

# Yi Cao

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## Education

**M.A. Biological Sciences**  
**May 2015**

Binghamton University, State  
University of New York

**B.S., Biotechnology**  
**June 2009**

Fudan University

## Skills

- Python
- Mathematica
- Excel
- Genetic Biology
- Cellular Biology
- Bioinformatics
- Animal Experiments
- Protein Biochemistry

## Languages

English ★★★★★

Mandrian ★★★★★

Cantonese ★★★★★★

French ★★★★★

## Experience

04/09 - 07/09 **Development Assistant**

[Genesky Bio-Tech Co, Ltd., Shanghai, China](#)

- Built up T-vector cloning platform, performed PCR with genomic DNA isolated from clinical samples.
- Analyzed genotypes according to sequencing results and composed the report sent to clients, like academic labs and clinics.

07/08 - 08/08 **Summer Research Internship**

[China Novartis Institutes for BioMedical Research](#)

- Identified and isolated mutant cancer cell gene targets and determined receptor function by transient transfection.
- Assisted nude mice model experiments.

07/12 - 09/12 **Hospital Volunteer**

[Lourdes Hospital, Binghamton, NY](#)

- Served in emergency room and hospital.
- Familiarized with procedures in emergency room, from greeting to financing.
- Assisted nurses, and helped patients and visitors to solve non-treatment issues.
- Maintained supplies, including food, beverage, linens, disposable medical supplies.

01/10 - 05/12 **Teaching Assistant**

[Biology Department, SUNY Binghamton](#)

- Prepared experiments materials, designed and taught lab sections, demonstrated techniques.
- Held weekly office hours, graded all associated materials.
- Guided students' group research project and evaluated presentation.
- Demonstrated proficiency at computer aided teaching and research tools and the web search engines.

## Projects

- 09/14-03/14 **Master paper project: opioid receptor signaling and its role in cancer progression**  
•Discussed conflicting research findings by studying more than 50 BioMedical literatures.
- 02/12-05/12 **Business Plan of Biomedical Start-up Company**  
•created a business plan for biomedical start-up FyreSaw Rhythm, which develops an innovative cardiac device to treat atrial fibrillation by surgery.  
•Worked in a team in creative thinking on the idea.  
•Composed the business model, exit strategy, and financials sections of the business plan.
- 02/11-05/11 **Dynamic modeling of PI3K/Akt signaling induced by mu opioid receptor**  
•Obtained protein immunoblots data from my independent laboratory project conducted on human cancer cells, and applied it for the configuration of modeling.  
•Designed and graphed a dynamic Model in Mathematica, simulating activity status and expression of multiple messenger molecules involved in this signaling process.
- 09/09-01/10 **Data mining of microarray database in search of biomarker candidates**  
•Designed a Python program used to search GSO database for cancer biomarkers, potentially leading to metastasis of breast cancer, prostate cancer, and lung cancer.  
•Presented the primary outcome in annual Binghamton University biology department seminar.