

# Rumya Raghavan

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## EDUCATION

### MIT

B.S. IN BIOENGINEERING, 2017

GPA: 4.9

## COURSEWORK

- Teaching Asst. for Fields, Forces and Flows
- Molecular, Cellular, Tissue Biomechanics
- Tissue Engineering and Biomaterials
- Immunoengineering in Cancer
- Principles of Genetic Engineering
- Immunology at Harvard Medical School

## LEADERSHIP

- BioEngineering Undergrad Board President
- Maseeh Hall MedLink
- Associate Advisor
- American Association for Cancer Research (AACR) Member
- Camp Kesem Counselor and Executive Board Member

Camp for kids affected by a parent's cancer

- Team Lead on Developing a Negotiation and Leadership Concentration

## SKILLS

### PROGRAMMING, DATA ANALYSIS

Java • Matlab • Python • ANOVA • Matlab  
Image Processing • FlowJo • GraphPad  
Prism • Snapgene

### IN-VITRO LAB WORK

Fluorescence Microscopy • Migration  
Assays • RNA Isolation • qPCR • Plasmid  
Purification • Cloning

### IMMUNOLOGY ASSAYS

ELISA Assays • Western Blots •  
Immunohistochemistry

### CELL SORTING

FACS • Magnet Activated Cell Sorting

### CELL CULTURE

Tissue Culture • Transfections • Cell  
Proliferation Assays • Bacterial Culture  
• Media Creation and Maintenance •  
Lentiviral vector synthesis

### IN-VIVO LAB WORK

Subcutaneous, Intraperitoneal Injections  
• Dissections and Mouse Organ  
Extractions • Retro-orbital

## EXPERIENCE

### MASSACHUSETTS GENERAL HOSPITAL | SURGICAL ONCOLOGY RESEARCHER

Jun 2017 - Present | Boston, MA

- Investigated Peripheral CD8+ T-cell Monitoring for the Prediction of Patient Response to Checkpoint Blockade Therapy
- To present at Keystone Symposia in March 2018

### KOCH INSTITUTE FOR INTEGRATIVE CANCER RESEARCH UNDERGRADUATE RESEARCHER IN THE IRVINE LAB

Oct 2013 - Jun 2015, Jan 2017-Jul 2017 | Cambridge, MA

- Improving Adoptive T-cell therapy via Nanogel Backpacking with Protein Adjuvant Cargo
- Functionalizing Nanoparticles and Amph-Vaccines for use in Targeted Cancer Therapy and Producing a More Robust Immune Response
- Summary published in MIT Undergraduate Research Journal, Volume 27, Spring 2014, 27-28

### DANA FARBER CANCER INSTITUTE RESEARCHER IN THE WUCHERPFENNIG LAB

May 2016 - December 2016 | Boston, MA

- Developed a MICB ferritin nanoparticle vaccine to treat cancer and prevent immune system evasion as a Harvard Immunology Scholar

### BECKMAN INSTITUTE FOR ADVANCED SCIENCE RESEARCHER IN THE BHARGAVA LAB

May 2015 - Aug 2015 | Urbana-Champaign, IL

- Presented "Modifying Gold Nanoparticle Surfaces to Improve Biocompatibility and Enhance Localization to the Nucleus of MCF10a Cells" at BMES Conference 2015

### SINGAPORE-MIT ALLIANCE IN RESEARCH TECHNOLOGY RESEARCH INTERN IN THE SO LAB

Jun 2014 - August 2014 | Singapore, Singapore

- Generated a diagnostic model for pathogenesis of Non-Alcoholic Fatty Liver Disease into Hepatocellular Carcinoma

### WEIZMANN INSTITUTE OF SCIENCE SUMMER RESEARCH INTERN

May 2013 - August 2013 | Rehovot, Israel

- Received scholarship from the Dr. Bessie Lawrence Summer Program to work under Dr. Shiri Raphaeli
- Investigated a Novel Interaction between Two Signaling Proteins and its Involvement in Cancer
- Presented "The Role of FOXO1 Downstream to the MEK/AKT Interaction In Cancer Migration and Proliferation" in Sept 2013

### UNIVERSITY OF FLORIDA | SUMMER RESEARCH INTERN

May 2012 - August 2012 | Gainesville, Florida

- Coauthor of "Periodontopathogen infection-induced changes in Aortic Gene Expression in ApoE null Mice" paper (International Association of Dental Research Conference Journal) and presented at AAAS Conference 2013