

# Wenyu Zhang

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## Education

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**Mailman School of Public Health - Columbia University**

**New York City, NY**

*Master of Science in Biostatistics (MS/TM)*

*September 2021 – May 2023*

**The Ohio State University College of Pharmacy**

**Columbus, Ohio**

*Bachelor of Science in Pharmaceutical Sciences*

*May 2020*

Cumulative GPA: 3.703/4.0

Relevant coursework:

- Engineering Math A, Statistics for the Life Sciences: RStudio
- General Chemistry 1, 2. Organic Chemistry 1, 2
- Biochemistry for the Pharmaceutical Sciences, Basic Pharmacokinetics
- Pharmaceutical Sciences Laboratory, Experimental Techniques in Drug Discovery: qPCR, RNA isolation, HPLC, gel electrolysis, NMR

## Professional Experience

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**Wuhan Center for Disease Control & Prevention**

**Wuhan, China**

*Data Assistant*

*October 2020-January 2021*

- Collect and analyze survey data of chronic disease risk factors (e.g., current health condition, preferred diet, exercise frequencies, smoking status) in Wuhan of 2019 with SAS
- Identify the association between characteristics (e.g., the age distribution, occupation, gender, weight) and health status of the death (e.g., family health history of a chronic disease, certain underlying medical conditions) with the death of COVID-19
- Analyze the correlation between the habit of cigarette smoking (e.g., smoking duration time, types of tobaccos, frequencies of smoking) and the risk of death from COVID-19

## Research Experiences

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**Department of Pharmacy, Tongren Hospital Affiliated to Wuhan University Wuhan, China**

*Research Assistant*

*July 2020- February 2021*

- Detect the expression changes of NLRP3 inflammasome in pituitary tissues of prolactinoma animal models with Western blot
- Establish the prolactinomas model by injecting estradiol oil in female F344 rats for 50 days
- Collect the data and calculate the p-value from correction fits between the variance of prolactinoma animal models and MCC950 treatments with SPSS
- Compile the data from Western blot experiments
- Assist in preparing an article for submission to the Endocrine-Related Cancer journal

**Dr. Robert Lee's Pharmaceutics Lab, The College of Pharmacy, The Ohio State University, Columbus, Ohio**

*Research Assistant*

*May 2018-May 2020*

- led and developed research projects to test drug delivery of antisense oligonucleotide encapsulated by cationic lipid nanoparticle
- Improved bortezomib composition based on rational design and clinical applications
- Evaluated the anticancer effects by injecting bortezomib into rats with cancer and compared the sizes of tumors from the treated group with the ones in the control group
- Identified maximum tolerated dose and LD 50 (Median lethal dose) to determine an acceptable level of toxicity and short-term acute toxicity of bortezomib
- Utilited Excel software to compile the data of bortezomib's dosage and assisted to prepared an manuscript for journal submission

## **Selected Lab-Projects**

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### **Synthesis of sulfanilamide from N-acetylsulfanilamide and determination of its pKa**

*Individual project of Pharmaceutical Science Laboratory*

*February 2020-March 2020*

- Established research projects to understand the hydrolysis reactions of Sulfanilamide synthesis
- Processed a titration curve of pKa to predict the solubility and permeability of sulfanilamide
- Measured the turbidity of sulfonamides in solution by using a microplate spectrophotometer
- Plotted the sample concentrations in log vs. Absorbance at 595nm and determined the half maximal inhibitory concentration of sulfonamides

### **Comparison Analysis of Hospital Length of Stay Between Insurers for Patients with Pediatric Asthma**

*Group project of Statistics for Life Science*

*January 2019-April 2019*

- Proposed and designed the null and alternative hypotheses about differences in lengths of stay between two insurers
- Computed statistical test for 789 asthma cases insured by two insurers from the 29 hospitals, generated the p-value, mean value, as well as conducted T-test for the tested degree of freedom and 95th confidence interval of hypotheses with R-studio
- Conducted a linear regression between days staying of two insurers and differences in hospital characteristics, resulting in p-value reflecting differences in length of stay between insurers A and B

## **Skills**

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- Proficient in RStudio, SAS, TreeAge output, EpiData
- Advanced understanding of pharmaceutical synthesis, biostatistics, and nanoparticle composition