Cuiying Xie

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Education

Southern Medical University (SMU) ***Guangzhou, China***

(Top3, 2024 Best Chinese Medical Universities Ranking, SHANGHAI RANKING)

M.Sc. in Pharmacy (No.32, 2023 Global Ranking of Academic Subjects, SHANGHAI RANKING) *Sep. 2022 – Current*

- **Department:**
  1. Center for Drug Clinical Research (GCP), *Nanfang Hospital*, Southern Medical University
  2. Clinical Pharmacy Center, *Nanfang Hospital*, Southern Medical University
- **Advisor:** Prof. Zhongyuan Xu
- **GPA:**3.4/4

Southern Medical University (SMU) ***Guangzhou, China***

B.Sc. in Clinical Pharmacy *Sep. 2016 – Jul. 2022*

- **GPA:**3.37/4
- **Core Courses:**

Clinical Pharmacology (93.2)	Pharmacology (88.9)	Pharmaceutics (88.1)	Pediatrics (91.1)
Pharmaceutical Analysis (94.3)	Internal Medicine (86.5)	Surgery (95)	Obstetrics and Gynecology (99.2)

Publication

[1] **Xie C,** Gu A, Khan M, Yao X, Chen L, He J, Yuan F, Wang P, Yang Y, Wei Y, Tang F, Su H, Chen J, Li J, Cen B, Xu Z. Opportunities and challenges of hepatocellular carcinoma organoids for targeted drugs sensitivity screening. Front Oncol. (Q2, IF: 5.7)

Research Experience

Development of a radiotherapy resistant stem cell model in glioblastoma (GBM) cell lines through repeated radiation screening: Isolation, identification, and investigation of resistance mechanisms *2023.3-2024.2 in preparation*

a. Isolate glioblastoma stem cells (GSCs) from the U87 cell line.
b. Establish radiotherapy-resistant GSCs through repeated radiotherapy screening and perform stem cell identification.
c. Induce redifferentiation of the GSCs and further investigate the mechanisms of radiotherapy resistance in the model.

Construction of a tumor immunity related clinical prediction model for glioblastoma (GBM) based on lncRNA using the TCGA database. *2023.8-2023.12*

a. Organize TCGA data, perform GSEA scoring using the collected immune-related gene sets, and classify subtypes.
b. Conduct co-expression module analysis based on WGCNA.
c. Construct a model using Lasso regression and COX regression, and validate it with external datasets."

iRGD modified liposomes for the co-delivery of two drugs to overcome radiotherapy resistance in glioblastoma (GBM). *2023.12-Current in preparation*

a. Construct iRGD-modified dual drug-loaded liposomes and conduct *in vitro* evaluations, including liposome characterization, assessment of therapeutic efficacy using *in vitro* models, and validation of the mechanisms to overcome GBM radiotherapy resistance.

b. Evaluate the targeting capability of iRGD-modified liposomes towards GBM, including both *in vitro* and *in vivo* model assessments.

c. Perform *in vivo* evaluation of iRGD-modified dual drug-loaded liposomes in overcoming GBM radiotherapy resistance.

A phase 3 randomized, double-blind, placebo-controlled clinical trial to evaluate the efficacy, immunogenicity, and safety of the 9-valent human papillomavirus (HPV) vaccine (V503) in Chinese men aged 20 to 45. *2024.6-Current*

a. Participated in multiple aspects of the project, including subject education and enrollment screening, drug administration, blood sample processing, and subject follow-up.

Selected Honors

2020-2021 **The Third Prize Scholarship of Southern Medical University** (Top 15%)

2019-2020 **Excellent Student of Southern Medical University**

2019-2020 **The Second Prize Scholarship of Southern Medical University** (Top 5%)

2017-2018 **Excellent Student Cadre of Southern Medical University**

Internship Experience

Intern Clinical Pharmacist

Clinical Pharmacy Center, *Nanfang Hospital*, Southern Medical University *2021.1-2021.11*

Skills

Wet Lab Technology：

- **Cell culture techniques：** General cell culture techniques, GSCs culture, CCK-8 assay, Flow Cytometry (Cell apoptosis analysis, Cell cycle analysis, Fluorescence detection), Co-culture of cells, Colony-formation assay, Cell scratch assay
- **Molecular biology & histology experimental techniques：** Protein extraction and Western Blot, RNA extraction and agarose gel electrophoresis, RT-qPCR, IF, IHC, ELISA, H&E staining, Oil Red O/Bodipy/lysosome staining ,etc.
- **Animal experimentation techniques ：** General animal feeding techniques, Mouse gavage, Mouse intraperitoneal/subcutaneous/intravenous Injections, Mouse tissue perfusion and sampling, Mouse glioblastoma *in situ* model construction
- **Experimental techniques for drug preparation:** Preparation of liposomes by thin film dispersion, Liposome drug loading, Liposome particle size and potential detection

Dry Lab Technology：

Using R for bioinformatics analysis:

- Utilizing GEO and TCGA data, data quality control (RNA-Seq and scRNA-Seq)
- RNA-Seq analysis: differential analysis and group statistics (volcano plots, box plots, heatmap, etc.), enrichment analysis and functional clustering, survival analysis and clinical prediction model construction (WGCNA, COX regression, lasso regression), etc.
- scRNA-Seq analysis: subgroup annotation, functional annotation, developmental trajectory, CNV, intercellular communication, etc.
- the use of other commonly used R packages.

Instrument operation skills： LIGHT CYCLER 480, ZEISS LSM 980, Nikon ECLIPSE Ti2-E, Beckman Coulter Cytoflex, Spectral Instruments Imaging, etc.

Language: Chinese (native), English (IELTS:6.5)

References

Prof. Zhongyuan Xu

Assoc Prof. Joshua Ehrlich

Dr. Bohong Cen