Shuqian Wan

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CET-6; IELTS (Band 6)

Date of Birth: May 7th, 1994
Place of Birth: Hubei,China
Citizenship: Chinese

Education

09/2016-06/2019 South China University of Technology (SCUT)

MEng in Bioengineering (biomedical materials; metabolism of lipid)

(Chinese government 985&211 project universities)

09/2012-06/2016 Wuhan Textile University (WTU)

BEng in Bioengineering (wastewater treatment; microorganism)

Research Projects

05/2017-04/2018 Research for the therapeutic effects of resveratrol-loaded PLGA nanoparticles on Non-Alcoholic Fatty Liver Disease

Summary: Resveratrol-loaded PLGA nanoparticles could enhance the stability, solubility and bioactivity of resveratrol for Non-Alcoholic Fatty Liver Disease (NAFLD) therapy

- Optimizing the method of preparing PLGA nanoparticles which was used to delivery RSV (RSV-PLGA-NPs)
- Characterizing the properties of RSV-PLGA-NPs (size, zeta potential, SEM, AFM, EE%, DL%, FTIR, stability, kinetics of release and degradation)
- Constructing the NAFLD cell model and detecting in vitro (cellular uptake, cytotoxicity, oil red O staining, quantitative of triglycerides and glycerol, cell Proliferation)

07/2017-06/2018 Research for the antibacterial effects of an iodine-loaded super-hydrophobic biofilm

Summary: This novel iodine-loaded super-hydrophobic biofilm can achieve the function of anti-adhesion and long-lasting antibacterial

- Creating a super-hydrophobic polymer film (PTFE-PVP-I)
- Detecting the hydrophobic capacity and antibacterial ability of PTFE-PVP-I (AFM, SEM, WCA, XPS, Inhibition zone test, anti-adhesion test)
- Testing the biological toxicity of PTFE-PVP-I (drug release and cytotoxicity)

04/2018-12/2018 Study on the effects of aged garlic extracts on the metabolism of lipid in vitro and in vivo

Summary: Research for aged garlic extracts which had a significant effect on inhibiting lipid accumulation

- Extracting and detecting the active component complex from aged garlic
- Constructing the fat cell model and detecting the lipid accumulation in vitro (cell culture, cytotoxicity assay, optimization modeling method, quantitative of triglycerides and glycerol)
- Constructing the fat animal model and detecting the lipid accumulation in vivo (gavage, anatomy, heart blood sampling, analysis of plasma lipid profile and histological)

Academic Achievements

Publication:

1. **Shuqian Wan**, Long Zhang, Yunyun Quan* and Kun Wei*. Resveratrol-loaded PLGA nanoparticles: enhanced stability, solubility and bioactivity of resveratrol for Non-Alcoholic Fatty Liver Disease. ***Royal Society Open Science***, 2018, 5 (11) IF: 2.515
2. **Shuqian Wan‡**, Xueming Niu and Kun Wei*. Effects of black garlic extracts on the

metabolism of fat in vitro and in vivo. ***Food& Function*** (under review) IF: 3.241

3. Xueming Niu‡, **Shuqian Wan‡** and Kun Wei*. Novel iodine-loaded super-hydrophobic biofilm with anti-adhesion and long-lasting antibacterial function. ***Macromolecular Rapid Communications*** (under review) IF: 4.078

Patents:

1. Kun Wei, **Shuqian Wan**, et al. Fat-reducing aged garlic extracts concentrated juice and preparation method thereof. CN201810888225.3
2. Kun Wei, **Shuqian Wan**, et al. Method for inducing mouse embryonic fibroblast differentiation into fat cells by using oleic acid in vitro. CN 201810977457.6
3. Kun Wei, **Shuqian Wan**. Resveratrol-loaded nanoparticles with controlled releasing and preparation method thereof. CN 201810760220.2

Honors and Awards

2017-2018 Professional practice outstanding graduate student, South China University of Technology

2017-2018 Second Level Scholarship, South China University of Technology

2016-2017 Third Level Scholarship, South China University of Technology

2012-2013 National Inspirational Scholarship, Wuhan Textile University

2014-2016 First Level Scholarship, Wuhan Textile University