


## **Jinzhū Yu (Cookie)**

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### **Executive Summary**

I am a PhD candidate in Biomedical Engineering. I specialize in development of diagnostic assays. Within the 4.5 years of my graduate study, I led the development of 2 assays to publication and completed proof of principle of 2 more assays. Having worked in two laboratories with different research foci for my dissertation broadened my view of bioscience research at large to see the unifying values across fields. My interactions with physicians, scientists, and professionals in technology transfer gave me a glimpse of the way many professions come together to solve socially important problems. These experiences prompted me to complement my research training with extensive professional development available to me on campus, including science communication with the public at the Alan Alda Center, commercialization of research result at the Center of Biotechnology, knowledge of many FDA guidelines important to the pharma/biotech industry, the clinical trial literature review offered by the medical school, and certifications in good research and clinical practices through the CITI training program.

### **Education**

2012-Present	Doctor of Philosophy	Stony Brook University Biomedical Engineering Graduate Program Dissertation: Enabling Large Field of View Assays for Massively Parallel Single Cell Functional Analysis
2008-2012	Bachelor of Engineering <i>magna cum laude</i>	Stony Brook University Biomedical Engineering

### **Positions and Employment**

2015-present	PhD Candidate	Laboratory of Microfluidics for Quantitative and Genomic Biology Research advisor: Eric Brouzes Ph.D.
2012-2015	Student Researcher	Laboratory of Cardiac Optogenetics and Optical Imaging Research advisor: Emilia Entcheva Ph.D.
2012-2013	Teaching Assistant	Introduction to Biomedical Engineering Instructor: Richard Clark Ph.D.  Bioelectricity Instructor: Emilia Entcheva Ph.D.

## **Awards and Honors**

2016	AAAS Excellence in Science
2013	Amgen Travel Award
2012	SUNY Provost Award
2012	Undergraduate Recognition Award in Academic Excellence
2011	Weinig Undergraduate Scholarship from The Weinig Foundation Scholarship
2010	Cascade Water Service Scholarship
2008-2012	Presidential Scholarship Stony Brook University
2008-2012	Academic Program Scholarship Stony Brook University
2008-2012	University Scholar 2008-2012

## **Leadership Roles**

2016-2017      Senator                      Graduate Student Organization of Stony Brook University  
During my senatorship, I advocated for student services and needs to the university administration, and obtained funding to host events that support students' well-being and professional networking.

2010-2011      Public Relation              Biomedical Engineering Society at Stony Brook University  
In my PR role, I strengthened inter-department relation within the college of engineering by organizing co-hosted events.

## **Professional Memberships**

2016- Present	AAAS member awarded by Program for Excellence in Science
2015-2016	SPIE Student membership
2013-2014	AHA Student membership

## **Publications**

### *Peer Reviewed Research Articles*

- **Yu J**, Chen K, Lucero RV, Ambrosi CM, Entcheva E. Cardiac Optogenetics: Enhancement by All-trans-Retinal. *Sci Rep.* 2015;5.
- Klimas A, Ambrosi CM, **Yu J**, Williams JC, Bien H, Entcheva E. OptoDyCE as an automated system for high-throughput all-optical dynamic cardiac electrophysiology. *Nat Commun.* 2016;7:11542.

### *Manuscript in Preparation*

- Quantification of Phosphorylated CrkL in single CML cells in sealed microwell array
- OptoGap: an optogenetically-enabled assay of cellular coupling in multicellular cardiac tissue

### *Book Chapters and Reviews*

- **Yu J**, Entcheva E. Inscribing Optical Excitability to Non-Excitable Cardiac Cells: Viral Delivery of Optogenetic Tools in Primary Cardiac Fibroblasts. *Optogenetics: Methods and Protocols.* 2016:303-317.

- Ambrosi CM, Klimas A, **Yu J**, Entcheva E. Cardiac applications of optogenetics. *Prog Biophys Mol Biol.* 2014(0).

### *Conference Presentations*

- Heart Rhythm Society 2015  
**Yu J**, Chen K, Lucero RV, Ambrosi CM, Entcheva E. Cardiac Optogenetics: Enhancement by All-Trans-Retinal
- American Heart Association 2013  
**Yu J**, Boyle PM, Ambrosi CM, Trayanova NA, Entcheva E. High-throughput contactless optogenetic assay for cellular coupling: Illustration by ChR2-light-sensitized cardiac fibroblasts and cardiomyocytes. *Circulation.* 2013;128(22 Supplement):A14943.

## **Professional Development**

### *Specializations*

- Intellectual Property

In collaboration with the Center of Biotechnology at Stony Brook University, I have done extensive patent and prior art searches for a technology funded by NIH Research Evaluation and Commercialization Hub. My work also included market research and competitive analysis for this technology.

- Bioscience Consulting

At the time of this application, I am taking the course Fundamentals in Bioscience Industry in which I am part of a team working on the commercialization strategy for a cancer therapeutic biologics developed in a research lab at Stony Brook University. I am responsible for delineating the commercialization pathway and financial analysis to estimate funding milestones, costs, and returns to investors.

- Financial Analysis

At the time of this application, I am preparing to take the chartered financial analyst level I exam.

- Science Communications

As a strong believer of accurate dissemination of scientific information to the public, I have treated communication skills just as crucial as building technical expertise. I sharpened my communication skills at the Alan Alda Science Communication center, where I got trained to speak to and write for non-scientific audience with a focus on using media and social network.

### *Certifications*

2016-2019	Good Clinical Practice
2015-2019	Responsible Conduct of Research
2016-2019	Conflict of Interest
2016	HIPPA training at Stony Brook University

2016-2019	Human Research
2012-2015	Working with IACUC
2012-2015	Working with rodent animals