Kevin Wang

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Education

Stony Brook University — Stony Brook, NY
B.S., Chemistry, Concentration in Biological Chemistry — 2020 – 2024

- Cumulative GPA: 3.94 / 4.00; *summa cum laude*
- Senior Thesis: "Viscosity of Unentangled Polymer Nanocomposites."
- Advisor: Christian Aponte-Rivera

Awards and Honors

Chancellor's Award for Student Excellence, SUNY	2024
American Chemical Society Division of Physical Chemistry Undergraduate Award, ACS	2024
Phi Beta Kappa, Stony Brook Chapter	2024
Chemistry Award for Outstanding Academic Achievement, Stony Brook University	2024
Presidential Scholarship, Stony Brook University	2020 – 24
National Merit Scholarship, Stony Brook University	2020 – 24
Dean's List, Stony Brook University	2020 – 24
Outstanding Academic Achievement Award, Stony Brook University	2021, 2022, 2023
Upstander Award, Stony Brook University	2022

Research Experience

Technician B — Jun 2025 – Present
Columbia University Irving Medical Center — New York, NY

- Conducted deep mutational scanning of hepatitis B virus X protein (HBx) to characterize functional effects of sequence variation
- Executed SARS-CoV-2 antiviral drug-resistance studies and collected phenotypic data
- Designed and cloned plasmids for cell-based assays across HBV, SARS-CoV-2, and RABV projects
- **Advisor:** Sho Iketani

Research Assistant — Feb 2023 – Jun 2025
Stony Brook University — Stony Brook, NY

- Completed senior thesis quantifying the Einstein viscosity of unentangled polymer nanocomposites
- Performed molecular dynamics simulations of polymer nanocomposites on the SeaWulf high-performance computing cluster
- Developed Python and R pipelines to analyze simulation outputs, interpret results, and generate visualizations
- Automated job submission and scheduling on the Slurm workload manager using custom Python scripts
- **Advisor:** Christian Aponte-Rivera

NSF REU Research Fellow — Jun 2023 – Aug 2023
Worcester Polytechnic Institute — Worcester, MA

- Modeled Cu(I)–protein interactions using a coarse-grained lattice-based framework to predict binding energies
- Optimized binding energy parameters, improving model accuracy by 41%
- Developed Python and shell scripts to automate computational workflows and to post-process output data
- **Advisor:** George A. Kaminski

PUBLICATIONS

1. Chithelen, J., Lovett, D.H., **Wang, K.**, Torres Yanagisawa, A.E., Caccin, F., Iketani, S., 2026. Cross-resistance patterns in SARS-CoV-2 against 3CL protease inhibitors. *Nature Communications*. *(accepted in principle)*

PRESENTATIONS

1. "Viscosity of Unentangled Polymer Nanocomposites," Senior Research Symposium, Stony Brook, New York, May 2024
2. "Predicting Cu(I) Binding Affinities Using a Coarse-Grained Lattice Model," WPI Summer Research Showcase, Worcester, Massachusetts, August 2023

CLINICAL EXPERIENCE

Mental/Behavioral Health Clinic Intern Jul 2022 – Aug 2022
NYC Health + Hospitals / Queens New York, NY

- Collaborated with interns and clinic staff to lead small-group activity therapy for pediatric patients, teaching mindfulness and stress-reduction exercises
- Designed educational materials for activity therapy sessions and the summer LEAD program
- Tutored two pediatric patient groups within the Behavioral Health Center and prepared them for the public-school curricula

Medical Assistant Dec 2021 – Jan 2022
Milestones Pediatrics of New York New York, NY

- Managed patient intake and check-out, including collection of demographic and medical history information
- Assisted with direct patient care, including obtaining vital signs and explaining treatment procedures to families
- Maintained electronic medical records and coordinated appointment scheduling

TEACHING

Laboratory Design Teaching Assistant Jan 2022 – May 2022
Stony Brook University Biology Department Stony Brook, New York

- Assisted faculty in developing new laboratory experiments and refining existing protocols for undergraduate laboratory courses
- Collaborated with fellow teaching assistants to troubleshoot and clarify experimental protocols
- Pilot-tested laboratory activities to validate protocols, optimize workflow, and ensure feasibility within scheduled class periods
- Revised instructional materials on the course learning management system to improve clarity and accessibility

COMMUNITY INVOLVEMENT

Second Deputy Chief of Operations Sep 2021 – May 2024
Stony Brook Campus Community Emergency Response Team Stony Brook, New York

- Led a volunteer emergency response team of 80 members, overseeing training, deployment coordination, and interagency collaboration
- Conducted simulation drills and trained volunteers in basic medical aid, fire suppression, search and rescue, and triage per FEMA CERT guidelines
- Directed captain recruitment, onboarding, and retention, doubling captain capacity in one year

- Provided field leadership during deployments to support timely and organized emergency response

Program Success Manager Apr 2021 – Sep 2021
The City Tutors New York, NY

- Managed a team of interns overseeing operations for a CUNY-wide mentorship program
- Matched more than 250 students with career development mentors based on student profiles and career interests
- Analyzed survey data to evaluate program outcomes and implemented process improvements based on findings

Professional Memberships

American Chemical Society

Skills

Programming Languages: Python, R, Bash/Shell, Unix/Linux, Wolfram Mathematica
Software: Git/GitHub, LAMMPS, VMD, MobaXterm, GraphPad Prism, SnapGene, ChemDraw, ImageJ/FIJI, EndNote
Chemical & Analytical: Synthesis, Purification, Spectroscopy (UV/Vis, IR, NMR, MS), Chromatography (GC, HPLC, TLC)
Molecular & Cellular Biology: Molecular Cloning, Plasmid Design, Site-Directed Mutagenesis, Deep Mutational Scanning, Bacterial Transformation, Miniprep/Midiprep, Gel Electrophoresis, Mammalian Cell Culture, Transfection, Transduction, Lentiviral Production, Flow Cytometry, FACS, Drug-Resistance Assays, Confocal Microscopy, BSL-2 Practices
Certifications: Basic Life Support Certification (Exp. 2026), Narcan Trained
Languages: Fluent in English, conversant in Mandarin and Spanish (incl. Intermediate Medical Spanish)