ANN OUYANG
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Education

Massachusetts Institute of Technology Cambridge, MA
Candidate for Bachelor of Science in Chemical-Biological Engineering, June 2011
Current GPA: 5.0
Honors/Awards: Recipient of Robert C. Bryd Scholarship, member of Tau Beta Pi Engineering Honor Society.
Relevant Coursework: Principles of Chemical Science, Differential Equations, Introduction to Computer Science, Organic Chemistry, Introduction to Chemical Engineering, Thermodynamics and Kinetics, Genetics, Thermodynamics II, Fluid Dynamics, General Biochemistry, Intro to Experimental Biology and Communication, Cell Biology (in progress), Transport Processes (in progress), Biomaterials: Tissue Interactions (in progress)

Skills

Computer: Python, Matlab, some Java
Laboratory: Proficient in mammalian cell culture, bacterial assays, gel electrophoresis, PCR, DNA isolation, and other microbiology techniques. Some experience with *C. elegans*.
Languages: Bilingual (English and Mandarin Chinese).

Research Experience

Hamel Lab, MIT Cambridge, MA
UROP (Undergraduate Research Opportunities Program) student *2009*
- Studied cellulosic bioethanol production from fermentation of sugarcane bagasse.
- Designed assays to measure ethanol production and growth curves of two yeast strains.

Voldman Lab, MIT Cambridge, MA
UROP (Undergraduate Research Opportunities Program) student *2009*
- Studied the sensitivity and viability of the Bio Flip Chip (BFC), a microfabricated silicone device developed by the Voldman Lab, and optimized protocols for preparing and using the device.
- Analyzed the effects of cell-cell contact and autocrine signaling on the growth of endothelial cells plated with the device.

Rich Lab, MIT Cambridge, MA
UROP (Undergraduate Research Opportunities Program) student *2008-2009*
- Analyzed z-DNA binding domains in the sea urchin ADAR-1 gene using molecular biology techniques such as PCR, cloning, and bacterial transformation.

CombinatoRx, Inc. Cambridge, MA
Discovery Biology Intern *2008*
- Developed high-throughput screening techniques to test an extensive compound library for substances that inhibit *E. coli, K. Pneumoniae, P. aeruginosa*, and *P. acnes.*
- Cultured cancer cells for a separate project.

Lauffenburger Research Group, MIT Cambridge, MA
UROP student *2008*
- Analyzed glioblastoma cell migration with 3D-imaging software.
- Prepared movies and identified cell movement patterns.

Research Science Institute Cambridge, MA
Research intern *2006*
- Researched gene and metabolic networks in yeast.
- Applied and improved techniques for mathematical analysis of the networks.

Leadership

MIT Chemical Engineering Department Cambridge, MA
Associate Advisor, Tutor *2009-2010*
MIT Freshmen Advising Cambridge, MA
Associate Advisor *2008-2009*
MIT Dormitory Council Cambridge, MA
Next House REX (Residence Exploration) co-Chair *2008*
Research Science Institute Cambridge, MA
Counselor *2008*
MIT Figure Skating Club Cambridge, MA
President (2009-2010) Treasurer (2008-2009) *2007-Present*