Allison Hung

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EDUCATION

Columbia University in the City of New York Expected Graduation: May 2020
B.A. in Biochemistry | GPA: 3.76 | Dean's List

Syosset High School Graduated 2016
GPA: 98.0 | SAT: 2330 | National Merit Scholar | National AP Scholar

RESEARCH EXPERIENCES

Haeusler Lab, Columbia University Medical Center Winter 2016-present
Research assistant, Summer Undergraduate Research Fellowship, UN3500 research for credit

- Investigated the link between bile acid signaling and insulin resistance
- Main project: Evaluate the effect of hydroxylated bile acids on glucose regulation using organoids derived from mouse stem cells
- Skills: confocal imaging, cell/tissue culture, RNA-seq analysis, Western blot, PCR, ELISA assay optimization, mouse handling

Johnson Lab, UC San Francisco Summer 2018
Amgen scholar, Summer Research Training Program

- Investigated white-opaque switching in the opportunistic fungal pathogen Candida albicans and its link to pathogenesis
- Main projects: (1) evaluate differences of white and opaque growth in bile-rich environments, and (2) characterize white vs. opaque clinical isolates and their interactions with host macrophages
- Skills: Flow cytometry, live confocal imaging, immunoassays, flow cytometry

Dill Lab, Stony Brook University Summer 2015
Summer Research Intern, high school Advanced Research Program

- Improved the lab's protein folding algorithms by incorporating multiple protein structure heuristics.
- Main project: Using Python, I added to a "sample enhanced" algorithm that could take multiple protein structure populations as guiding heuristics and more efficiently fold proteins that may be difficult to analyze experimentally.
- Skills: Python, Molecular Dynamics, UNIX

SKILLS

Computer: Python, Java, R, Latex, Microsoft office, Jmol/pymol, Prism, HOMER, ImageJ, html/CSS
Lab: Western blot, cell/tissue culture, confocal imaging, flow cytometry, RNA-seq analysis
Coursework: Biochemistry, Developmental Biology, Microbiology, Virology, Physics 1 & 2, Calculus (Multivariable), Intensive General Chemistry, Biology, Organic Chemistry, AP Computer Science (HS)
Miscellaneous: Mandarin (fluent), Spanish (fluent)

AWARDS

ABRCMS Student Travel Award	September 2018
Oral presentation award, UCSF SRTP symposium	Summer 2018
American Heart Association Undergraduate Research Fellowship	March 2018
Columbia Summer Undergraduate Research Fellowship	Summer 2017
1st place in Biology – Long Island Science and Engineering Fair	March 2016
1st place Protein Modeling – Science Olympiad State Competition	March 2016
9th place ARML National Mathematics Competition	May 2015

SELECTED PRESENTATIONS

Mount Sinai Undergraduate Research Fair 2018	[Oral and poster] (Johnson)
ABRCMS 2018	[Poster] (Johnson)
SRTP final presentation 2018	[Oral and Poster] (Johnson)
Columbia SURF symposium 2017, 2018	[Oral and Poster] (Haeusler)
Long Island Science and Engineering Fair 2016	[Poster] (Dill)

OUTREACH/LEADERSHIP

Synthetic Biology Initiative, Project Lead
Manipulating Microbes, Blogger
Columbia University Science Journal, mentor
Columbia Splash, Volunteer Teacher