Grace Yao

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EDUCATION:

Massachusetts Institute of Technology, Cambridge, MA   **Sept 2007-Present**
S.B. in Biology, Minor in French (June 2011)
M.Eng in Biomedical Engineering (June 2012)

Plano Senior High School, Plano, TX   **Aug 2005-May 2007**
Class Rank: 3/1277, GPA: 4.53/4.0, SAT: 2400

EXPERIENCE:

Katharina Ribbeck Laboratory (MIT), Cambridge, MA   **Feb 2011-Present**
Research Assistant
Conducting two research projects: 1) investigating permeability of native cervical mucus among patients in pre-term labor at Tufts Medical Center using microarrays and fluorescence microscopy; 2) microencapsulating cells with mucin to immunoisolate them for cell therapy applications using tissue culture, layer-by-layer technology, cell sorting, and confocal microscopy

Genomic Vision, Paris, France   **May 2010-Aug 2010**
Diagnostics Researcher
Tested applications in genome assembly using a novel molecular combing technique to visualize single molecules of yeast DNA; designed primers to make bar codes of 3 common yeast genomes for a fast and reliable means to evaluate food microbiomes

MIT D-Lab, Cambridge, MA   **Feb 2010-May 2010**
Performed field work in Nicaragua, completed two projects for the developing world: 1) an Arduino-powered contraction monitor for maternity wards of under-equipped clinics; 2) hand-tricycle attachments on a mobile post office for people with disabilities in India

Experimental Microbial Genetics (MIT), Cambridge, MA   **Sept 2009-Dec 2009**
Completed an individual research project on *Pseudomonas aeruginosa* clinical isolates taken from the sputum of cystic fibrosis patients, used genetic and bacteriological techniques to evaluate the virulence of phenazines in the lung environment

Philippe Benaroch Laboratory (Institut Curie, Inserm U932), Paris, France   **May 2009-Aug 2009**
Studied intracellular trafficking of TLR3 in cells using tagged protein, immuno-staining with Western Blots, cell sorting, and fluorescent histology microscopes, constructed plasmid

Jonathan King Laboratory (MIT), Cambridge, MA   **Jan 2008-Sept 2008**
Learned microbiological techniques to isolate and amplify novel bacteriophages from the Charles River and the Deer Island sewage treatment plant for gene sequencing, performed genetic annotations

University of Texas at Dallas NanoTech Institute, Dallas, TX   **May 2007-Aug 2007**
Modeled proteins and carbon nanotubes using the VMD computer program and the Protein DataBank

OTHER WORK:

ReachOut: MIT Public Service Center, Cambridge, MA   **Sept 2007-May 2011**
Taught a student to develop critical reading and writing skills at the Cambridge Community Center

Highlights for High School: Istituto Superiore E. Fermi, Mantua, Italy   **Jan 2011**
Wrote lesson plans for high school biology and chemistry and lectured full time

ACTIVITIES:

MIT Undergraduate Association   **Sept 2007-May 2009**
Enacted measures to increase transparency and communication in dorms and student government

2011 MIT Ring Committee   **May 2008-Present**
Helped design the 2011 class ring, maintained a website, and organized premiere and delivery events

OTHER SKILLS:

Computer: Java, Python, MATLAB programming and Microsoft Office
Bioinformatic tools: BLAST, Glimmer, GeneMark, Artemis, etc., fluorescent and confocal microscopy
Language: familiar with French, fluent in spoken Mandarin Chinese