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研究方向：食品微生物与生物技术



**研究领域：**1) 微生物资源发掘与安全性评价；2) 新型益生元、益生菌、后生元的研究与开发；3) 益生元、益生菌免疫活性、肠道益生特性等研究；4) 活性益生菌高密度发酵培养及活性保持技术研究；5) 细菌源多糖新资源发掘；6) 乳酸菌多糖功能和活性研究。

**个人简介：**南京农业大学食品科技学院教授、博士研究生导师；哈佛大学医学院 Department of Medicine-GI/Nutrition/波士顿儿童医院 Division Gastroenterology, Hepatology and Nutrition 访问学者，合作导师：Wayne I. Lencer。兼任江苏省农产品加工贮藏与质量控制实验教学示范中心副主任、食品科技学院生物工程教工支部书记、南京农业大学---江阴市益生菌专家工作站站长；兼任中国食品科学技术学会第三届青年工作委员会委员、国家食药同源产业科技创新联盟理事、南京微生物学会副理事长、南京农业大学青年科技委员会委员。入选南京农业大学第三批“钟山学者学术新秀”计划（2015）、

“江苏省青蓝工程优秀青年骨干教师”（2016）、江苏省高层次创新创业人才引进计划“双创博士”（科技副总）（2016）。获南京农业大学优秀党务工作者（2018）、南京南农业大学“最美教师”（2019）、南京农业大学社会合作突出贡献奖（2020）等荣誉称号；2012-2015、2020年单位考核优秀，2017年科级人员聘期考核优秀。

**科研情况：**主持省部级以上项目13项，其中国家自然科学基金项目4项，江苏省自然科学基金3项；主持企业横向项目5项。

序号	项目名称	承担情况	项目周期	项目来源
1	基于乳酸菌表面胞外多糖桩基效应的新疆赛里木拉丝酸奶高产粘及凝胶机制研究（U1903108）	主持	2020.01 -2022.12	国家自然科学基金-新疆联合基金项目
2	基于黏附效应的益生瑞士乳杆菌胞外多糖（EPS）肠道锚定、定殖及菌群调节机制研究（31871771）	主持	2019.01 -2022.12	国家自然科学基金（面上）项目
3	瑞士乳杆菌 MB2-1 源抗艰难梭菌粘附胞外多糖（EPS）的控制性合成、活性筛选及其作用机制研究（31571818）	主持	2016.01 -2019.12	国家自然科学基金（面上）项目
4	基于可控酶水解的活性乳酸菌低聚糖制备及其抗肠致病性大肠杆菌黏附活性与机制研究（31201422）	主持	2013.01 -2015.12	国家自然科学基金（青年）项目
5	生物膜型益生菌发酵剂制备关键技术及其在功能性发酵乳品生产中的应用（CX(20)3043）	主持	2020.08 -2022.07	2020年度江苏省农业科技自主创新资金项目

6	西藏开菲尔源益生瑞士乳杆菌胞外多糖(EPS)肠道锚定、粘附及微生态调节机制研究 (BK20201320)	主持	2020.07 -2023.06	江苏省自然科学基金(面上)项目
7	基于双组学策略的瑞士乳杆菌源胞外多糖糖库构建及其抗致病性大肠杆菌粘附效应与机制研究 (BK20161448)	主持	2016.07 -2019.06	江苏省自然科学基金(面上)项目
8	功能性低聚糖的酶法合成及其与肠道益生功能和抗氧化构效关系研究 (BK2011651)	主持	2011.07 -2014.07	江苏省自然科学基金(面上)项目
9	抗致病性大肠杆菌黏附的功能性低聚糖制备、筛选及抗黏附作用构效关系和机制研究 (20110097120028)	主持	2012.01 -2014.12	教育部高等学校博士学科点(新教师)基金
10	风腊羊肉加工新技术与产业化 (BC2011410)	主持	2011.07 -2014.07	江苏省苏北专项计划项目
11	蛹虫草培养基中活性多糖绿色提取富集关键技术研究及新产品开发 (BE2013322)	主持	2013.03 -2016.02	江苏省科技支撑计划项目
12	具抗EPEC黏附活性的乳酸菌胞外多糖(EPS)组分制备及其抗黏附活性构效关系和作用机制研究 (CAAS-FS-09)	主持	2018.09 -2019.09	农业农村部农产品加工重点实验室开放课题
13	新疆疆岳驴乳中乳蛋白质加工稳定性及其机制研究 (KYLH201702)	主持	2017.01 -2019.12	南京农业大学---塔里木大学联合基金
14	两种典型益生瑞士乳杆菌胞外多糖肠道免疫调节机制研究 (KYYJ201807)	主持	2018.09 -2020.09	南京农业大学---新疆农业大学联合基金

15	瑞士乳杆菌 MB2-1 抗幽门螺杆菌粘附活性多糖组份库构建及其机制研究(31371807)	骨干	2014.01 -2017.12	国家自然科学基金(面上)基金项目
16	传统发酵乳制品微生物资源开发与产业化开发(2011AA100903)	骨干	2012.01 -2016.01	国家 863 计划项目
17	益生菌功能机制的解析与优化(2013BAD18B01-4)	骨干	2013.01 -2016.12	国家科技支撑计划项目
18	新型乳酸菌发酵剂生产技术中试与示范	骨干	2012.04 -2014.04	国家农业成果转化项目
19	植物乳杆菌源低聚半乳糖抗艰难梭菌粘附活性构效关系及其机制(20130097110022)	骨干	2014.04 -2016.12	教育部高等学校博士学科点(博导)基金

**科研成果:** 已在国内外学术期刊发表科研论文 91 篇, 其中 SCI 收录 62 篇; 申请和授权专利 5 项; 获中国食品工业协会科学技术奖一等奖 1 项。

**发表论文(\*表示通讯作者论文):**

- [1] You, X., Li, Z., Ma, K., Zhang, C. L., Chen, X. H., Wang, G. X., Dong, M. S., Rui, X., Zhang, Q. Q., & **Li, W.\***. Structural characterization and immunomodulatory activity of an exopolysaccharide produced by *Lactobacillus helveticus* LZ-R-5[J]. *Carbohydrate Polymers*. 2020, 235: 115977.
- [2] You, X., Yang, L., Zhao, X. J., Ma, K., Chen, X. H., Zhang, C. L., Wang, G. X., Dong, M. S., Rui, X., Zhang, Q. Q., & **Li, W.\***. Isolation, purification, characterization and immunostimulatory activity of an exopolysaccharide produced by *Lactobacillus pentosus* LZ-R-17 isolated from Tibetan kefir [J]. *International Journal of Biological Macromolecules*. 2020, 158: 408–419.
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**教学情况：**承担本科生《食品免疫学》、《食品工业真菌学》、《酒文化与品鉴》、《食品免疫学实验》以及本科生全英文课程《Food Immunology》、《Mycology in Food Industry》等课程；承担和参与研究生《食品安全研究进展》、《高级食品微生物学》、《食品科学进展》等课程的教学工作；承担江苏高校省级外国留学生英文授课（培育）课程《Food Immunology》1项、校级课程思政项目2项、校级《食品免疫学》在线开放课程1项；参编教材《基础食品微生物学》（第四版，中国轻工业出版社）；主持江苏省省级研究生教改项目2项、校本科生教改项目4项、校“卓越教学”课堂教学改革实践项目2项、校级虚拟仿真实验项目1项、校研究生教改项目2项、校创新性实验项目3项；参与省教改重点项目1项、校研究生教改项目1项、发表教改论文1篇；获江苏省教育厅“江苏省高等教育教学成果奖”二等奖1项（2011年）、南京农业大学校级教育教学成果奖一等奖1项（2011年）、南京农业大学第十一届青年教师授课比赛优秀奖1项（2014年）、南京农业大学第二届微课比赛优秀奖1项（2015年）、南京农业大学第三届微课比赛三等奖1项（2017）、南京农业大学南京农业大学教师教学比赛优秀奖1项（2020）、南京农业大学实验教学先进个人2项（2017、2019）。

#### 指导学生项目及获奖情况

序号	项目类型	项目名称	承担情况
1	2017“养乐多”全国高校食品创意大赛二等奖	玫瑰芝香活心	指导教师

2	2017 第二届江苏省科协青年会员创新创业大赛暨首届江苏省大学生食品科技创新创业大赛二	醋酱	指导教师
3	2017 江苏省农学会首届“创星杯”创新创业大赛创新组优秀奖	醋酱	指导教师
4	2019 南京农业大学校级优秀论文特等奖	不同增稠剂及益生元对发酵牛乳消化特性的影响研究	指导教师
5	2018 南京农业大学校级优秀论文特等奖	瑞士乳杆菌 MB2-1 源胞外多糖 (EPS) 纯组分体外肠道益生活性研究	指导教师
6	2018 南京农业大学“互联网+”大学生创新创业大赛	基于互联网新零售模式的无奶剩还产品推广	指导教师
7	2019 第十七届“智农杯”明日工程师论坛二等奖 指导教师	苏酪	指导教师
8	2019 “温氏杯”全国大学生畜产品创新创业大赛---铜奖	苏酪	指导教师
9	2019 江苏省农学会首届“创星杯”创新创业大赛创业组一等奖	苏酪	指导教师
10	2019 江苏省普通高等学校本专科优秀毕业设计(论文)三等奖	不同增稠剂及益生元对发酵牛乳消化特性的影响研究	指导教师
11	2020“萌番姬杯”第七届国际大学生农业创新创业大赛优秀创业团队奖	苏酪系列产品创新开发与推广	指导教师

12	2017 第十六届“挑战杯”全国大学生课外学术科技作品竞赛培育项目立项团队	源于瑞士乳杆菌 MB2-1 的胞外多糖 (EPS) 对人体肠道菌群调节作用及其益生机制研究	指导教师
13	2019 江苏省研究生科研创新计划项目 (博士)	金蝉花多糖结构解析及其基于 TLR4-NF- $\kappa$ B 信号通路免疫机制研究 (KYCX19 0590)	指导教师
14	2019 江苏省研究生实践创新计划项目 (硕士)	基于乳酸菌发酵枸杞汁活性成分研究及其功能性产品开发 (SJCX19_0137)	指导教师
15	2018 江苏省研究生实践创新计划项目	驴乳加工稳定性及体外肠道消化特性研究	指导教师
16	2017 江苏省研究生实践创新计划项目	五种豆类水溶性多糖的提取、活性研究及功能性饮品研发 (SJCX17_0196)	指导教师
17	2016 江苏省研究生实践创新计划项目	乳酸菌肽聚糖的提取及其功能性饮品开发	指导教师
18	2020 年度国家奖学金	肖路遥	指导教师
19	2020 年度校长奖学金	尤秀	指导教师