

# 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
- Microsoft Office
- Genetic Biology
- Cellular Biology
- Bioinformatics
- Animal Experiments
- Protein Biochemistry
- Photoshop
- Agile Management

## 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.