1 长链脂肪酸调节母猪乳脂合成的分子机制（31872364），国家自然科学基金委，59W，2019.1-2022.12 第2（管武太主持）

2 不同种类和加工工艺的油脂对肠道稳态和肠道微生物菌群定植的影响（2017YFD0500501），国家重点研发计划项目，31W，2017.9-2020.12，第2（管武太主持）

发表论文

第一作者或通讯作者发表英文文章：

28. Wu, Z., Heng, J., Tian, M., Song, H., Chen, F., Guan, W*., & Zhang, S*. (2020). Amino acid transportation, sensing and signal transduction in the mammary gland: key molecular signalling pathways in the regulation of milk synthesis. *Nutrition research reviews*, 33(2), 287–297. (*通讯作者，IF 2019 = 7.641，2020中科院分区一区)

27. Heng, J., Wu, Z., Tian, M., Chen, J., Song, H., Chen, F., Guan, W*., & Zhang, S*. (2020). Excessive BCAA regulates fat metabolism partially through the modification of m6A RNA methylation in weanling piglets. *Nutrition & metabolism*, 17, 10. (*通讯作者，IF 2019 =3.211)

26. Zhang, W., Heng, J., Kim, S.W., Chen, F., Deng, Z., Zhang, S*, Guan, W*. Dietary enzymatically-treated *Artemisia annua* L. supplementation could alleviate oxidative injury and improve reproductive performance of sows reared under high ambient temperature[J]. *Journal of Thermal Biology*, 2020, 94: 102751. (*通讯作者，IF 2019=2.361)

25. Tian, M., Chen, J., Liu, J., Chen, F., Guan, W*, Zhang, S*, Dietary fiber and microbiota interaction regulates sow metabolism and reproductive performance[J]. *Animal Nutrition*, 2020. (*通讯作者, IF 2019=4.492, 2020中科院分区一区)
24. Tian, M., Qi, Y., Zhang, X., Wu, Z., Chen, J., Chen, F., Guan, W*, Zhang, S*. Regulation of the JAK2-STAT5 pathway by signaling molecules in the mammary gland[J]. *Frontiers in Cell and Developmental Biology*, 2020, 8: 1382. (*通讯作者, IF 2019=5.201)
23. Wu, Z., Tian, M., Heng, J., Chen, J., Chen, F., Guan, W*, & Zhang, S*. (2020). Current Evidences and Future Perspectives for AMPK in the Regulation of Milk Production and Mammary Gland Biology. *Frontiers in cell and developmental biology*, 8, 530. (*通讯作者, IF 2019=5.201)
22. Ren, C., Wang, Y., Lin, X., Song, H., Zhou, Q., Xu, W., Shi, K., Chen, J., Song, J., Chen, F., Zhang, S.*, & Guan, W*. (2020). A Combination of Formic Acid and Monolaurin Attenuates Enterotoxigenic *Escherichia coli* Induced Intestinal Inflammation in Piglets by Inhibiting the NF- κ B/MAPK Pathways with Modulation of Gut Microbiota. *Journal of agricultural and food chemistry*, 68(14), 4155–4165. (*通讯作者, IF 2019=4.192, 2020中科院分区一区)
21. Zhang, S., Wu, Z., Heng, J., Song, H., Tian, M., Chen, F., & Guan, W*. (2020). Combined yeast culture and organic selenium supplementation during late gestation and lactation improve preweaning piglet performance by enhancing the antioxidant capacity and milk content in nutrient-restricted sows. *Animal nutrition*, 6(2), 160–167. (第一作者, IF 2019=4.492, 2020中科院分区一区)
20. Yang, F.#, Zhang, S.#, Tian, M., Chen, J., Chen, F., & Guan, W*. (2020). Different Sources of High Fat Diet Induces Marked Changes in Gut Microbiota of Nursery Pigs. *Frontiers in microbiology*, 11, 859. (#第一作者, IF 2019=4.235)
19. Zhang, S., Wu, Z., Heng, J., Tian, M., Chen, J., Chen, F., & Guan, W*. (2020). L-carnitine increases cell proliferation and amino acid transporter expression via the activation of insulin-like growth factor I signaling pathway in rat trophoblast cells. *Food science & nutrition*, 8(7), 3298–3307. (第一作者, IF 2019=1.797)
18. Heng, J., Tian, M., Zhang, W., Chen, F., Guan, W*, & Zhang, S*. (2019). Maternal heat stress regulates the early fat deposition partly through modification of m6A RNA methylation in neonatal piglets. *Cell stress & chaperones*, 24(3), 635–645. (*通讯作者, IF 2019=2.892)
17. Tian, M., Heng, J., Song, H., Shi, K., Lin, X., Chen, F., Guan, W., & Zhang, S*. (2019). Dietary Branched-Chain Amino

- Acids Regulate Food Intake Partly through Intestinal and Hypothalamic Amino Acid Receptors in Piglets. *Journal of agricultural and food chemistry*, 67(24), 6809–6818. (*通讯作者, IF 2019=4.192, 2019中科院分区一区)
16. Tian, M., Heng, J., Song, H., Zhang, Y., Chen, F., Guan, W., & Zhang, S*. (2019). Branched chain amino acids stimulate gut satiety hormone cholecystokinin secretion through activation of the umami taste receptor T1R1/T1R3 using an in vitro porcine jejunum model. *Food & function*, 10(6), 3356–3367. (*通讯作者, IF 2019=4.171, 2019中科院分区一区)
15. Li, L.#, Zhang, S.#, Wu, W., Guan, W., Deng, Z., & Qiao, H. (2019). Enhancing thermostability of *Yarrowia lipolytica* lipase 2 through engineering multiple disulfide bonds and mitigating reduced lipase production associated with disulfide bonds. *Enzyme and microbial technology*, 126, 41-49. (#第一作者, IF 2019=3.448)
14. Zhang, S., Heng, J., Song, H., Zhang, Y., Lin, X., Tian, M., Chen, F., & Guan, W. (2019). Role of Maternal Dietary Protein and Amino Acids on Fetal Programming, Early Neonatal Development, and Lactation in Swine. *Animals : an open access journal from MDPI*, 9(1), 19. (第一作者, IF 2019=2.323)
13. Zhang, S., Chen, F., Zhang, Y., Lv, Y., Heng, J., Min, T., Li, L., & Guan, W. (2018). Recent progress of porcine milk components and mammary gland function. *Journal of animal science and biotechnology*, 9, 77. (第一作者, IF 2018=3.441, 中科院分区2020一区)
12. Zhang, S., Tian, M., Song, H., Shi, K., Wang, Y., & Guan, W. (2018). Effects of L-carnitine on reproductive performance, milk composition, placental development and IGF concentrations in blood plasma and placental chorions in sows. *Archives of animal nutrition*, 1-14. (第一作者, IF 2018=1.786)
11. Zhang, S., Zhang, X., Qiao, H., Chen, J., Fang, C., Deng, Z., & Guan, W. (2018). Effect of timing of post-weaning supplementation of soybean oil and exogenous lipase on growth performance, blood biochemical profiles, intestinal morphology and caecal microbial composition in weaning pigs. *Italian Journal of Animal Science*, 1-9. (第一作者, IF 2018=1.265)
10. Zhang, Y.#, Zhang, S.#, Guan, W., Chen, F., Cheng, L., Lv, Y., & Chen, J. (2018). GLUT1 and lactose synthetase are critical genes for lactose synthesis in lactating sows. *Nutrition & metabolism*, 15, 40. (#第一作者, IF 2018=3.599)
9. Yang, F.#, Zhang, S.#, Kim, S. W., Ren, C., Tian, M., Cheng, L., Song, J., Chen, J., Chen, F., & Guan, W. (2018). Fat encapsulation enhances dietary nutrients utilization and growth performance of nursery pigs. *Journal of animal science*,

- 96(8), 3337–3347. (#第一作者, IF 2018=1.697)
8. Zhang, S., Song, J., Deng, Z., Cheng, L., Tian, M., & Guan, W. (2017). Effects of combined α -galactosidase and xylanase supplementation on nutrient digestibility and growth performance in growing pigs. *Archives of animal nutrition*, 71(6), 441-454. (第一作者, IF 2017=1.887)
7. Zhang, S., Zeng, X., Ren, M., Mao, X., & Qiao, S. (2017). Novel metabolic and physiological functions of branched chain amino acids: a review. *Journal of animal science and biotechnology*, 8, 10. (第一作者, IF 2017=3.205)
6. Zhang, S., Chu, L., Qiao, S., Mao, X., & Zeng, X. (2016). Effects of dietary leucine supplementation in low crude protein diets on performance, nitrogen balance, whole-body protein turnover, carcass characteristics and meat quality of finishing pigs. *Animal science journal = Nihon chikusan Gakkaiho*, 87(7), 911–920. (第一作者, IF 2016=1.325)
5. Ren, M.#, Zhang, S.#, Liu, X., Li, S., Mao, X., Zeng, X., & Qiao, S. (2016). Different Lipopolysaccharide Branched-Chain Amino Acids Modulate Porcine Intestinal Endogenous β -Defensin Expression through the Sirt1/ERK/90RSK Pathway. *Journal of agricultural and food chemistry*, 64(17), 3371–3379. (#第一作者, IF 2016=3.154)
4. Zhang, S., Yang, Q., Ren, M., Qiao, S., He, P., Li, D., & Zeng, X. (2016). Effects of isoleucine on glucose uptake through the enhancement of muscular membrane concentrations of GLUT1 and GLUT4 and intestinal membrane concentrations of Na⁺/glucose co-transporter 1 (SGLT-1) and GLUT2. *The British journal of nutrition*, 116(4), 593–602. (第一作者)
3. Ma, W. F.#, Zhang, S. H.#, Zeng, X. F., Liu, X. T., Xie, C. Y., Zhang, G. J., & Qiao, S. Y. (2015). The appropriate standardized ileal digestible tryptophan to lysine ratio improves pig performance and regulates hormones and muscular amino acid transporters in late finishing gilts fed low-protein diets. *Journal of animal science*, 93(3), 1052–1060. (#第一作者, IF 2015=2.014)
2. Zhang, S., Ren, M., Zeng, X., He, P., Ma, X., & Qiao, S. (2014). Leucine stimulates ASCT2 amino acid transporter expression in porcine jejunal epithelial cell line (IPEC-J2) through PI3K/Akt/mTOR and ERK signaling pathways. *Amino acids*, 46(12), 2633–2642. (第一作者)
1. Zhang, S., Qiao, S., Ren, M., Zeng, X., Ma, X., Wu, Z., Thacker, P., & Wu, G. (2013). Supplementation with branched-chain amino acids to a low-protein diet regulates intestinal expression of amino acid and peptide transporters in weanling pigs. *Amino acids*, 45(5), 1191–1205. (第一作者)

第一作者或通讯作者发表中文文章:

[1] 恒景会,田敏,管武太,张世海(*).氧化应激对母畜乳腺功能的影响及其营养调控策略[J/OL].动物营养学报:2020,33(1):1-9.

[2] 张宇峰,田敏,恒景会,陈芳,邓跃林,管武太(*),张世海(*).支链氨基酸对断奶仔猪肠道和肌肉氨基酸转运载体表达的影响[J].中国畜牧杂志,2020,56(04):92-99.

[3] 田敏,恒景会,张文飞,陈芳,邓跃林,管武太,张世海(*). 饲粮营养素调控母猪泌乳性能的研究进展.中国畜牧杂志,2018;(10):9-14.

▣ 科研创新

管武太, 邓子潇, 李力浪, 吴炜坤, 张世海. 一种耐热突变脂肪酶及制备方法与应用. 申请号: 201711220144.8

管武太, 李力浪, 吴炜坤, 邓子潇, 张世海. 一种能提高耐热脂肪酶产量的重组工程菌及其构建方法和应用. 申请号: 201711220171.5

管武太, 张世海, 陈芳, 桂干北, 乔汉祯, 谌俊. 一种改善母猪繁殖性能和抗氧化能力的组合物及其应用. 申请号: 201710361392.8

▣ 教学活动

本科生课程: 《动物营养学》、《饲料学》、《饲料学综合实习》

研究生课程: 《猪营养研究专题》

▣ 指导学生情况

指导学术型研究生2名, 专业硕2名, 合作指导研究生15名

▣ 我的团队

管武太教授 母仔猪营养团队。本团队包括教授1名, 副教授3名。

