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研究方向: 兽医寄生虫病与免疫，兽医公共卫生



个人简介: 博士、教授,主要从事兽医寄生虫分子免疫, 动物细胞因子的克隆与应用及兽医公共卫生方面的研究。中国畜牧兽医学会兽医食品卫生学分会理事, 中国动物学会寄生虫学委员会青年委员会委员。2002 年毕业于河南农业大学获得学士学位, 2003 年考入南京农业大学攻读硕士学位, 2005 年提前攻读博士学位, 2008 年获得博士学位, 2008 年 6 月开始在南京农业大学动物医学院从事教学科研工作。2010 年 12 月被聘为副教授。2014 年 4 月-2015 年 4 月, 在丹麦奥胡斯大学作为访问学者一年。主持科研课题 8 项, 其中国家“973 计划”专题子课题 1 项, “国家自然科学基金”2 项, “江苏省自然基金”2 项, “主持中央高校基本科研业务费自主创新重点项目”1 项, “中国农业大学南京农业大学青年教师开放科研基金”1 项, “家畜疫病病原生物学国家重点实验室开放基金课题”1 项。作为主要完成人参加科研课题 3 项, 其中“农业部公益性行业专项”1 项, “国家自然科学基金”1 项, 江苏省科技支撑计划”1 项。发表 SCI 论文收录 50 余篇。参编论著 4 本。获得国家发明专利 7 项。国家级精品课程、国家资源共享课程《兽医寄生虫学》主讲教师。

科研项目:

1. 主持国家自然科学基金面上项目: “*E. maxima* Th1 细胞因子抑制相关抗原的确定及其抑制作用机制的研究”, 项目编号: 31672545;
2. 主持国家自然科学基金青年科学基金项目: “鸡球虫共同抗原的确认及免疫原性分析”项目编号: 31201896;
3. 主持国家“973”计划子课题: “部分捻转血矛线虫排泄分泌物 (ESP) 山羊免疫细胞及细胞因子结合蛋白的克隆与表达”, 项目编号: 2015CB150305-4

4. 主持江苏省自然科学基金面上项目：“*E. maxima* 偏菱形样蛋白免疫原性及其在球虫入侵过程中作用研究”，项目编号：BK20161442；
5. 主持江苏省自然科学基金面上项目：“毒害艾美耳球虫免疫功能基因组研究，项目编号：BK2010446；
6. 主持中央高校基本科研业务费自主创新重点项目：“鸡球虫 T 细胞刺激抗原的筛选及其功能研究”，项目编号：KYZ201631；
7. 参与科研项目 5 项：国家自然科学基金国际(地区)合作与交流项目（项目编号：31661143017），国家自然科学基金面上项目（项目编号：31172308）；农业部公益性行业专项（项目编号：20090306）；江苏省科技支撑计划（农业）项目划（项目编号：BE2009389）和江苏省自然科学基金面上项目（BK20141365）。

荣誉奖项：

2016 年度个人考核优秀；
2015 年获得中国畜牧兽医学会兽医寄生虫分会大会优秀报告一等奖；
2015 年获得江苏省畜牧兽医年会优秀论文奖；
2015 年获得武汉回盛奖教金；
2012 年获得动物医学院青年教授授课大赛三等奖；
2011 年获得森楠奖教金

发明专利：

1. 李祥瑞，宋小凯，严若峰，徐立新，任喆，一种鸡艾美耳球虫免疫调节型多价表位 DNA 疫苗，2014.09.03，中国，ZL201110307305.3
2. 李祥瑞，宋小凯，严若峰，徐立新，雷晨昱，宋鸿雁，预防鸡巨型艾美耳球虫的免疫调节型 DNA 疫苗，2012.07.04，中国，ZL200810234982.5
3. 李祥瑞，宋小凯，严若峰，徐立新，一种鸡柔嫩艾美耳球虫复合免疫调节型 DNA 疫苗，2011.05.04，中国，ZL200710191695.6
4. 李祥瑞，徐立新，严若峰，宋小凯，一种用于弓形虫感染的诊断抗原及其制备方法和应用，2015.09.16，中国，ZL201310124956.8
5. 李祥瑞，严若峰，徐立新，宋小凯，高云路，一种鸡球虫多价重组蛋白亚单

位疫苗及其应用, 2015.02.18, 中国, ZL201310273603.4

6. 李祥瑞, 徐立新, 宋小凯, 严若峰, 宋鸿雁, 预防鸡堆型艾美耳球虫的免疫调节型 DNA 疫苗, 2012.07.04, 中国, ZL200810155079.X
7. 李祥瑞, 严若峰, 徐立新, 宋小凯, 张娜, 预防鸡毒害艾美耳球虫的免疫调节型 DNA 疫苗, 2010.12.08, 中国, ZL 200810155080.2

近年代表性论著:

论文:

1. Yang X, Li M, Liu J, Ji Y, Li X, Xu L, Yan R, **Song X***. Identification of immune protective genes of *Eimeria maxima* through cDNA expression library screening. *Parasite Vectors* 2017, 10(1):85.
2. **Song X**, Zhao X, Xu L, Yan R, Li X. Immune protection duration and efficacy stability of DNA vaccine encoding *Eimeria tenella* TA4 and chicken IL-2 against coccidiosis. *Res Vet Sci*. 2016, 111:31-35.
3. **Song X**, Zhang Z, Liu C, Xu L, Yan R, Li X. Evaluation of the persistence, integration, histopathology and environmental release of DNA vaccine encoding *Eimeria tenella* TA4 and chicken IL-2. *Vet Parasitol*. 2016, 229: 22-30.
4. **Song X**, Gao Y, Xu L, Yan R, Li X. Partial protection against four species of chicken coccidia induced by multivalent subunit vaccine. *Vet Parasitol*. 2015 212(3-4):80-85.
5. **Song X**, Zhang R, Xu L, Yan R, Li X. Chimeric DNA vaccines encoding *Eimeria acervulina* macrophage migration inhibitory factor (E.MIF) induce partial protection against experimental *Eimeria* infection. *Acta Parasitol*. 2015 60(3):500-8.
6. **Song X**, Xu L, Yan R, Huang X, Li X. Construction of *Eimeria tenella* multi-epitope DNA vaccines and their protective efficacies against experimental infection. *Vet Immunol Immunopathol*. 2015 166(3-4):79-87.
7. **Song X**, Huang X, Yan R, Xu L, Li X. Efficacy of chimeric DNA vaccines encoding *Eimeria tenella* 5401 and chicken IFN- γ or IL-2 against coccidiosis in chickens. *Exp Parasitol*. 2015 156:19-25.
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- Eimeria tenella*, *Eimeria necatrix*, *Eimeria maxima* and *Eimeria acervulina* infections using multivalent epitope DNA vaccines. Vaccine. 2015 33(24):2764-70.
- 9. 李梦辉, 刘连瑞, 涂浩, 黄经纬, 张振超, 徐立新, 严若峰, 李祥瑞, 宋小凯*. 利用 gateway 技术构建巨型艾美耳球虫孢子化卵囊 cDNA 表达文库. 南京农业大学学报 2015, 38 (4): 630-635.
 - 10. 朱艳, 滕佩, 魏德康, 张振超, 徐立新, 严若峰, 李祥瑞, 宋小凯*. 柔嫩艾美耳球虫江苏株微线蛋白-3 基因的克隆与序列分析. 畜牧与兽医 2014, 46 (8): 75-79.
 - 11. **Xiaokai Song**, Lixin Xu, Ruofeng Yan, Xinmei Huang, Mohammed Ali A. Shah, Xiangrui Li*. The optimal immunization procedure of DNA vaccine pcDNA-TA4-IL-2 of *Eimeria tenella*, its cross immunity to *Eimeria necatrix* and *Eimeria acervulina*. Veterinary parasitology (IF: 2.579), 2009, 159(1): 30-36.
 - 12. Qianming Xu, **Xiaokai Song**(并列第一作者), Lixin Xu, Ruofeng Yan, Mohammed Ali A. Shah, Xiangrui Li. Vaccination of chickens with a chimeric DNA vaccine encoding *Eimeria tenella* TA4 and chicken IL-2 induces protective immunity against coccidiosis. Veterinary Parasitology (IF: 2.579), 2008, 156(3-4): 319-323.
 - 13. Sun W, **Song X**, Yan R, Xu L, Li X. Vaccination of goats with a glutathione peroxidase DNA vaccine induced partial protection against *Haemonchus contortus* infection. Vet Parasitol 2011, 182(2-4): 239-247.
 - 14. Muhammad Ali A. Shah, **Xiaokai Song**, Lixin Xu, Ruofeng Yan, Xiangrui Li*, Construction of DNA vaccines encoding *Eimeria acervulina* cSZ-2 with chicken IL-2 and IFN- γ and their efficacy against poultry coccidiosis. Research in Veterinary Science, 2011, 90: 72–77
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39. Zhao Guangwei, Wang Shuai, Wang Wang, Zhang Zhenchao, Xie Qing, Zhang Meng, I A Hassan, Yan Ruofeng, **Song Xiaokai**, Xu Lixin, Li Xiangrui. Type I strain of Toxoplasma gondii from chicken induced different immune responses with that from human, cat and swine in chicken. *Journal of Integrative Agriculture* 2015, 14(5): 956–965
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著作:

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