Tao Zheng

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Education

- **University of Michigan** — Ann Arbor, MI
  PhD Program in Pharmaceutical Sciences — *Sep. 2019 – Present*
- **Sichuan University** — Chengdu, China
  Master of Science in Pharmaceutics; GPA: 3.83 — *Sep. 2016 – June. 2019*
- **Huazhong University of Science and Technology** — Wuhan, China
  Bachelor of Science in Pharmacy; GPA: 3.89; National Scholarship 2011-2012, 2013-2014 — *Sep. 2011 – June. 2016*

Experience

- **PhD pre-candicate** — Ann Arbor, MI
  Advisor: Dr. Steven P. Schwendeman; College of Pharmacy — *May 2019 - Present*
  - **Controlled release systems based on PLGA**: PLGA, poly(lactic-co-glycolic acid), is a versatile copolymer widely used in controlled-release drug products and medical devices. The Schwendeman lab has been working on controlled-release systems based on PLGA for a very long time, especially on microspheres, implants and membranes. Currently I am involved in a collaborative project where we use PLGA microspheres to release drugs.
- **Master's researcher** — Chengdu, China
  Advisor: Dr. Xun Sun; West China School of Pharmacy — *Sep 2016 - June 2019*
  - **Microneedle**: Microneedle patch is microneedles with the dimension of micrometers standing on a patch in an array. It is a relatively new transdermal drug delivery system and shows great potential in effectively delivering pharmaceuticals without causing much pain, the cold chain and the wasted needles. My work during master's study was to develop the microneedle technology in the laboratory from scratch, as a platform technology for delivering vaccines, nanoparticles and microparticles. Applications for patents based on my work were filed.
  - **Newton Advanced Fellowships**: The Newton Advanced Fellowships scheme is an initiative supported by The Royal Society of UK, in China partnered with The National Natural Science Foundation. Under the guidance of my advisor, I wrote most parts of the proposal for the scheme and successfully got funded.
  - **Teaching assistant**: Teaching assistant for undergraduate Pharmaceutics, where I facilitated in class discussion, assignments grading and office hours, and greatly improved my communication skills.
- **Undergraduate researcher** — Wuhan, China
  Tongji School of Pharmacy — *July 2014 - May 2015*
  - **High-throughput preparation of PLGA nanoparticles**: Assembled a preliminary microfluidic system for the high-throughput preparation of PLGA nanoparticles and learned the basics of the characterization of nanoparticles.
  - **Toxicity of PEG-PCL micelles**: Systematically investigated the toxicity of PEG-PCL micelles on liver. Performed cellular assays and animal experiments.

Skills

- **Language**: Fluent in English and native in Chinese (Mandarin).
- **Programming**: Python, Linux and R basics.
- **Others**: MS Office, LaTeX, Adobe Photoshop, and Blender 3D.

Publications

- [**1**]: L. Tan, T. Zheng, M. Li, X. Zhong, Y. Tang, M. Qin, X. Sun, Optimization of an mRNA vaccine assisted with cyclodextrin-polyethyleneimine conjugates, Drug Deliv. and Transl. Res. 10 (2020) 678–689.
- [**2**]: L. Li, T. Zheng, T. Wang, Z. Zhang, T. Gong, X. Sun, Virus Envelope-Like Self-Assembled Nanoparticles Based on alpha-CD/PEG for Antigens Targeting to Dendritic Cells, J. Biomed. Nanotechnol. 13 (2017) 1490–1499.