

# HARINI NATARAJAN

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87 Butternut Road, White River Junction, VT, 05001

## EDUCATION

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<b>Dartmouth College</b> , Hanover, NH PhD student	2016-present
<b>Wellesley College</b> , Wellesley, MA B.A. in Biological Chemistry	2011-2015
<b>Hanover High School</b> , Hanover, NH	2007-2011

## WORK EXPERIENCE

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<b>Thayer School of Engineering, Dartmouth College</b> <i>Research assistant (PI: Margaret Ackerman)</i> <ul style="list-style-type: none"><li>Using Fc array assay to characterize the immune response to vaccine trials</li><li>Transient expression of proteins in mammalian cells</li><li>Development and implementation of documentation in a GCLP facility</li></ul>	2015-2016
<b>David H. Koch Institute for Integrative Cancer Research</b> <i>UROF (PI: Robert Langer)</i> <ul style="list-style-type: none"><li>Development of sustained-release drug delivery systems</li></ul>	Fall 2014-2015
<b>Geisel School of Medicine, Dartmouth College</b> <i>Summer Intern (PI: James Moseley)</i> <ul style="list-style-type: none"><li>Examination of phosphorylation dynamics in <i>S. pombe</i></li></ul>	Summer 2014
<b>Biological Sciences Department, Wellesley College</b> <i>Undergraduate Researcher (PI: Drew Webb)</i> <ul style="list-style-type: none"><li>Development of antibody-conjugated gold nanoparticles to target pancreatic adenocarcinoma</li><li>Panning of peptide phage libraries to identify peptides that bind to cell surface targets on cancer cells</li></ul>	2013-2014
<b>Thayer School of Engineering, Dartmouth College</b> <i>Intern (PI: Tillman Gerngross)</i> <ul style="list-style-type: none"><li>Glycoengineering of bacteria: cloning of glycosyltransferases and epimerases</li><li>Development of antibody-conjugated iron oxide nanoparticles to treat Her2-positive breast cancer</li></ul>	2008-2013
<b>Neuroscience Department, Wellesley College</b> <i>Undergraduate Researcher (PI: Marc Tetel)</i> <ul style="list-style-type: none"><li>Cloning, expression, and purification of mouse estrogen receptor alpha</li></ul>	2011-2012
<b>Private Tutor</b> <ul style="list-style-type: none"><li>Tutor in ESL, French, Biology, and Chemistry at Wellesley College and Hanover High</li></ul>	

## LABORATORY SKILLS

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- Cloning, site-directed mutagenesis, and other basic molecular biology techniques
  - Protein production, purification, and characterization (SDS-PAGE, Western blot, etc.)
  - Protein modification, conjugation, and characterization (ELISA, amine estimation, PEG estimation, thiol estimation, endotoxin assays, UV-Vis spectroscopy)
  - Basic cell culture techniques
  - Transient transfection and protein production in HEK cells
  - Panning of phage libraries to identify peptide binding target
  - Tetrad analysis and manipulation of yeast genome (homologous recombination, site-directed gene insertion and deletion, marker swapping, counterselection)
  - Fluorescent tagging and imaging of proteins
  - Production and testing of polymeric drug delivery devices
  - Fc array assay using the Luminex platform
  - Protein purification using AKTA purification system (IMAC, SEC)
  - Mouse handling and treatment
  - Flow cytometry
  - Directed evolution through yeast display

## PRESENTATIONS

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### POSTERS:

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Natarajan H, Kett W, Webb A. "Assay Development for Optimization of Antibody-Conjugated Gold Nanoparticles." Wellesley College Summer Research Poster Session 2013, Wellesley, MA.

Natarajan H, Kett W, Webb A. "Development of a Gold Nanoparticle for the Treatment of Pancreatic Adenocarcinoma." National Collegiate Research Conference, January 2014, Harvard University, Cambridge, MA.

### **ORAL PRESENTATIONS:**

**Title:** Targeted Pancreatic Cancer Therapy with Antibody-conjugated Nanoparticles. Wellesley College, July 2013

### **RESEARCH AWARD**

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Roberta Day & Karl A Staley Fund for Cancer-related Research Award

June-August 2013