

Yuchen Hua

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EDUCATION

Columbia University New York, NY 09/2022 –Present

DEGREE : M.S. in Biostatistics

Course Highlights: Probability, Data Science, Principle of Epidemiology, Biostatistics Method

Brandeis University Waltham, MA 08/2018 –12/2021

DEGREE : B.S. in Biochemistry

GPA : 3.587/4

Course Highlights: Math I&II, Linear Algebra, Biostatistics, Classical and Statistical Thermodynamics, Genetics & Genomics, Physics I&II

RESEARCH PROJECTS

Computational Study of COVID-19 Antibodies and Structural Implications on Future Antibody Development

► **Shanghai Jiao Tong University, School of Pharmacy** (Advisor : Prof. Buyong Ma) 07 – 08/2021

The structural analysis of the antibody complementarity-determining regions (CDRs) is critical for antibody discovery and development. In this project, I used computational methods and tools to disassemble the diverse COVID-19 antibodies and then conducted statistical analysis on the structural information of amino acid pairs on CDRs to identify the critical interactions and accordingly give implications on future COVID-19 antibody development.

Review of Different Glucose-responsive Insulin Treatments for Type I Diabetes, the Corresponding Biomaterials, and Drug Delivery Methods

► **Cornell University, Collaborative Online Research** (Advisor: Prof. Minglin Ma) 08 – 09/2020

With two team members, we conducted literature review to summarize the mechanisms and biomaterials used by four up-to-date glucose-responsive insulin treatments, compared the pros and cons between different drug delivery methods, and critically analyzed the challenges each faces.

The review paper is published on *Solid State Technology*.

INTERNSHIP

Soochow University Affiliated Dushu Lake Hospital Suzhou, China

► **Summer Research Intern** (Supervisor : Dr. Yafeng Zhou, Vasculocardiology Department) 06 – 07/2019

As a research assistant, I helped organize and clean the clinical data of >100 patients with acute myocardial infarction (AMI) to verify the efficacy of a new drug treatment. In another research, I used SPSS to perform univariate and multivariate analyses to identify the emotional risk factors – depression and anxiety in patients with acute coronary syndrome (ACS) diseases.

SKILLS

Computational	R, Linux, LISA (Linux Integrated System Analysis), Bioconductor, VMD,
Experimental	analysis; PCR, Thin-layer Chromatography ; Distillation and Chromatography; IR Spectroscopy