

Jennifer I Lai

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Education

THAYER SCHOOL OF ENGINEERING, DARTMOUTH COLLEGE, HANOVER, NH Biological Engineering PhD Candidate	2015 -
OXFORD UNIVERSITY, OXFORD, UK Rhodes Scholar, University College, Faculty of Music MSt in Music (Piano Performance)	2012 - 2014
MASSACHUSETTS INSTITUTE OF TECHNOLOGY, CAMBRIDGE, MA SB in Biological Engineering; SB in Music Cumulative GPA: 5.0/5.0	2007 - 2011

Research Experience

THAYER SCHOOL OF ENGINEERING, DARTMOUTH COLLEGE, HANOVER, NH Advisor: Margaret Ackerman Computational structure-based vaccine design	2015 -
THAYER SCHOOL OF ENGINEERING, DARTMOUTH COLLEGE, HANOVER, NH Advisor: Margaret Ackerman Antibody subclass profiling of elite controllers of HIV	2012 - 2013
DEPARTMENT OF BIOLOGICAL ENGINEERING, MIT, CAMBRIDGE, MA Advisors: Ernest Frankel and Shao-Shan Carol Huang Transcriptional regulation in glioblastoma cell lines after treatment with small molecule inhibitors	2010
FU SCHOOL OF ENGINEERING, COLUMBIA UNIVERSITY, NEW YORK, NY Advisors: Lance Kam and Keyue Shen Geometry of the immunological synapse in naive CD4+ T-cell differentiation	2009
DEPARTMENT OF BIOLOGICAL ENGINEERING, MIT, CAMBRIDGE, MA Advisors: K Dane Wittrup and Margaret Ackerman <i>In vitro</i> prediction of protein immunogenicity	2007 - 2009

Publications

1. Brown EP, Normandin E, Osei-Owusu NY, Mahan AE, Chan YN, **Lai JI**, Vaccari M, Rao M, Franchini G, Alter G, Ackerman ME. Microscale purification of antigen-specific antibodies. *Journal of Immunological Methods*. 2015 Oct; 425:27-36.
2. Van der Post RS, et al. Hereditary diffuse gastric cancer: updated clinical guidelines with an emphasis on germline CDH1 mutation carriers. *Journal of Medical Genetics*. 2015 Jun; 52(6):361-74.
3. Black MD, Kaneshiro R, **Lai JI**, Shimizu DM. Hereditary Diffuse Gastric Cancer Associated with E-cadherin Germline mutation: A Case Report. *Hawaii Journal of Medicine & Public Health*. 2014 Jul; 73(7): 204-207.
4. **Lai JI**, Licht AF, Dugast A, Suscovich T, Choi I, Bailey-Kellog C, Alter G, Ackerman, ME. Divergent Antibody Subclass and Specificity Profiles but not Protective HLA Alleles are Associated with Variable Antibody Effector Function Among HIV-1 Controllers. *J Virol*. 2014 Mar; 88(5): 2799-809.
5. Lamppa JW, Ackerman ME, **Lai JI**, Scanlon TC, Griswold KE. Genetically engineered alginate lyase-PEG conjugates exhibit enhanced catalytic function and reduced immunoreactivity. *PLOS ONE*. 2011 Feb 14; 6(2):e17042.
6. Ackerman ME, **Lai JI**, Pastan I, Wittrup KD. Exploiting bias in a non-immune library to predict antigenicity. *Protein Eng Des Sel*. 2011 Nov; 24(11):845-53.

Awards and Honors

Amgen Scholar (2009)
Burchard Scholar (2010)
Tau Beta Pi (2010)
Rhodes Scholar (2011)

Phi Beta Kappa (2011)
George Austin Colligan Fellow (2015)
Albert Cass Travel Fellowship (2016)

Teaching and Advising Experience

OFFICE OF RESIDENTIAL LIFE, DARTMOUTH COLLEGE, HANOVER, NH **2016 -**
Mentor and tutor undergraduates as a graduate resident fellow.

THAYER SCHOOL OF ENGINEERING, DARTMOUTH COLLEGE, HANOVER, NH **2015 -**
Train engineering undergraduate students in molecular biology lab techniques. Supervise undergraduate thesis work.

DEPARTMENT OF BIOLOGICAL ENGINEERING, MIT, CAMBRIDGE, MA **2009 - 2011**
Undergraduate Associate Advisor, Tutor and Grader
Assisted faculty in advising junior undergraduate students on course selection and career goals. Graded assignments and held problem solving tutorial sessions for "Thermodynamics of Biomolecular Systems".

Leadership Experience

RHODES SCIENCE GROUP, OXFORD, UK **2012 - 2014**
Founder, Convener
Led an interdisciplinary discussion group giving scholars the opportunity to discuss issues in science and society.

NO STOMACH FOR CANCER, INC., MADISON , WI **2012 - 2014**
Board Member
Represented NSFC at the International Gastric Cancer Linkage Consortium's second meeting (Nijmegen, Netherlands).
Administered NSFC's first peer-review scientific grant process and served as liaison to the scientific advisory board.

TAU BETA PI MASS BETA CHAPTER, MIT, CAMBRIDGE, MA **2011**
Career Fair Chair
Coordinated logistics for the TBP career fair. Recruited 75 companies with ~1000 MIT students in attendance.