

XIAOSAI YAO

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77 Massachusetts Ave
Cambridge, MA 02139 USA

Education

- 2008-present **Massachusetts Institute of Technology** Cambridge, MA
PhD student in Biological Engineering
- 2004-2007 **Johns Hopkins University** Baltimore, MD
Bachelor of Science in Biomedical Engineering (Chemical Engineering Concentration)

Research Experience

- 2008-present **Massachusetts Institute of Technology** Cambridge, MA
Advisor: Prof. K. Dane Wittrup
- Characterization of circulating tumor cells
 - Tumor vascular targeting using protein conjugated nanoparticles
- 2007-2008 **The Institute of Bioengineering and Nanotechnology** Singapore
Advisor: Dr. Andrew Wan
- Encapsulation of pancreatic islets with polyelectrolyte fibers for immunoisolation
 - Heterospheroid as 3D tumor model
- 2005-2007 **The Sidney Kimmel Comprehensive Cancer Center at Johns Hopkins** Baltimore
Advisor: Dr. Elizabeth Jaffee
- Characterization of Foxp3⁺ CD8⁺ tumor infiltrating lymphocytes in FVB and neu-N transgenic mouse models. Functional studies included surface staining, in vitro suppression, in vitro expansion and adoptive transfer.
- 2006 **The Weatherall Institute of Molecular Medicine** Oxford University
Advisor: Dr. Vincenzo Cerundolo
- Cloning of CD1e from NKT cells
 - Cloning of gamma-delta TCR
- 2004-2006 **The Institute of Molecular Cell Biology** Singapore
Advisor: Prof. Wanjin Hong
- siRNA knockdown of lysosomal/endosomal protein by retrovirus
 - EGFR biotinylation internalization/degradation assay
 - mRNA expression level analysis of Rab proteins by real-time PCR in cancer cell lines.

Publications/Conferences

- Xiaosai Yao, Andrew Wan, Karthikeyan Narayanan, Jackie Ying. “Fibrous Scaffold for encapsulation of Pancreatic Islets”. Oral Presentation. Tissue Engineering and Regenerative Medicine International Society Meeting (TERMIS) June 22-26, 2008, Porto, Portugal.
- Dung Le, Brian Ladle, Xiaosai Yao, Todd Armstrong, and Elizabeth M. Jaffee. “Characterization of a Novel CD8+Foxp3+ T Cell Population Found in Regressing Murine Tumors”. Poster 216, Keystone Symposia on Molecular and Cellular Biology. March 28 - April 2, 2007. The Potent New Anti-Tumor Immunotherapies. Banff, Alberta
- Design Team 9. “A Novel Approach to Intraocular Drug Delivery”. BME Design Team Day. 2006

Honors/Awards

2007 Richard J. Johns Award for excellence in Biomedical Engineering JHU
2007 Tau Beta Pi, Engineering Honor Society
2006 The Vredenburg Scholarship
2004 – present The National Science Scholarship (BS-PhD) Singapore