



基础医学与生物科学学院

School of Biology & Basic Medical Sciences



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学院概况

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教育教学

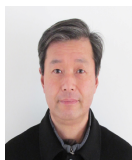
学科建设

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党群工作

诚聘英才

搜索



姓 名: 张雨青
技术职称: 研究员
导师类型: 博导
所在学系: 应用生物学系
学科专业: 特种经济动物饲养、生物物理、药物化学
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研究方向

生物药物与生物医用材料
生物技术与酶工程

个人简历

一九八一年毕业于苏州蚕桑专科学校(现并入苏州大学), 二零零五年三月获日本信州大学大学院工学系研究科生物机能专业工学博士学位。现任苏州大学医学部生物物理专业硕士生导师, 特种经济动物饲养专业和药物化学专业博士生导师。“十一五”、“十二五”和“十三五”连续被农业部聘任为《国家现代农业产业技术体系》蚕茧深加工利用/蚕丝资源综合利用岗位科学家。
主要从事丝蛋白新功能材料和蚕桑资源循环利用的研究, 特别是以丝蛋白作为酶/药物缓释载体、医用生物材料和生物药物以及蚕业生产废弃物—桑枝生物药物的研究与开发。参与多个“973”重点项目和农业部公益项目研究, 担任国家“863”重大项目《家蚕基因表达谱和蛋白质组研究》(2006AA10A118)课题副组长。在国内外学术刊物上发表研究论文近200篇, 其中有60多篇发表在SCI收录1区和2区等杂志上; 有多篇论文分别获得1994-95年度、1996-97年度、1998-99年度和2004-05年度苏州市自然科学优秀论文一等奖。申请中国发明专利、实用新型专利和国际专利近30多项; 获省部级科学技术进步奖五项, 2013年参加项目《丝胶回收与综合利用关键技术与产业化》获得国家科技进步二等奖(证书号: 2013-J-212-2-03-R05)。1999、2003、2005、2007和2013年分别获苏州大学陆氏科研基金奖、苏州大学大陆产业基金奖、苏鑫奖教金科研奖和周氏科研类优胜奖。2010年评为苏州大学2010届毕业设计(论文)优秀指导老师, 指导的3名硕士和1名博士研究生分别获得2014、2016、2017年度苏州大学优秀硕士和博士学位论文。

学术成果

近年发表的主要学术论文(*通讯作者):

1. Zhi-Lin Zhao; Li, Wen-Wen; Wang, Fei; & Zhang, Y-Q* Using of hydrated lime water as a novel degumming agent of silk and sericin recycling from wastewater. *Journal of Cleaner Production*. 2017, 172: 2090-2096. DOI: doi.org/10.1016/j.jclepro.2017.11.213
2. Xiao-Lu Yin, Hua-Yu Liu, Yu-Qing Zhang*. Oral administration of mulberry branch bark powder improves significantly hyperglycemia and hyperinsulinemia in type II diabetic mice. *Food & Nutrition Research*. 2017, 61(1): 1368847. DOI:10.1080/16546628.2017.1368847
3. Cao, T.T., & Zhang, Y.Q*. The potential of silk sericin protein as a serum substitute in cell culture and cryopreservation. *Amino Acids* 2017, 49(6): 1029-1039. DOI: 10.1007/s00726-017-2396-3
4. Li Wen-Wen, Wang, H., & Zhang, Y-Q* A novel chitosan hydrogel membrane by an improved electrophoretic deposition and its characteristics in vivo and in vitro. *Materials Science and Engineering C* 2017, 74: 287-297. DOI: 10.1016/j.msec.2016.12.005
5. Fei Wang, Yu-Qing Zhang*. Effects of alkyl polyglycoside (APG) on Bombyx mori silk degumming and the mechanical properties of silk fibroin fibre. *Materials Science and Engineering C* 2017, 74: 152-158. <http://dx.doi.org/10.1016/j.msec.2017.02.015>
6. Biao Ding, Liang-Ze Wan, Yu-Qing Zhang*. Biosafety evaluation of three sodium lauryl N-amino acids synthesized from silk industrial waste in mice. *Journal of Surfactants and Detergents*. 2017, 20(5), 1173-1187.
7. Jiang Wang, Li-Jun Zhao, Yu-Qing Zhang*. UV irradiation and salicylic acid immersion enhance the level of mulberoside A in isolated mulberry branches, a huge amount of agro-waste. *Waste and Biomass Valorization* 2017, 8(8): 2643-2651. DOI: 10.1007/s12649-016-9702-2
8. Dong Liu, Yu-Qing Zhang*. TiO₂ nanoparticles exposure induces lung inflammation in mice via the NF-κB and IFN signalling pathways. *Journal of Biomedical Material Research A* 2017, 105(3): 720-727. doi: 10.1002/jbm.a.35945
9. Bing-Qing Xu and Yu-Qing Zhang*. The bioactive components of *Gynura divaricata* and its potential use in health food and medicine: A review. *African Journal of Traditional Complementary and Alternative Medicines* 2017, 14(3): 113-127
10. Yu, Xiaohong; Hong, Fashui*; Zhang, Yu-Qing*. Cardiac inflammation involving in PKCε or ERK1/2 -activated NF-κB signalling pathway in mice following exposure to titanium dioxide nanoparticles. *Journal of Hazardous Materials* 2016, 313, 68-77. <http://dx.doi.org/10.1016/j.jhazmat.2016.03.088>
11. Jin-Ge Zhao and Yu-Qing Zhang*. A new estimation of the total flavonoids in silkworm cocoon sericin layer through aglycone determination by hydrolysis-assisted extraction and HPLC-DAD analysis. *Food & Nutrition Research* 2016, 60, 30932
12. Hua-Yu Liu, Jiang Wang, Jing Ma, Yu-Qing Zhang*. Interference effect of oral administration of mulberry branch bark powder on the incidence of type 2 diabetic mice induced by streptozotocin. *Food & Nutrition Research* 2016, 60, 31606(11)
13. Jie Hong, Fashui Hong*, Yuguan Ze, Yu-Qing Zhang*. The nano-TiO₂ exposure can induce hepatic inflammation involving in a JAK-STAT signalling pathway. *Journal of Nanoparticles Research* 2016, 18, 162(9)
14. Yu, Xiaohong; Hong, Fashui*; Zhang, Yu-Qing*. Bio-effect of nanoparticles in the cardiovascular system. *Journal of Biomedical Material Research A* 2016, 104A(11), 2881-2897
15. Fan Qiu, Tian-Zhen He, Yu-Qing Zhang*. Two polysaccharides isolated from mulberry branch bark and their antioxidant activity. *Archives of Pharmacal Research* 2016, 39(5), 887-896
16. Dong Liu, Master; Ping Yang, Yu-Qing Zhang*. Water-soluble extract of *Saxifraga stolonifera* has anti-tumor effects on Lewis lung carcinoma-bearing mice. *Bioorganic & Medicinal Chemistry Letters* 2016, 26(19), 4671-4678
17. Cao, T.T., & Zhang, Y.Q*. Processing and characterization of silk sericin from Bombyx mori and its application in biomaterials and biomedicines. *Materials Science and Engineering C* 2016, 61: 940-952. doi:10.1016/j.msec.2015.12.082
18. Ding, B., Lv, Y., & Zhang, Y-Q*. Anti-tumor effect of morusin from the branch bark of cultivated mulberry in Bel-7402 cells via the MAPK pathway. *RSC Advances* 2016, 6: 17396-17404.
19. Hong, J., & Zhang, Y.Q* Murine liver damage caused by exposure to nano-titanium dioxide. *Nanotechnology* 2016, 27: 112001. doi:10.1088/0957-4484/0/0/000000
20. Zhu, L., & Zhang, Y.Q*. Postoperative anti-adhesion ability of a novel carboxymethyl chitosan from silkworm pupa in a rat cecal abrasion model. *Materials Science and Engineering C* 2016, 61: 387-395. doi:10.1016/j.msec.2015.12.080
21. Xu, B., Yang, P., & Zhang, Y-Q*. Hypoglycaemic activities of lyophilized powder of *Gynura divaricata* by improving antioxidant potential and insulin signalling in type 2 diabetic mice. *Food & Nutrition Research* 2015, 59: 29652.

22. Jin-Ge Zhao and **Yu-Qing Zhang***. Inhibition of the flavonoid extract from silkworm cocoons on DMBA/UVB-induced skin damage and tumor promotion in BALB/C mouse. **Toxicology Research**. **2015**. 4: 1016-1024. DOI: 10.1039/C5TX00087D

23. Ting-Ting Cao & **Yu-Qing Zhang***. Viability and proliferation of L929, tumour and hybridoma cells in the culture media containing sericin protein as a supplement or serum substitute. **Applied Microbiology Biotechnology** **2015**. 99(17): 721, 9-7228. DOI:10.1007/s00253-015-6576-3.

24. Wang, H., & **Zhang, Y-Q***. Processing silk hydrogel and its applications in biomedical materials. **Biotechnology Progress** **2015**. 31(3): 630-640. DOI: 10.1002/btpr.2058

25. Lin Zhu, Lin Peng and **Yu-Qing Zhang***. The Processing of Chitosan and Its Derivatives and Their Application for Postoperative Anti-Adhesion. **Mini-Reviews in Medicinal Chemistry** **2015**, 15(4): 330-337

26. Fei Wang and **Yu-Qing Zhang***. Bioconjugation of silk fibroin nanoparticles with enzyme and peptide and their characterization, **Advances in Protein Chemistry and Structural Biology** **2015**, **98**: 263–291. doi:10.1016/bs.apcsb.2014.11.005

27. Wang, H.-Y., Chen Y.-Y. & **Zhang, Y.-Q***, Processing and characterization of powdered silk micro- and nanofibers by ultrasonication, **Materials Science and Engineering C** **2015**, 48: 444-452

28. Liang-Ze Wan, Bin Ma and **Yu-Qing Zhang***, Preparation of morusin from Ramulus mori and its effects on mice with transplanted H22 hepatocarcinoma, **Biofactors** **2014**, 40(6): 636-645

29. Shu Wang, Xian-Ming Liu, Jian Zhang* and **Yu-Qing Zhang***. An efficient preparation of mulberroside A from the branch bark of mulberry and its effect on the inhibition of tyrosinase activity. **PLOS One** **2014**. 9: e109396.

30. Hai-Yan Wang and **Yu-Qing Zhang***. Processing and characterisation of a novel electropolymerized silk fibroin hydrogel membrane. **Scientific Reports** **2014**, 4: 6182, 11.

31. Min-Hui Wu, Liang-Ze Wan and **Yu-Qing Zhang***. A novel sodium N-fatty acyl amino acid surfactant using silkworm pupae as stock material. **Scientific Reports** **2014**, 4: 4428, DOI: 10.1038/srep04428

32. Jin-Ge Zhao, Qian-Qian Yan, Jian Zhang, **Yu-Qing Zhang***. Isolation and identification of colorless caffeoyl compounds in purple sweet potato by HPLC-DAD-ESI/MS and their antioxidant activities. **Food Chemistry** **2014**, **161**: 22-26.

33. Min-Hui Wu, **Jing-Xia Yue** and **Yu-Qing Zhang***. Ultrafiltration recovery of sericin from silk floss processing alkaline waste and its controlled enzymatic hydrolysis. **Journal of Cleaner Production** **2014**, **76**: 154-160. <http://dx.doi.org/10.1016/j.jclepro.2014.03.068>

34. Min-Hui Wu and **Yu-Qing Zhang***. Nanofiltration recovery of sericin from silk processing waste and synthesis of a lauroyl sericin-based surfactant and its characteristics. **RSC Advances** **2014**, **4**, 4140-4145. DOI: 10.1039/c3ra45549a

35. Hua-Yu Liu, Meng Fang, **Yu-Qing Zhang***. In vivo hypoglycaemic effect and inhibitory mechanism of the branch bark extract of the mulberry on STZ-induced diabetic mice. **The Scientific World Journal** **2014**, ID 614265, 11

36. Ting-Ting Cao, Zhen-Zhen Zhou and **Yu-Qing Zhang***. Processing of β -glucosidase-silk fibroin nanoparticle bioconjugates and their characteristics. **Applied Biochemistry and Biotechnology** **2014**, **173**: 544-551. DOI: 10.1007/s12010-014-0861-y

37. **Ting-Ting Cao**, Yuan-Jing Wang and **Yu-Qing Zhang***, Silk reeling of silkworm cocoon in strongly alkaline electrolyzed water as a sericin swelling agent at a lower temperature, **Journal of Textile Institute** **2014**, **105**(5): 502-508. DOI:10.1080/00405000.2013.826418

38. Lin Zhu, **Yu-Qing Zhang***. Identification and analysis of the pigment composition and sources in the colored cocoon of the silkworm, *Bombyx mori*, by HPLC-DAD. **Journal of Insect Science** **2014**, **14**:31. http://www.insectscience.org/14_31

39. Shu Wang, Meng Fang, Yong-Lei Ma, and **Yu-Qing Zhang***, Preparation of the branch bark ethanol extract in mulberry *Morus alba*, its antioxidation, and antihyperglycemic activity *in vivo*. **Evidence-Based Complementary and Alternative Medicine** **2014**, Article ID 569652, 7 pages. <http://dx.doi.org/10.1155/2014/569652>

40. Hai-Yan Wang, **Yu-Qing Zhang***. Effect of regeneration of liquid silk fibroin on its structure and characterization. **Soft Matter** **2013**, **9**:138-145. DOI: 10.1039/c2sm26945g

41. Ting-Ting Cao, Yuan-Jing Wang and **Yu-Qing Zhang***, Effect of strongly alkaline electrolyzed water on silk degumming and the physical properties of the fibroin fiber, **PLOS One** **2013**. **8**(6): e65654. doi:10.1371/journal.pone.0065654.

42. Jin-Ge Zhao, Qian-Qian Yan, Li-Zhen Lu and **Yu-Qing Zhang***, In vivo antioxidant, hypoglycemic, and anti-tumor activities of anthocyanin extracts from purple sweet potato. **Nutrition Research and Practice** **2013**. **7**(5): 359-365

43. Hai-Yan Wang, Yuan-Jing Wang Li-Xia Zhou, Lin Zhu and **Yu-Qing Zhang***. Bioactivity of an ethanolic extract from the sericin layer of silkworm *Bombyx mori* cocoon as a novel functional biomaterial, **Food & Function** **2012**, **3**(2), 150-158 DOI: 10.1039/c1fo10148j.

44. **Yu-Qing Zhang*** et al, Highly efficient processing of silk fibroin nanoparticle-Lasparaginase bioconjugates and their characterization as a drug delivery system. **Soft Matter** **2011**. **7**(20): 9728-9736. DOI: 10.1039/c0sm01332c

45. Lin Zhu, Ren-Ping Hu, Hai-Yan Wang, Yuan-Jing Wang and **Yu-Qing Zhang***. [Bioconjugation of neutral protease on silk fibroin nanoparticles and application in the controllable hydrolysis of sericin](#). **Journal of Agriculture and Food Chemistry** **2011**. **59**(18): 10298–10302. DOI: 10.1021/jf202036v

代表项目

- (1) “十三·五”国家现代农业产业技术体系《蚕丝资源综合利用》岗位，2011-2015，主持；
- (2) “十二·五”国家现代农业产业技术体系《茧丝深加工利用》岗位，2011-2015，主持；
- (3) “十一·五”国家现代农业产业技术体系《蚕茧深加工》岗位，2008-2010，主持；
- 国家高技术研究发展计划(863)计划《家蚕基因表达谱和蛋白质组研究》(2006AA10A118)，2006-2010，任课题组副组长，主持课题五。

其 他

- 成果获奖：
- (1) 2013年度《丝胶回收与综合利用关键技术及产业化》获国家科技进步二等奖，排名第五(2013-J-212-2-03-R05)
- (2) 2012年度《荧光判性家蚕新品种的育成及雄蚕丝的开发》获教育部科学技术进步二等奖，排名第九(1-2-9)
- (3) 2003年度《纳米丝素中SOD固定化研究及其纳米产品》获第八届“挑战杯”全国大学生课外学术科技作品竞赛二等奖，指导教师
- (4) 2002年度《利用Bm-NPV表达丙型肝炎病毒抗原蛋白》获苏州市科技进步二等奖，排名第五(No.2-22-5)
- (5) 2000年度《以固定化酶丝素膜为基础的葡萄糖尿酸生物传感器的研究》获江苏省科技进步三等奖，排名第一(No.3-51-1)
- (6) 1995年度《珍珠漂白工艺(中试)》获江苏省科技进步四等奖，排名第三(No.4-2 -3)

- 申请或授权专利：
- (1) 张雨青、李文文、王飞，一种蚕丝脱胶/精练剂、应用及对脱胶废液的处理方法，发明专利，申请号：2016111420392，2016-12-12
- (2) 张雨青、赵金鸽，一种蚕茧层活性物质总黄酮的评价方法，中国专利，申请号：CN2016104275676，2016-6-16

(3) 张雨青、殷晓路, 一种用于连接不同口径的玻璃磨口的转接器, 实用新型专利, 申请号: CN 2016212310094, 2016-11-16

(4) 张雨青、刘东, 一种虎耳草猪肺混合水提物、其制备方法及应用, 中国专利, CN105380967A, 2015-11-27

(5) 张雨青、刘华瑜, 一种桑皮粉、制备方法及其应用, 中国专利, CN105029431A, 2016--19

(6) 张雨青、许冰清, 一种用于降血糖的白背三七冻干粉、制备方法及其应用, 中国专利, CN104887732A, 2015-5-19

(7) 张雨青、朱琳, 一种蚕蛹羧甲基壳聚糖、制备方法及其应用, 中国专利, CN104817649A, 2015-5-12

(8) 张雨青、伍敏晖, 万良泽, 一种N-脂肪酰基氨基酸钠表面活性剂及其制备方法, 中国专利, 申请号: 201410089532.7, 申请日: 2014-3-12

(9) 曹婷婷、张雨青; 一种折叠滤纸, 实用新型专利, 申请号: 201420267420.1, 申请日: 2014-5-23

(10) 王海燕、张雨青; 一种电聚丝素水凝胶膜的制备方法、装置及其应用, 发明专利, 申请号: 201410221710.7, 申请日: 2014-5-23

(11) 张雨青等, 一种蚕丝脱胶/精练剂及其应用, 发明专利, CN103205885A, 2013-7-17

(12) 张雨青等; 一种利用强碱性电解水低温缫丝的方法, 发明专利, CN102605436A, 2012-7-25

(13) 张雨青等, 一种柱层析上样装置, 发明专利, CN101923078A1, 2012-11-06

(14) 张雨青等, 一种桑树枝条剥皮机, 发明专利, CN101811318 (A), 2010-08-25

(15) 张雨青等, 一种护肤用蚕丝扑粉的制备及使用方法, 发明专利, CN101780024A, 2010-7-21

(16) 张雨青等, 一种从紫甘薯中提取花色苷的方法, 发明专利, CN101735644A, 2010-6-16

(17) 张雨青等, 一种蚕茧丝胶层醇溶物及其制备方法, 发明专利, 200910027117.8; 2011-4-13授权

(18) 张雨青等, 一种具有降血糖活性的桑皮提取物及其制备方法, 发明专利, CN10133694A; 2009-1-7

(19) Yu-Qing Zhang. A method of producing nanosize fibroin particle, **PCT**, WO 2005085327 A1, 2005. 9. 15.

Yu-Qing Zhang. Silk fibroin nanoparticles fixed with enzyme and their production, **PCT**, WO2007112679A1, 2007.10.11.

关闭窗口