

## 常广军 博士 副教授 硕士研究生导师

临床兽医学外科教研室

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研究方向：奶牛群发普通病、表观遗传与信号传导机制

兽医外科学、实验外科学



河北邢台人，副教授。2005-2009年，河北科技师范学院动物医学专业读本科，获学士学位。2009-2015年，南京农业大学动物医学院临床兽医学方向硕博连读，获博士学位。2013-2014年，德国农畜生物学研究所（Leibniz Institute for Farm Animal Biology, Germany）基因组生物学方向联合培养博士。研究方向为奶牛临床疾病发病机理及防控方案。现主要从事系统性炎症反应表观遗传调节机制，及新型生物活性物质的抗炎机制和临床应用研究。先后主持国家自然科学基金青年项目、中国博士后基金面上项目及中央高校基础前沿专项子课题等项目6项，参与国家奶业973项目、国家重点研发计划和国家自然科学基金等10余项。在J Agr Food Chem、Vet J、J Dairy Sci、J Cell Physiol、南京农业大学学报、畜牧兽医学报、中国兽医学报、畜牧与兽医和草业学报等杂志发表研究论文40余篇，其中以第一作者或通讯作者发表SCI论文10余篇。

### 工作经历

2019-12 至现在，南京农业大学，动物医学院，副教授

2018-12 至 2019-12，南京农业大学，动物医学院，助理研究员

2016-01 至 2019-07，南京农业大学，动物医学院，师资博士后

### 教育经历

2011-09 至 2016-12，南京农业大学，临床兽医学，博士；导师：沈向真教授

2014-09 至 2016-09，德国农畜生物学研究所（Leibniz Institute for Farm Animal Biology, Germany），基因组生物学及信号传导学，联合培养博士；合作导师：Prof. Hans-Martin Seyfert

2005-09 至 2009-06，河北科技师范学院，动物医学，学士

### 承担课程

VET3307 大动物疾病学（本科，选修，动物医学，42学时）

VET4319 小动物疾病学（本科，选修，动物医学，36学时）

VET4316 兽医外科学（本科，必修，动物医学，36学时）

VET4315 兽医外科手术学（本科，必修，动物医学，45学时）

VET4343 兽医临床治疗学综合实践（本科，必修，动物医学）

### 承担科研项目

1. 国家自然科学基金委员会，青年基金项目，31702301，《LncRNA MALAT1 靶向 NF- $\kappa$ B 通路调节 E.coli 性乳腺炎的作用机制》，2018-01 至 2020-12，27 万元，**结题**，主持
2. 中国博士后科学基金会，面上项目（一等），2016M590471，《消化道来源的 LPS 对山羊肝细胞凋亡的影响及其分子机制》，2016-09 至 2018-12，8 万元，已结题，主持
3. 中央高校基础前沿专项，JCQY201905，《亚急性瘤胃酸中毒引起牛奶重要营养品质降低的机理及调控技术研究》课题三《SARA 导致乳腺中乳蛋白和乳脂肪合成降低的机制》，2019-01 至 2023-12，100 万元，**在研**，主持
4. 中央高校基本科研业务费青年基金，KJQN201828，2018-01 至 2020-12，10 万元，已结题，主持
5. 中央高校基本科研业务费南农农业大学-广西水牛所联合基金，KYXJ202005，《内源性 LPS 对反刍动物肝细胞自噬的影响及其分子机理》，2020-09 至 2021-12，7.5 万元，在研，主持
6. 国家重点研发计划，《畜禽群发普通病防控技术研究》课题五《家畜呼吸系统疾病诊断与防控技术研究》，2017YFD0502205，2017-07 至 2021-06，294 万元，在研，参加
7. 国家自然科学基金委员会，面上项目，31672618，《SARA 产生的 DAP 诱导反刍动物乳腺炎症反应的分子机制研究》，2017-01 至 2020-12，62 万元，结题，参加
8. 国家自然科学基金委员会，面上项目，31872528，《FOXA2 对 SARA 引起的反刍动物肝脏炎症的调节作用与机制研究》，2019-01 至 2022-12，59 万元，在研，参加
9. 教育部“促进与美大地区科研合作与高层次人才培养项目”《瘤胃产生的脂多糖内毒素对奶牛乳腺酪蛋白合成功能的影响与调控研究》，(项目编号：教外司美[2015]2062 号-2)，2015.10-2017.9，结题，参加。
10. 南京农业大学-现代牧业（集团）奶牛产业技术研究院平台项目，2021-01 至 2023-12，150 万元，在研，主持

### 学术兼职

中国畜牧兽医学会兽医外科学分会常务理事  
国家奶业创新联盟理事  
国家优质乳工程评审委员  
中国畜牧兽医学会高级会员  
中国兽医协会会员  
江苏省畜牧兽医学会理事

### 荣誉&奖励

2019，动物医学院青年教师授课比赛三等奖  
2018，中国畜牧兽医学会兽医外科学分会第 22 次学术研讨会优秀论文奖  
2016，江苏省优秀博士学位论文  
2013 年，第二届奶牛营养与牛奶质量国际研讨会优秀论文奖

专利

1. 沈向真, 常广军, 陶慧, 张凯. 肝脏复合血管痿, 2013,9, 中国, 201320269624.4

发表论文

1. **Guangjun Chang**, Xinxin Liu, Nana Ma, Jinyu Yan, Hongyu Dai, Animesh Chandra Roy, Xiangzhen Shen, Dietary addition of sodium butyrate contributes to attenuated feeding-induced hepatocyte apoptosis in dairy goats, *Journal of Agricultural and Food Chemistry*, 2018, 66(38):9995-10002.
2. **Guangjun Chang**, Jinyu Yan, Nana Ma, Xinxin Liu, Hongyu Dai, Muhammad Shaid Bilal, Xiangzhen Shen, Dietary sodium butyrate supplementation reduces high-concentrate diet feeding-induced apoptosis in mammary cells in dairy goats, *Journal of Agricultural and Food Chemistry*, 2018, 66(9):2101-2107.
3. **Guangjun Chang**, Nana Ma, Huanmin Zhang, Yan Wang, Jie Huang, Jing Liu, Hongyu Dai, Xiangzhen Shen, Sodium butyrate modulates mucosal inflammation injury mediated by GPR41/43 in the cecum of goats fed a high concentration diet, *Frontiers in Physiology*, 2019, doi: 10.3389/fphys.2019.01130. eCollection 2019
4. **Guangjun Chang**, Huanmin Zhang, Yan Wang, Nana Ma, Roy Animesh Chandra, Gengping Ye, Su Zhuang, Weiyun Zhu, Xiangzhen Shen, Microbial community shifts elicit inflammation in the caecal mucosa via the GPR41/43 signalling pathway during subacute ruminal acidosis, *BMC Veterinary Research*, 2019, 19;15(1):298. doi: 10.1186/s12917-019-2031-5
5. **Guangjun Chang**, Lailai Wang, Nana Ma, Wenwen Zhang, Huanmin Zhang, Hongyu Dai, Xiangzhen Shen, Histamine activates inflammatory response and depresses casein synthesis in mammary gland of dairy cows during SARA, *BMC Veterinary Research*, 2018, 23;14(1):168. doi: 10.1186/s12917-018-1491-3
6. Nana Ma\*, **Guangjun Chang\***, Jie Huang, Yan Wang, Qianyun Gao, Xiaoye Cheng, Jing Liu, Xiangzhen Shen, Cis-9, trans-11-conjugated linoleic acid exerts an anti-inflammatory effect in bovine mammary epithelial cells after escherichia coli stimulation through NF- $\kappa$ B signaling pathway, *Journal of Agricultural and Food Chemistry*, 2019, 67(1):193-200
7. Xingkai Zhao\*, **Guangjun Chang\***, Yan Cheng, Zhenlei Zhou, GABA $\alpha$  receptor/STEP61 signaling pathway may be involved in emulsified isoflurane anesthesia in rats, *International Journal of Molecular Sciences*, 2020, 21(11):4078. doi: 10.3390/ijms21114078
8. Animesh Chandra Roy, **Guangjun Chang**, Shipra Roy, Nana Ma, Qianyun Gao, Xiangzhen Shen,  $\gamma$ -d-Glutamyl-meso-diaminopimelic acid induces autophagy in bovine hepatocytes during nucleotide-binding oligomerization domain 1-mediated inflammation, *Journal of Cellular Physiology*, 2020, doi: 10.1002/jcp.30227. Online ahead of print
9. Animesh Chandra Roy, **Guangjun Chang**, Nana Ma, Yan Wang, Shipra Roy, Jing Liu, Zain-Ul Aabdin, Xiangzhen Shen, Sodium butyrate suppresses NOD1-mediated inflammatory molecules expressed in bovine hepatocytes during iE-DAP and LPS treatment, *Journal of Cellular Physiology*, 2019, 234(11):19602-19620
10. Jing Liu, **Guangjun Chang**, Jie Huang, Yan Wang, Nana Ma, Animesh-Chandra Roy, Xiangzhen Shen, Sodium butyrate inhibits the inflammation of lipopolysaccharide-induced acute lung injury in mice by regulating the toll-like receptor 4/nuclear factor  $\kappa$ B signaling pathway, *Journal of Agricultural and Food Chemistry*, 2019, 67(6):1674-1682
11. Yan Wang, Jing Liu, Jie Huang, **Guangjun Chang**, Animesh Chandra Roy, Qianyun Gao, Xiaoye Cheng, Xiangzhen Shen, Sodium butyrate attenuated iE-DAP induced inflammatory response in the mammary glands of dairy goats fed high-concentrate diet, *Journal of the Science of Food and Agricultural*, 2021, 101(3):1218-1227
12. Hongyu Dai, NaNa Ma, **Guangjun Chang**, Zain Ul Aabdin, Xiangzhen Shen, Long-term high-concentrate diet feeding induces apoptosis of rumen epithelial cells and inflammation of rumen epithelium in dairy cows,

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13. Qianyun Gao, Yan Wang, Nana Ma, Hongyu Dai, Animesh Chandra Roy, **Guangjun Chang**, Xiaoli Shi, Xiangzhen Shen, Sodium valproate attenuates the iE-DAP induced inflammatory response by inhibiting the NOD1-NF- $\kappa$ B pathway and histone modifications in bovine mammary epithelial cells, *International Immunopharmacology*, 2020, 83:106392. doi: 10.1016/j.intimp.2020.106392
14. Hongyu Dai, Guozhen Wei, Yan Wang, Nana Ma, **Guangjun Chang**, Xiangzhen Shen, Sodium butyrate promotes lipopolysaccharide-induced innate immune responses by enhancing mitogen-activated protein kinase activation and histone acetylation in bovine mammary epithelial cells, *Journal of Dairy Science*, 2020, 103(12):11636-11652
15. Animesh Chandra Roy, Yan Wang, Huanmin Zhang, Shipra Roy, Hongyu Dai, **Guangjun Chang**, Xiangzhen Shen, Sodium butyrate mitigates iE-DAP induced inflammation caused by high-concentrate feeding in liver of dairy goats, *Journal of Agricultural and Food Chemistry*, 2018, 29;66(34):8999-9009
16. Tianle Xu, Nana Ma, Yan Wang, Xiaoli Shi, **Guangjun Chang**, Juan J Looor, Xiangzhen Shen, Sodium Butyrate Supplementation Alleviates the Adaptive Response to Inflammation and Modulates Fatty Acid Metabolism in Lipopolysaccharide-Stimulated Bovine Hepatocytes, *Journal of Agricultural and Food Chemistry*, 2018, 66(25):6281-6290
17. **Guangjun Chang**, Wolfram Petzl, Jens Vanselow, Juliane Günther, Xiangzhen Shen, Hans-Martin Seyfert, Epigenetic mechanisms contribute to enhanced expression of immune response genes in the liver of cows after experimentally induced Escherichia coli mastitis, *The Veterinary Journal*, 2015, 203 (3): 339-341
18. **Guangjun Chang**, Tianle Xu, Bodo Brand, Wolfram Petzl, Xiangzhen Shen, Hans-Martin Seyfert, Three promoters with different tissue specificity and pathogen inducibility express the toll-like-receptor 2 (TLR2)-encoding gene in cattle, *Veterinary Immunology and Immunopathology*, 2015, 167 (1-2): 57-63
19. **Guangjun Chang**, Su Zhuang, Hans-Martin Seyfert, Kai Zhang, Tianle Xu, Di Jin, Junfei Guo, Xiangzhen Shen, Hepatic TLR4 signaling is activated by LPS from digestive tract during SARA, and epigenetic mechanisms contribute to enforced TLR4 expression, *Oncotarget*, 2015, 6 (36) :38578-38590
20. **Guangjun Chang**, Kai Zhang, Tianle Xu, Di Jin, Junfei Guo, Su Zhuang, Xiangzhen Shen, Epigenetic Mechanisms Contribute to the Expression of Immune Related Genes in the Livers of Dairy Cows Fed a High Concentrate Diet, *Plos One*, 2015, 10 (4): e0123942
21. **Guangjun Chang**, Kai Zhang, Tianle Xu, Di Jin, Hans-Martin Seyfert, Xiangzhen Shen(\*), Su Zhuang, Feeding a high-grain diet reduces the percentage of LPS clearance and enhances immune gene expression in goat liver, *BMC Veterinary Research*, 2015, 2015 (11): 67
22. Hui Tao, **Guangjun Chang**, Tianle Xu, Huajian Zhao, Kai Zhang, Xiangzhen Shen, Feeding a high concentrate diet down regulates expression of ACACA, LPL and SCD and modifies milk composition in lactating goats, *Plos One*, 2015, 10(6):e0130525
23. Di Jin, **Guangjun Chang**, Kai Zhang, Junfei Guo, Tianle Xu, Xiangzhen Shen. Rumen-derived lipopolysaccharide enhances the expression of lingual antimicrobial peptide in mammary glands of dairy cows fed a high-concentrate diet. *BMC Veterinary Research*. 2016, 12(1):128
24. Tianle Xu, Hui Tao, **Guangjun Chang**, Kai Zhang, Lei Xu, Xiangzhen Shen. Lipopolysaccharide derived from the rumen down-regulates stearyl-CoA desaturase 1 expression and alters fatty acid composition in the liver of dairy cows fed a high-concentrate diet. *BMC Veterinary Research*. 2015, 11:52
25. Abaker JA , Tianle Xu, Di Jin, **Guangjun Chang**, Kai Zhang, Xiangzhen Shen. Lipopolysaccharide derived from the digestive tract provokes oxidative stress in the liver of dairy cows fed a high-grain diet. *Journal of Dairy Science*. 2017, 100(1):666-678