Yi Li

China Pharmaceutical University, #639 Longmian Avenue, Nanjing, P.R.China · 211198
yi@stu.cpu.edu.cn (+86) 150-5059-0898

Education

Sept.2016-Jun.2020 **China Pharmaceutical University (**Nanjing, China),
Degree: B.S. Pharmaceutical Science (Top-Notch Innovation Program)
GPA: 85.16/100 3.5/4.0 Program Experts Assessment Score: 94.33/100

Jul.2018-Aug.2018 **University of Strathclyde** (Glasgow, United Kingdom)
Summer exchange program, Visiting Student

Jun.2019-Aug.2019 **Peking University** (Beijing, China)
Summer research program, Research Assistant

Research Experience

Center for Research Development and Evaluation of Pharmaceutical Excipients and Generic Drugs, China Pharmaceutical University, Nanjing, P.R.China

Jan.2019-Present **Constructing a Smart Paclitaxel-Dichloroacetic acid Nanococrystals for Efficient MDR Reversal and Enhanced Apoptosis,** *Principle Investigator*

- Explored methods to prepare the two-drug platform, using one drug as the active agent and the carrier to deliver another drug;
- Optimized the prescription via computer simulation;
- Characterized particles in vitro and improved experiment conditions based on their effects on the characteristics of nanococrystals;
- Cultivated drug-resistant A549 cell strain, and studied cytotoxicity and apoptosis in both normal and drug-resistant A549 cell strain;
- Studied intracellular distribution and non-lysosomal inoculation pathway;
- Constructed a multifuncational drug-delivery-drug self-assembled nanoplatform to reverse MDR effect and enhance apoptosis via a non-lysosomal pathway.

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

- Prepared nanoparticles and detected the thermosensitivity of LTST using a fluorescence probe;
- 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;
- Examined apoptosis and proliferation of cancer cells by TUNEL and Ki67 assay , and studied the mechanism of antimetastasis;
- Cultivated the 4T1 tumor−bearing mice model to evaluated the biodistribution and antitumor efficacy in vivo;
- Designed and made figure to demonstrate the project;
- Participated in the complete process from basic study to publication.

Mar.2018-Jun.2018 **Determining a Drug-Delivering-Drug Platform-Mediated Potent Protein Therapeutics via a Non-lysosomal Route**, *Research assistant*

- Performed western blot assay to study the mechanism of functional protein, and optimized the WB experiment condition;
- Compared endocytosis manner and intracellular distribution of lysosomal route and non-lysosomal route by CLSM;
- Understood the effect of the the characteristics of nanoparticles on their endocytosis manner, and acquired basic cell experiment skills.

Nov.2017-Jan.2018 **Targeting Intracellular MMPs to Inhibits Tumor Metastasis and Angiogenesis,** *Research Assistant*

- Designed the synthetic route of HA-PTX prodrug and attached it to marimastat/β-casein complexes to construct self-assembled nanoplatform;

- Assisted to study and antitumor efficacy in a mouse 4T1 tumor model;
- Acquired basic animal experiment skills, including construction of tumor model, administration, study on pharmacokinetics and processing biological samples, etc.

May 2017-Aug.2017 **Assembling Nanoplatform from a CD44-targeted Drug and Liposomes for Dual Targeting of TME and Cancer Cells,** *Research Assistant*

- Prepare liposomes by the ultrasound hydration method.
- Learned to target TME by hyperthermia treatment;
- Compared drug effect with normal liposomes and free drugs;
- Measured and recorded the weight and tumor size of the mice.
- Learned to design multifunctional carriers, acquired preparation methods and operation of experiment equipments.

Oct.2017-Apr.2018 **Baicalein-mediated delivery of p53 in therapeutics of Pulmonary Hypertension (Student Entrepreneurship Competition Program)**, *Team leader*

- Designed preparation experiment to assemble BCL-p53-βlg complex;
- Performed electrophoresis to determine the constituents of the complex and study their mechanism, separately;
- Established pulmonary embolism in a rat model and studied the anti-PAH efficacy;
- Presented short term result in seminars, including data analysis and sketch map, etc;

State Key Laboratory of Natural and Biomimetic Drugs, Peking University, Beijing, P.R.China

Jun.2019-Aug.2019 **Constructing a Nanosized Functional miRNA Liposomes to treatment of TNBC by silencing Slug gene**, *Research Assistant*

- Synthesized Slug 3′-UTR, the miRNA and negative control miRNA by solid-phase synthesis;
- Learned to design primer, use PCR to amplification and opotimize PCR condition;
- Evaluated cellular localization of functional liposomes by qPCR method;
- Acquired basic molecular biology experiment skills, including plasmid transduction, CRISPR, gene sequencing, etc.

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

Award

2018/2019 The Outstanding Student Scholarship for Top-Notch Program - (top 1 in PI group)
2018 Overseas Outstanding Student Scholarship of CPU
2017 The Third Prize of Scholarship - (top 10% of 100 student)

Skills

Scores TOEFL: 106 (R 30 L 30 S 23 W 23) GRE: V157+Q165+AW3.0
Instrument Skills CLSM, TEM/SEM, PXRD, FCM, CD, FT-IR, MS, NMR, WB, cryo-EM, Micro plate spectrophotometer; DLS particle analyser, ultracentrifuge, etc;
Cell Experiments MTT assay, transwell assay, apoptosis test, intracellular distribution, etc;
Animal Experiments Construction of in situ tumor model, administration, hyperthermia, bio-sample collection and processing, establishment of pharmacokinetic model, etc;
Gene Engineering CRISPR, PCR, RT-qPCR, primer design, DNA sequencing, etc.
Softwares Origin, SPSS, MATLAB, Chemdraw, Ae, Ps, Ai, 3DMax, Design Expert, LaTex, Endnote, Graphpad Prism, Mathematica, PyMol, Geneious, etc;

Extracurricular Experiences

Aug.17.2018 ***Generic Drug Consistency Evaluation Training,*** Student representative
Nov.30-Dec.2.2018 ***The 12th China Pharmaceutical Conference,*** Student representative
Aug.19-Aug.22.2019 ***The 4th Chinese American Society of Nanomedicine and Nanobiotechnology (CASNN)***, Student representative
Sept. 2016-Present ***National Hospice Service Program***, Doctor assistant, Fujian, China
Oct.2016-Jun.2017 ***Outpatient Pharmacy of Nanjing First Hospital***, Pharmacist assistant
Oct.2016-Jun.2017 ***Department of Pharmacy of Fujian Provincial Hospital***, Pharmacist assistant
Sept.2016-Sept. 2018 ***Teaching assistant of Science College of CPU***