

ALBERT J. HWA

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EDUCATION **Massachusetts Institute of Technology** Cambridge, MA Sept. 2000-present
Doctor of Philosophy in Bioengineering
Thesis Title: In Vitro Liver Angiogenesis in 3D Hepatocyte-Endothelial Co-cultures

Cornell University Ithaca, NY Sept. 1996-May 2000
Bachelor of Science in Chemical Engineering, *Magna Cum Laude*

WORK **Research Assistant** Jan. 1999-May 1999,
EXPERIENCE *Professor W. Mark Saltzman, Cornell University, Ithaca, NY* Aug. 1999-May 2000

- Devise effective techniques for isolating desired proteins.
- Develop and perfect experimental setup for observing biological macromolecule movements.
- Utilize high-resolution microscope and computer imaging to identify gene transfection pathway in cells.
- Collaborate on developing experimental vaccination processes through controlled release of vaccinagens.
- Investigate optimal conditions for gene expression of desired protein.

Co-Operative Engineer May 1999-Aug. 1999
Air Products & Chemicals Inc., Allentown, PA

- Developed mechanism of gas chromatography for better analysis of product streams.
- Investigated properties of various catalysts to best catalyze desired organic synthesis.
- Experimented with different feed compositions and reactor control settings in search for the best process conditions.
- Served on the Activity Committee for summer interns and organized various group events.

Co-Operative Engineer Aug. 1998-Dec. 1998
Air Products & Chemicals Inc., Allentown, PA

- Analyzed multiple wastewater characteristics of a chemical plant to determine the level of pollutant emitted into the local environment.
- Calculated and analyzed cost and energy advantages of new equipment in preparation for contract negotiations.
- Monitored emission levels of volatile organic compounds from plant production systems and coordinated plant repairs.
- Compiled and consolidated guidelines for the Leak Detection and Repair program, and expanded the guideline to include emission rate estimation methodology. This document was nationally distributed throughout the company's chemical division.