



华南农业大学
South China Agricultural University

研究生院

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个人主页			

个人简介

邓百川，博士，华南农业大学副教授，硕士生导师，男，1987年生，江西省宁都县人。专注于宠物营养、小肽与代谢组学研究，担任国家宠物产业科技创新联盟副理事长，广东省畜牧兽医学会宠物专业委员会常务副主任委员，广东省饲料行业协会宠物营养与产业分会总干事，华南农大宠物营养研究中心负责人。博士毕业于挪威卑尔根大学，现就职于华南农业大学动物科学学院。先后主持国家自然科学基金、国家重点研发计划项目子课题、广东省自然科学基金、广州市基础与应用基础研究项目等课题10余项。在Food Chemistry, Frontiers in Immunology, Frontiers in Microbiology, Analytica Chimica Acta, Journal of

Agricultural and Food Chemistry等国际知名杂志发表SCI论文40余篇，申请国家发明专利2项，参编教材1部。兼任Food Chemistry, Journal of Chromatography A, Food & Function, Journal of Functional Foods等国际期刊特约审稿人。

工作经历

2016年05月至今，华南农业大学动物科学学院，副教授，硕士生导师

教育经历

2012.07—2015.11 卑尔根大学 博士

2010.08—2012.06 卑尔根大学 硕士

2005.09—2009.06 中南大学升华荣誉学院 本科

社会、学会及学术兼职

社会兼职 1. 国家宠物产业科技创新联盟 副理事长； 2. 广东省畜牧兽医学会宠物专业委员会 常务副主任委员； 3. 广东省饲料行业协会宠物营养与产业分会 总干事； 4. 中国宠物讲师团联盟顾问委员会 特聘专家； 5. 中国农业健康产业联盟 理事； 6. 广东省畜牧兽医学会 动物营养与饲料专业委员会 委员； 7. 广东省畜牧兽医学会 小动物医学专业委员会 委员； 学术兼职 Food Chemistry, Journal of Chromatography A, Food & Function, Journal of Functional Foods, Fuel, Chemometrics and Intelligent Laboratory Systems, Journal of Immunology Research和Journal of Animal Physiology and Animal Nutrition等国际期刊特约审稿人。

研究领域

宠物营养
小肽营养
代谢组学

▣ 科研项目

近年来，主持国家自然科学基金、国家重点研发计划项目子课题、广东省自然科学基金、广州市基础与应用基础研究项目等课题10余项。

- 1、国家重点研发计划项目“畜禽养殖绿色安全饲料饲养新技术研发”（项目编号：2018YFD0500600），2018.06-2020.12，本人角色：子课题主持人；
- 2、国家自然科学基金青年项目“ γ -谷氨酰-亮氨酸二肽对断奶仔猪肠上皮屏障功能的调控作用及机制研究”（项目编号：32002186），2021.01-2023.12，本人角色：项目主持人；
- 3、广州市基础与应用基础研究项目“没食子酸缓解幼犬运输应激的作用及机制研究”，2021.04-2023.03，本人角色：项目主持人；
- 4、企业横向课题“雷米高-华农大宠物营养研究中心”，2019.12-2024.12，本人角色：负责人；
- 5、企业横向课题“宠物食品肽谱分析”，2021.01-2022.01，本人角色：负责人；
- 6、企业横向课题“宠物营养研发”，2021.01-2021.12，本人角色：负责人；
- 7、企业横向课题“肠道护理宠物食品研发”，2020.10-2022.10，本人角色：项目主持人；
- 8、企业横向课题“宠物食品研发”，2020.03-2021.03，本人角色：项目主持人；
- 9、企业横向课题“宠物犬鲜粮配方及生产工艺开发”，2020.01-2020.07，本人角色：项目主持人；
- 10、广东省自然科学基金“ γ -Glu-Leu二肽调控仔猪肠上皮细胞屏障的机制解析”（项目编号：2020A1515010322），2019.10-2022.09，本人角色：项目负责人；
- 11、广东省自然科学基金“基于色谱-质谱联用技术的小肽快速定性分析新方法研究”（项目编号：2017A030310410），2017.05-2020.04，本人角色：项目主持人；
- 12、国家自然科学基金重大项目“地方猪种成肌和肌内沉脂的生理生化机制及与品质的关系”（项目编号：31790411），

2018.01-2022.12, 本人角色: 项目骨干;

13、广东省基础与应用基础研究基金“仔猪巨噬细胞极化的氨基酸代谢决定机制及其营养调控”(项目编号: 2019B1515210002), 2020.06-2022.05, 本人角色: 项目骨干;

14、广东省普通高校创新团队项目“猪肉品质营养调控创新团队”(项目编号: 2017KCXTD002), 2018.01-2020.12, 本人角色: 项目骨干;

15、广东省自然科学基金“基于母猪肠道菌群改变解析其对泌乳力的调控作用及其机理探讨”(项目编号: 2017A030310398), 2017.05- 2020.04, 本人角色: 项目骨干;

16、华南农业大学青年科技人才培养专项“猪乳内源性抗菌肽的筛选与活性研究”, 2017.09-2020.08, 本人角色: 项目主持人;

发表论文

近年来, 在Food Chemistry, Frontiers in Immunology, Frontiers in Microbiology, Analytica Chimica Acta, Journal of Agricultural and Food Chemistry等国际知名杂志发表SCI论文40余篇。

1. Hongrong Long, Zhongquan Xin, Fan Zhang, Zhenya Zhai, Xiaojun Ni, Jialuo Chen, Kang Yang, Pinfeng Liao, Limeng Zhang, Zaili Xiao, Daniel Sindaye, Baichuan Deng*. The cytoprotective effects of dihydromyricetin and associated metabolic pathway changes on deoxynivalenol treated IPEC-J2 cells. Food Chemistry, 2020, 338, 128116. (影响因子6.306, 通讯作者)
2. Zhongquan Xin, Shasha Ma, Dabing Ren, Wenbin Liu, Binsong Han, Yi Zhang, Jianbo Xiao, Lunzhao Yi*, Baichuan Deng*. UPLC–Orbitrap–MS/MS combined with chemometrics establishes variations in chemical components in green tea from Yunnan and Hunan origins. Food Chemistry, 2018, 266:534-544. (影响因子6.306, 通讯作者)
3. Kang Yang, Limeng Zhang, Pinfeng Liao, Zaili Xiao, Fan Zhang, Daniel Sindaye, Zhongquan Xin, Chengquan Tan, Jinping Deng, Yulong Yin* and Baichuan Deng*. Impact of Gallic Acid on Gut Health: Focus on the Gut Microbiome, Immune Response, and Mechanisms of Action. Front. Immunol. 11:580208. doi: 10.3389/fimmu.2020.580208. (影响因子 5.085, 通讯作者)
4. Zhenya Zhai, Fan Zhang, Ruihua Cao, Xiaojun Ni, Zhongquan Xin, Jinping Deng, Guoyao Wu, Wenkai Ren, Yulong Yin* and Baichuan Deng*. Cecropin A Alleviates Inflammation Through Modulating the Gut Microbiota of C57BL/6 Mice With DSS-

- Induced IBD. *Frontiers in Microbiology*. 2019, 10:1595. (影响因子4.235, 通讯作者)
5. Deng BC, Ni XJ, Zhai ZY, Tang TY, Tan CQ, Yan YJ, Deng JP*, Yin YL*. New Quantitative Structure-Activity Relationship Model for Angiotensin-Converting Enzyme Inhibitory Dipeptides Based on Integrated Descriptors. *Journal of Agricultural and Food Chemistry*, 2017, 65, 9774-9781. (影响因子 4.192, 第一作者)
6. Deng BC, Yun YH, Cao DS, Yin YL, Wang WT, Lu HM, Luo QY, Liang YZ*. A bootstrapping soft shrinkage approach for variable selection in chemical modeling. *Analytica Chimica Acta*, 2016, 908, 63-74. (影响因子 5.977, 第一作者)
7. Baichuan Deng*, Hongrong Long, Tianyue Tang, Xiaojun Ni, Jialuo Chen, Guangming Yang, Fan Zhang, Ruihua Cao, Dongsheng Cao, Maomao Zeng and Lunzhao Yi. Quantitative Structure-Activity Relationship Study of Antioxidant Tripeptides Based on Model Population Analysis. *International Journal of Molecular Sciences*, 2019, 20, 995. (影响因子4.556, 第一作者)
8. Zhenya Zhai, Xiaojun Ni, Chenglong Jin, Wenkai Ren, Jie Li, Jinping Deng*, Baichuan Deng* and Yulong Yin*. Cecropin A Modulates Tight Junction-Related Protein Expression and Enhances the Barrier Function of Porcine Intestinal Epithelial Cells by Suppressing the MEK/ERK Pathway. *International Journal of Molecular Sciences*, 2018, 19, 1941. (影响因子4.556, 通讯作者)
9. Zhongquan Xin, Zhenya Zhai, Hongrong Long, Fan Zhang, Xiaojun Ni, Jinping Deng, Lunzhao Yi* and Baichuan Deng*. Metabolic Profiling by UPLC–Orbitrap–MS/MS of Liver from C57BL/6 Mice with DSS-Induced Inflammatory Bowel Disease. *Mediators of Inflammation*, 2020, 6020247. (影响因子 3.758, 通讯作者)
10. Chen JL, Zhai ZY, Long HR, Yang GM, Deng BC*, Deng JP*. Inducible expression of defensins and cathelicidins by nutrients and associated regulatory mechanisms. *Peptides*, 2020, 123, 170177. (影响因子 2.843, 通讯作者)
11. Xiaojun Ni, Zhenya Zhai, Zhongquan Xin, Chengquan Tan, Yiliang Chen, Jinping Deng, Pinfeng Liao, Limeng Zhang, Zaili Xiao, Baichuan Deng*. Antioxidant Properties and Transepithelial Transportation of Di-/tripeptides Derived from Simulated Gastrointestinal Digestion of Pig Blood Cells Hydrolysates. *eFood*, 2020, 1(3), 254-269. (通讯作者)
12. Chengquan Tan, Zhenya Zhai, Xiaojun Ni, Hao Wang, Yongcheng Ji, Tianyue Tang, Wenkai Ren, Hongrong Long, Baichuan Deng*, Jinping Deng* & Yulong Yin*. Metabolomic Profiles Reveal Potential Factors that Correlate with Lactation Performance in Sow Milk. *Scientific Reports*, 2018, 8:10712. (影响因子4.122, 通讯作者)
13. Deng BC, Lu HM, Tan CQ, Deng JP*, Yin YL*. Model population analysis in model evaluation. *Chemometr Intell Lab*,

- 2018, 172: 223~228. (影响因子 2.701, 第一作者)
14. Deng BC, Yun YH, Liang YZ*, Cao DS, Xu QS, Yi LZ, Huang X. A new strategy to prevent over-fitting in partial least squares models based on model population analysis. *Analytica Chimica Acta*, 2015, 880, 32-41. (影响因子 5.977, 第一作者)
15. Deng BC, Yun YH, Ma P, Lin CC, Ren DB, Liang YZ*. A new method for wavelength interval selection that intelligently optimizes locations, widths and combinations of the intervals. *Analyst*, 2015, 140, 1876-1885. (影响因子4.107, 第一作者)
16. Deng BC, Yun YH, Liang YZ*. Model population analysis in chemometrics. *Chemometr Intell Lab*, 2015, 149, 166-176. (影响因子 2.701, 第一作者)
17. Deng BC, Yun YH, Liang YZ, Yi LZ. A novel variable selection approach that iteratively optimizes variable space using weighted binary matrix sampling. *Analyst*, 2014, 139, 4836-4845. (影响因子4.107, 第一作者)
18. 廖品凤, 杨康, 张黎梦, 刘清神, 邹连生, 唐超, 邓百川*. 宠物营养研究进展. *广东畜牧兽医科技*. 2020,45 (3):11-14. (通讯作者)
19. 张黎梦, 廖品凤, 杨康, 邓百川*. 我国宠物饲料的发展现状与展望. *广东饲料*. 2020,29(11):11-12. (通讯作者)
20. 肖再利, 谭清甜, 陈家烙, Daniel Sindaye, 卢亚萍, 邓百川*. 饲料中添加溶菌酶对蛋鸡生产性能、蛋品质和血清生化指标的影响. *饲料工业*. 2020, 41(19):54-59. (通讯作者)
21. 唐天悦, 翟振亚, 谭成全, 邓百川*, 邓近平*. 半胱胺在猪营养上的研究进展. *动物营养学报*. 2018,30(05):1647-1654. (通讯作者)
22. Xia YY, Chen SY, Zeng SJ, Zhao YY, Zhu CR, Deng BC, Zhu GQ, Yin YL, Wang WC*, Hardeland R*, Ren WK*. Melatonin in macrophage biology: Current understanding and future perspectives. *Journal of Pineal Research*, 2019, DOI: 10.1111/jpi.12547. (影响因子 15.221)
23. Yong-Huan Yun, Hong-Dong Li, Bai-Chuan Deng, Dong-Sheng Cao. An overview of variable selection methods in multivariate analysis of near-infrared spectra. *Trends in Analytical Chemistry*. 2019, 113, 102-115. (影响因子 9.801)
24. Siyuan Chen, Yaoyao Xia, Fang He, Jian Fu, Zhongquan Xin, Baichuan Deng, Liuqin He, Xihong Zhou* and Wenkai Ren*. Serine Supports IL-1 β Production in Macrophages Through mTOR Signaling. *Frontiers in Immunology*, 2020, 11, 1866. (影响因子 5.085)
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- Yulong, Compensation effects of coated cysteamine on meat quality, amino acid composition, fatty acid composition, mineral content in dorsal muscle and serum biochemical indices in finishing pigs offered reduced trace minerals diet. *Science China-Life sciences*, 2019, DOI:10.1007/s11427-018-9399-4 (影响因子 4.611)
26. Chen, ZL; Yang, YH; Mi, SM; Fan, QS; Sun, XM; Deng, BC; Wu, GY; Li, YF; Zhou, QC; Ruan, Z*. Hepatoprotective effect of chlorogenic acid against chronic liver injury in inflammatory rats. *Journal of Functional Foods*. 2019, 62, 103540. (影响因子 3.197)
27. Hao Wang, Chengjun Hu, Chuanhui Cheng, Jiajie Cui, Yongcheng Ji, Xiangyu Hao, Qiqi Li, Wenkai Ren, Baichuan Deng, Yulong Yin*, Jinping Deng*, Chengquan Tan*. Unraveling the association of fecal microbiota and oxidative stress with stillbirth rate of sows. *Theriogenology*. 2019, 136, DOI: 10.1016/j.theriogenology.2019.06.028. (影响因子2.299)
28. Hu, CJ, Xing, WG, Liu, XH, Zhang, XZ, Li, K, Liu, J, Deng, BC, Deng, JP, Li, Y*, Tan, CQ*. Effects of dietary supplementation of probiotic *Enterococcus faecium* on growth performance and gut microbiota in weaned piglets. *AMB EXPRESS*, 2019, 9, 33. (影响因子 IF=1.719)
29. Guan Yang, Siyuan Chen, Baichuan Deng, Chengquan Tan, Jinping Deng*, Guoqiang Zhu, Yulong Yin* and Wenkai Ren*. Implication of GPR43 in intestinal inflammation: a mini-review. *Frontiers in Immunology*, 2018, 9, 1434. (影响因子 5.085)
30. Hao Wang, Yongcheng Ji, Cong Yin, Ming Deng, Tianyue Tang, Baichuan Deng, Wenkai Ren, Jinping Deng, Yulong Yin and Chengquan Tan. Differential Analysis of Gut Microbiota Correlated with Oxidative Stress in Sows with High or Low Litter Performance During Lactation. *Frontiers in Microbiology*, 2018, 9:1665. (影响因子 4.235)
31. Chen S, Xia Y, Zhu G, Yan J, Tan C, Deng B, Deng J*, Yin Y, Ren W*. Glutamine supplementation improves intestinal cell proliferation and stem cell differentiation in weanling mice. *Food & Nutr Res*. 2018 Jul 23;62. (影响因子2.553)
32. Zhang, Z. M.; Li, H. D.; Yun, Y. H.; Ma, P.; Yi, L. Z.; Ren, D. B.; Zhang, L. X.; Yan, J.; Dong, N. P.; Deng, B. C.; Lu, H. M.*. Chemometrics in instrumental analysis of complex systems-in honor and memory of Yi-Zeng Liang. *Journal of Chemometrics* 2018, 32, (11). (影响因子 IF=1.884)
33. Liu PZ, Deng BC, Liang ZL, Duscher G, Guo JJ. High efficiency core-loss EELS analyzing from the viewpoint of chemometrics. *Materials Characterization*. 2017, 129, 313-318. (影响因子 2.892)

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35. Yi LZ, Dong NP, Yun YH, Deng BC, Ren DB, Liu S, Liang YZ. Chemometric methods in data processing of mass spectrometry-based metabolomics: A review. *Analytica Chimica Acta*, 2016, 914:17-34. (影响因子5.977)
36. Wen M, Deng BC, Cao DS, Lu HM, Yun YH, Yang RH, Liang YZ*. The Model Adaptive Space Shrinkage (MASS) Approach: A New Method for Simultaneous Variable Selection and Outlier Detection Based on Model Population Analysis, *Analyst*, 2016, 141, 5586-5597. (影响因子4.107)
37. Zhang XJ, Yi LZ, Deng BC, Chen L, Shi ST, Zhuang YL, Zhang Y. Discrimination of *Acori Tatarinowii* Rhizoma and *Acori Calami* Rhizoma based on quantitative gas chromatographic fingerprints and chemometric methods. *J. Sep. Sci.*, 2016, 38, 4078-4085. (影响因子 2.741)
38. Lin YW, Deng BC, Wang LL, Xu QS, Liu L, Liang YZ. Fisher optimal subspace shrinkage for block variable selection with applications to NIR spectroscopic analysis. *Chemometr. Intell. Lab.*, 2016, 159, 196-204. (影响因子 2.701)
39. Lin YW, Deng BC, Xu QS, Yun YH, Liang YZ*. The equivalence of partial least squares and principal component regression in the sufficient dimension reduction framework. *Chemometr, Intell, Lab.*, 2016, 150, 58-64. (影响因子 2.701)
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41. Ren DB, Yi LZ, Qin YH, Yun YH, Deng BC, Lu HM, Chen XQ, Liang YZ. Systematic and practical solvent system selection strategy based on the nonrandom two-liquid segment activity coefficient model for real-life counter-current chromatography separation. *Chromatography A*, 2015, 1393, 47-56. (影响因子4.169)
42. Yun YH, Fu L, Deng BC, Lai GB, Goncalves CMV, Lu HM, Yan J, Huang X, Yi LZ, Liang YZ. Informative metabolites identification by variable importance analysis based on random variable combination, *Metabolomics*, 2015, 1-13. (影响因子 3.855)
43. Wang WT, Yun YH, Deng BC, Fan W, Liang YZ. Iteratively variable subset optimization for multivariate calibration. *RSC advances*, 2015, 5, 95771-95780. (影响因子 3.840)
44. Luo QY, Yun YH, Fan W, Huang JH, Zhang LX, Deng BC, Lu HM. Application of near infrared spectroscopy for the rapid

- determination of epimedinin A, B, C and icariin in Epimedium. RSC advances, 2015, 5, 5046-5052. (影响因子3.840)
45. Cao DS, Dong J, Wang NN, Wen M, Deng BC, Zeng WB, Xu QS, Liang YZ, Lu AP, Chen AF. In silico toxicity prediction of chemicals from EPA toxicity database by kernel fusion-based support vector machines. Chemometr Intell Lab. 2015, 146, 494-502. (影响因子 2.701)
46. Yun YH, Deng BC, Liang YZ*. Progress of Chemical Modeling and Model Population Analysis. CHINESE JOURNAL OF ANALYTICAL CHEMISTRY, 2015, 43, 1638-1647. (影响因子0.795)
47. Yun YH, Wang WT, Deng BC, Lai GB, Liu XB, Ren DB, Liang YZ, Fan W, Xu QS. Using Variable combination population analysis for variable selection in multivariate calibration. Analytica Chimica Acta, 2014, 862, 14-23. (影响因子5.977)
48. Yi LZ, Dong NP, Shi ST, Deng BC, Yun YH, Yi ZB, Zhang Y. Metabolomic identification of novel biomarkers of nasopharyngeal carcinoma. RSC advances, 2014, 4, 59094–59101. (影响因子 3.840)
49. Li HD, Liang YZ, Cao DS, Tan BB, Deng BC, Lin CC. Recipe for uncovering predictive genes using support vector machines based on model population analysis. IEEE/ACM Transactions on Computational Biology and Bioinformatics, 2011, 8, 1633-1641. (影响因子1.955)
50. 王浩, 印遇龙, 邓百川, 邓近平, 谭成全. 植物提取物的特性及其在母猪生产中的应用. 2017, 29 (11):3852-3862.
51. 肖凯丽, 印遇龙, 张琳, 邓百川, 邓近平, 谭成全. 氨基酸对哺乳动物脂质代谢的调控及其作用机理. 中国畜牧兽医. 2017,44(12):3473-3481.
52. 周健, 熊霞, 李建中, 邓百川, 黄鹏飞, 印遇龙. 乳源生物活性肽对动物肠道功能的影响及作用机制. 动物营养学报. 2016, 28(7) : 1981-1987.

▣ 科研创新

申请专利:

1. 邓百川, 龙红荣, 辛中权, 张帆, 杨康, 陈家烙, 廖品凤, 张黎梦, 肖再利. 二氢杨梅素在制备缓解呕吐毒素引起肠道细胞损伤的药物中的应用, 202010017284.0, 国家发明专利.

▣ 教学活动

讲授《宠物鉴赏与饲养》、《动物营养组学》、《舌尖上的化学》和《现代动物营养研究技术》等课程。

▣ 指导学生情况

先后直接指导或合作指导研究生17名，本科生18名。

▣ 我的团队

本人属于华南农业大学印遇龙院士研究团队，团队成员还有邓近平研究员、任文凯博士、张琳博士、谭成全博士和郭妍老师。