

# Yingchen Xu

(C) 858-717-7212 | [yx2711@cumc.columbia.edu](mailto:yx2711@cumc.columbia.edu) | New York, NY, 10032

## EDUCATION

---

**Columbia University, Mailman School of Public Health, New York** **Sep 2021-May 2023**

- Master of Public Health in Biostatistics, certificated in Advanced Epidemiology
- Current GPA: 4.03/4.00

**University of California, San Diego** **Sep 2017-Dec 2020**

- Bachelor of Science in Molecular Biology GPA: 3.513/4.0
- Provost Honors: 2017 Fall, 2018 Spring, 2020 Winter, 2020 Spring

## SKILLS

---

- |  |                                     |
|--|-------------------------------------|
| • R programming                              | • Biostatistics analysis            |
| • SAS certified specialist: Base Programming | • Knowledge of molecular techniques |
| • SQL  | • Molecular lab background          |
| • MATLAB                                     | • Chemical and molecular analysis   |
| • Google Analytics                           | • Bioinformatics techniques         |

## WORKING EXPERIENCE

---

**Baiyunshan ChenLiJi Pharmaceutical Factory, Guangzhou, China** **Jul 2019-Sep 2019**

*Intern at Microbiology Lab*

- Performed microbial limit tests on products and packaging materials and checked the total number of aerobic bacteria and mold and yeast by using the plate method.
- Examined test samples for control bacteria, including E. coli, Salmonella and Gram-negative bacteria.
- Conducted enrichment culture and separation culture on these control bacteria respectively.
- Assisted to inspect the cleanliness of the assembly line by sampling with the Laser dust particle calculator and organized data on a chart for further analysis and evaluation.
- Prepared materials needed for experiments, such as various types of media, buffer, glassware, etc.
- Recorded experimental data, analyzed results, and wrote laboratory reports.
- Worked closely with team members to deliver project requirements and develop solutions timely.

**Guangzhou Foreign Language School, Guangzhou, China** **Feb-Jun 2017, Jul-Aug 2018**

*TOEFL, SAT, AP Chemistry Tutor*

- Assisted high school teachers in preparing for course materials and leading discussion sessions, assisted schools in constantly innovating teaching content, methods, and teaching modes.
- Graded students' exams and homework, collected students' frequently wrong questions and shared the analysis of problem-solving ideas to promote students' learning.
- Held office hours to answer students' questions, and customized feasible tutoring programs according to students' study conditions.
- Maintained students' attendance and progress records.
- Supervised students during examinations.

## RESEARCH EXPERIENCES

---

### Human Behavioral Genetics: Quantitative Approaches

Jul 2020-Sep 2020

Online Project-Based Learning Program; Advisor: Prof. Irwin Waldman

- Learned the methods to quantify genetic influences on the environment to specific traits through family, twin, and adoption studies.
- Mastered the methods to detect genotype-environment correlation and interaction.
- Conducted literature review in relevant studies and practiced writing academic journals.
- Completed a quantitative assignment on a selected topic of Autism and made a presentation.

### Course Final Project: Find-a-gene Project

Sep 2020-Dec 2020

BIMM 143 Bioinformatics Laboratory; Advisor: Dr. Barry Grant

- Investigated a novel gene by performing the BLAST search against a DNA database.
- Analyzed the novel gene by using database searching, sequence analysis, structure analysis and the R environment.
- Techniques applied: Multiple sequence alignment; Phylogenetic tree; Heatmap; R/Bio3D; NGLviewer(or VMD/PyMol); Target Associated Assays and ligand efficiency data.

### The Green Squads Program

Jun 2022-Aug 2022

Collaborative learning program conducted by the Shillim Institute

- Researched on latest reports, articles, legislations, and initiatives on climate change, particularly on plastic management & recycling and water stewardship & conservation.
- Collected data, facts, figures, and other important information on climate change.
- Prepared materials for educational workshop for local high school students.

### Functional Data Modeling of Melatonin Cycles

Sep 2021-Present

MPH Practicum Project; Advisor: Dr. R. Todd Ogden

- Aimed at examining the relationship between sleep deprivation and depression by modeling melatonin cycles across days and across subjects.
- Involved the use of R programming in data manipulation, data visualization, and data analysis
- Analyzed the trend of subjects' melatonin cycles utilizing functional data analysis and function on scalar regression
- Reported and updated project's progress once a week to Dr. Ogden
- Conducted final practicum report and presentation

## ACTIVITIES

---

### Volunteer in Book Beyond Boundaries Organization

Nov 2017

- As a volunteer, talked with inmates to understand their life conditions in the Richard J. Donovan Correctional Facility.
- Shared reading habits and experiences with inmates.

### Member in Ocean Lover Club

Sep 2017-Sep 2018

- Participated in volunteer work of cleaning up the La Jolla Shore beach.
- Collected and released relevant information and assisted in carrying out marine protection research activities.
- Actively participated in relevant marine environmental protection lectures.

### Member in Euphoria Translation Team

Mar 2020 – Sep 2021

- Participated in translating English-speaking videos and English news into Chinese.