

Yi Li

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❖ Education

China Pharmaceutical University

Nanjing, P. R. China

B.S. in Pharmaceutical Science (Top-Notch Innovation Program)

09/2016-07/2020

GPA: 3.55/4.00

Honors:

- Outstanding Student Scholarship for Top-Notch Program of 2018 and 2019
- Overseas Outstanding Student Scholarship of 2018
- The Third Prize of Scholarship (top 10%) of 2017

University of Strathclyde

Glasgow, United Kingdom

Summer exchange program

07/2018-08/2018

❖ Research

Key Laboratory of Druggability of Biopharmaceutical, China Pharmaceutical University,

Nanjing, P. R. China

advised by Dr.Lifang Yin and Dr.Wei He

- Principal Investigator, **Study on a Smart Paclitaxel-Dichloroacetic Acid Nanococrystals for Efficient MDR Reversal and Enhanced Apoptosis** 01/2019-present

- 1) Constructed a multifunctional drug-delivery-drug self-assembled nanoplatform to reverse MDR effect and enhance apoptosis via a non-lysosomal pathway;
- 2) Explored methods to prepare the two-drug platform and optimized the prescription via computer simulation;
- 3) Characterized particles in vitro and improved experiment conditions based on their effects on the characteristics of nanococrystals;
- 4) Studied cytotoxicity and apoptosis in normal and drug-resistant A549 cell strain;
- 5) Studied intracellular distribution and non-lysosomal inoculation pathway.

- Co-Investigator, **Using Marimastat-Loaded Thermosensitive Liposomes (MATT-LTSLs) and Paclitaxel Nanocrystals (PTX-Ns) as Dual Nanomedicines to Treat Metastatic Cancer** 11/2018-03/2019

- 1) Designed MATT-LTSLs to lock cancer cells in microenvironment by hyperthermia, and PTX-Ns to enhance apoptosis by local treatment;
- 2) Detected the thermosensitivity of LTST using a fluorescence probe;
- 3) Studied cellular uptake using flow cytometry, examined the antimetastatic ability through wound healing assay and transwell assay, and assessed the targeting ability and the penetration by loading a near-infrared probe;
- 4) Examined apoptosis and proliferation of cancer cells by TUNEL and Ki67 assay;
- 5) Evaluated biodistribution and antitumor efficacy in vivo in 4T1 tumor-bearing mice model.

- Co-Investigator, **Study on a Drug-Delivering-Drug Platform-Mediated Potent Protein Therapeutics via a Non-lysosomal Route** 03/2018-06/2018

- 1) Studied the mechanism of functional protein and performed quantitative analysis by western blot assay;
- 2) Compared endocytosis manner and intracellular distribution of lysosomal route and non-lysosomal route by CLSM;
- 3) Studied influences of characteristics of nanoparticles on their endocytosis manner, and performed pharmacodynamic experiments in cell level.

- Team Leader, **Baicalein-mediated Delivery of p53 in Therapeutics of Pulmonary** 10/2017-04/2018

Hypertension (Student Entrepreneurship Competition Program),

- 1) Constructed a gene-drug co-delivery platform to develop novel chemotherapy for PAH, and confirmed efficacy in animal level;
- 2) Designed synthetic route to assemble BCL-p53-βlg complex;
- 3) Performed electrophoresis for component analysis and mechanism study;
- 4) Established pulmonary embolism in a rat model and studied the anti-PAH efficacy.

■ Research Assistant, **Assembling Nanoplatfrom from a CD44-targeted Drug and Liposomes for Dual Targeting of TME and Cancer Cells** 05/2017-01/2018

- 1) Constructed self-assembled smart thermosensitive liposomes as dual-targeting platform for co-delivery of MATT and HA-PTX to inhibit metastasis and angiogenesis;
- 2) Designed the synthetic route and compared drug effect with normal liposomes and free drugs;
- 3) Performed pharmacokinetic experiments in a mouse 4T1 tumor model.

State Key Laboratory of Natural and Biomimetic Drugs, Peking University,

Beijing, P. R. China

advised by Dr. Wangliang Lu

■ Research Assistant, **Constructing a Nanosized Functional miRNA Liposomes to treatment of TNBC by silencing Slug gene** 06/2019-08/2019

- 1) Constructed miRNA liposomes using CRISPR/Cas9 to silence Slug gene;
- 2) Performed solid-phase synthesis;
- 3) Designed primer, performed PCR and gene sequencing, and analyzed cellular localization of functional liposomes by qPCR method.

❖ **Publication**

Lyu, Y., Xiao, Q., **Li, Y.**, Wu, Y., He, W., & Yin, L. (2019). "Locked" cancer cells are more sensitive to chemotherapy. Bioengineering & translational medicine, 4(2), e10130. doi:10.1002/btm2.10130

❖ **Affiliations**

Student Representative, The 4th Chinese American Society of Nanomedicine and Nanobiotechnology 08/2019

Student Representative, The 12th China Pharmaceutical Conference 11/2018

Student Representative, Generic Drug Consistency Evaluation Training 08/2018

❖ **Volunteer**

Doctor Assistant, National Hospice Service Program, Fujian, China 09/2016-Present

Teaching Assistant, Science College of CPU 09/2016-09/2018

Pharmacist Assistant, Outpatient Pharmacy of Nanjing First Hospital 10/2016-06/2017

Pharmacist Assistant, Department of Pharmacy of Fujian Provincial Hospital 12/2017-02/2018

❖ **Skills**

Instrument: CLSM, TEM/SEM, PXRD, FCM, CD, MS, NMR, WB, cryo-EM, DLS particle analyzer, ultracentrifuge, etc;

Cell Experiments: MTT assay, transwell assay, apoptosis test, intracellular distribution, etc;

Animal Experiments: Constructing tumor model, administration, hyperthermia, bio-sample collection and processing, etc;

Gene Engineering: CRISPR, PCR, RT-qPCR, primer design, DNA sequencing, etc.

Software: Origin, SPSS, MATLAB, Chemdraw, Primerbank, ProtParam, Design Expert, Endnote, Mathematica, etc;

❖ **Scores**

GRE: 322 (V 157/ Q 165/ AW 3.0) 08/2019

TOEFL: 106 (R 30/ L 30/ S 23/ W 23) 04/2019