

EDUCATION

Johns Hopkins University School of Medicine Baltimore, MD Doctor of Medicine Doctor of Philosophy in Bioengineering	08/2016 – Present
University of California, San Francisco San Francisco, CA University of California, Berkeley Berkeley, CA Master of Translational Medicine	08/2015 – 06/2016
University of California, San Diego La Jolla, CA Summa Cum Laude, Phi Beta Kappa, Tau Beta Pi Bioengineering: Biotechnology B.S. and General Biology, B.S.	09/2011 – 06/2015

PEER-REVIEWED PUBLICATIONS

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- [Continuous Wave Ultrasonic Doppler Tonometry](#)
 - Akinin A, **Yang J**, Williams A, Lee A, Pourhoseini P, Fronek A. IEEE Biomedical Circuits and Systems Conference (BioCAS). Lausanne: IEEE; 2014. p. 328–31.
 - [Alternative activation mechanisms of Protein Kinase B trigger distinct downstream signaling responses](#)
 - Balzano D, Fawal M-A, Velazquez JV., Santiveri CM, **Yang J**, Pastor J, Campos-Olivas R, Djouder N, Lietha D. J Biol Chem 2015;(4):jbc.M115.651570.
 - [Self-antigens and Rejection: A Proteomic Analysis](#)
 - Yang JYC**, Sigdel TK, Sarwal MM. Curr Opin Organ Transplant 2016;21(4):362–7.
 - [Transplant Genetics and Genomics](#)
 - Yang JYC**, Sarwal MM. **Nature Reviews Genetics** 2017;18(5):309–26
 - [Retrospective Evaluation of the Efficacy and Safety of Belatacept with Thymoglobulin Induction and Maintenance Everolimus: A Single Center Clinical Experience](#)
 - Wojciechowski D, Chandran S, **Yang J**, Sarwal M, Vincenti F. Clin Transplant. 2017.
 - [Polyclonal Regulatory T cell Therapy for Control of Inflammation in Kidney Transplants](#)
 - Chandran S, Tang Q, Sarwal M, Laszik ZG, Putnam AL, Leung J, Nguyen V, Lee K, Sigdel T, Tavares EC, **Yang J**, Hellerstein M, Fitch M, Bluestone J, Vincenti F. Am J Transplant. 2017.
 - The Common Rejection Module in chronic rejection post lung transplantation
 - Sacreas A, **Yang JYC**, Vanaudenaerde BM, Sigdel TK, Liberto J, Verleden GM, Vos R, Verleden SE, Sarwal MM. *Under review.*

PATENTS / INTELLECTUAL PROPERTY

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- A Novel Immunoprobe-Based Method to Assess Organ Injury Status Through a Biofluid-Based Cell-Free DNA (cfDNA) Assay
 - Sarwal MM, Sigdel TK, **Yang JY**. Application No. PCT/US2017/047372.
 - Isothermal Superhelicase-dependent Amplification of Nucleic Acids
 - Ha T, **Yang J**. JHU Invention Disclosure No. C14980

GRANTS

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- [IDT Synthetic Biology Grant Program 2017](#)

Role: Principal Investigator	01/2018 – 01/2020
Purpose: Development of enhanced superhelicases through synthetic biology approaches	\$14,900

BIOTECH EXPERIENCE

Helispot, Inc., www.helispot.bio

06/2017 – Present

Role: Chief Executive Officer

- Developed an isothermal assay for the detection of nucleic acids based on helicase technology.
- Won a grant to develop superhelicases that function directly in blood and urine from IDT.

KIT Bio, Inc., www.kit.bio

12/2015 – Present

Role: Startup Co-founder

- Developed a noninvasive assay to determine risk of kidney injury more sensitively than creatinine or proteinuria.
- Developing a urine dipstick to allow point-of-care diagnosis of kidney injury.
- Winner of multiple startup and entrepreneurial competitions (Full list in Awards section).

PEER-REVIEWED ABSTRACTS

1. [Treatment of Innate Immune Arthritis With a Toll-Like Receptor 7 Agonist Requires Type I Interferon](#)
 - Hayashi T, Crain B, Yao MS, Cottam HB, **Yang J**, Carson DA, Corr M. *Arthritis Rheum* 2013;65:733.
2. [A Non-invasive Urinary Common Rejection Module \(uCRM\) Gene Expression Score Quantifies and Differentiates Kidney Transplant Injury](#)
 - Sigdel TK, **Yang JY**, Bestard O, Hsieh S-C, Roedder S, Damm I, Liberto J, Nandoe S, Sarwal MM. *Am J Transplant.* 2017;17 (suppl 3).
3. [A Novel Belatacept Regimen to Optimize Efficacy and Safety](#)
 - Wojciechowski D, Chandran S, Sarwal M, **Yang J**, Vincenti F. *Am J Transplant.* 2017;17 (suppl 3).
4. [Novel biomarkers for segregating lung transplant rejection phenotypes](#)
 - **Yang JY**, Vanaudenaerde B, Sigdel TK, Liberto J, Verleden S, Sarwal MM. *Am J Transplant.* 2017;17 (suppl 3).
5. [Gene expression markers to segregate lung transplant rejection phenotypes](#)
 - Verleden S, **Yang JY**, Sigdel TK, Liberto J, Verleden G, Vos R, Sigdel TK, Vanaudenaerde B, Sarwal MM. *Eur. Respir. J.* 2017;50 (suppl 61).
6. A novel urinary Kidney Injury Test differentiates nephrolithiasis from immune-mediated renal disease
 - Chi T, Sigdel T, **Yang JY**, Watson D, Tzou D, Reliford-Titus S, Sarwal MM. *J Urol.* 2018. *Under review.*

MEDIA MENTIONS

1. [University City High School Student Joshua Yang Wins 8th Annual AMN/HCC Scholarship](#)
 - PRNewswire (2011)
2. [Top San Diego students honored at SeaWorld](#)
 - The San Diego Union-Tribune (2011)
3. [Calit2 Class of 2012: Undergraduate Scholars Begin Their Summer of Research](#)
 - Jacobs School of Engineering News (2012)
4. [UC San Diego Undergraduates Awarded National Goldwater Scholarships](#)
 - UCSD News Center (2014)
5. [Engaging the Next Generation of Leaders: Graduate Students in Sarwal Lab to Attend Clinton Global Initiative University](#)
 - UCSF Surgery News (2016)
6. [Grad Slam brings TED style to students' research projects](#)
 - Berkeley News (2016)
7. [Improving the odds for kidney transplant success](#)
 - Berkeley Engineer Magazine (2016)
8. [MedHacks 2016 winners built an app to get emergency responders to the right place](#)
 - Technically (2016)
9. [Student Spotlight: Medical Student and Entrepreneur: One and the Same](#)
 - Johns Hopkins University Alumni and Friends Newsletter (2017)
10. [Humanitarian diagnostics startup Helispot takes home first-ever IDT Synthetic Biology Grant Award](#)
 - SynBioBeta (2017)

HONORS AND AWARDS

2018

- [Lemelson-MIT Student Prize "Cure it!" 2018 Finalist](#)

2017

- Forbes Under 30 Scholar 2017
- [Thermo Fisher Scientific Antibody Scholarship 2017 Award Winner](#)
- Tylenol Future Care Scholarship 2017 Semi-Finalist
- American Transplant Congress (ATC) 2017 – Best in Congress Poster
- [American Society of Nephrology \(ASN\) TREKS Kidney Scholar](#)

2016

- 1st Place: [MLH 2017 JHU MedHacks 2.0 Hackathon](#) (Best Use of Data for Medicine / Wolfram's Best Tech Award)
- [Johns Hopkins University Daniels Scholar](#)
- [American Society of Nephrology \(ASN\) Kidney STARS 2016 Award](#)
- 1st Place: [ASAIO 5th Annual Medical Device Entrepreneur's Forum](#) (KIT Bio, Inc.)
- 1st Place: [17th Annual UC/BIC Systemwide Bioengineering Symposium Mentored Showcase / Shark Tank](#) (KIT Bio, Inc.)
- [American Transplant Congress \(ATC\) 2016 Resident/Student Award](#)
- [Master of Translational Medicine Student Travel Award](#)
- [Bay Area Global Health Innovation Challenge 2016 Top 20 Innovation](#) (KIT Bio, Inc.)
- [UC Berkeley Grad Slam 2016 Semi-Finalist](#)
- [Clinton Global Initiative University \(CGI U\) 2016 Attendee](#) (KIT Bio, Inc.)

2015

- [OneStart Americas 2016 Startup Accelerator Semi-Finalist](#) (KIT Bio, Inc.)
- [Berkeley-Haas Healthcare Conference Innovation in Diabetes Design Challenge Winner](#)
- [Berkeley-Haas Hack2Health Finalist](#)
- Student Speaker for the UCSD Bioengineering Senior Graduation
- [Student Speaker for the UCSD Jacobs School of Engineering Ring Ceremony](#)
- [UCSD Bioengineering Department Outstanding Academic Achievement Award](#)
- [Phi Beta Kappa UCSD Scholarship](#)
- [Engineering World Health HealthHack Hackathon Finalist](#)
- [UCB/UCSF MTM Translational Medicine Scholarship](#)
- [International House of Berkeley C.H. Ramsden Scholarship](#)
- [UCSD Bioengineering Quiz Bowl Finalist](#)

2014

- [Tau Beta Pi](#) Engineering Honor Society
- [Phi Beta Kappa](#) Honor Society
- [Spanish National Cancer Research Centre Summer Training Fellowship](#)
- [Barry M. Goldwater Scholarship](#)
- [Asian Business Association of San Diego College Scholarship](#)
- [Cenzone Tech Inc. Scholarship](#)

2013

- [Amgen Scholars Program Scholar](#)
- [Asian Pacific Islander American Public Affairs Association Scholarship](#)

2012

- [Qualcomm Institute \(Calit2\) Summer Scholar](#)

2011

- Jacobs School Scholar
- [Regents Scholar](#)
- [Provost Honors](#)
- [Atsuhiko Tateuchi Memorial Scholarship](#)
- [Point Loma Credit Union Scholarship](#)
- [Elk's Lodge Most Valuable Student Association Finalist](#)
- [Cox Cares Scholars Finalist](#)
- [AXA Achievement Community Scholarship](#)
- [Discus Award Winner](#)
- [California Scholarship Federation Seymour Award](#)
- [Chinese Women's Association Scholarship](#)
- [Taiwanese American Foundation of San Diego Scholarship](#)
- [Samsung Scholarship](#)
- [Captain Godfrey Memorial Scholarship](#)
- [Asian Pacific Islanders for Professional and Community Development AT&T Scholarship](#)
- [Asian Business Association of San Diego Scholarship](#)
- [National Chemistry Olympiad Finalist](#)
- [Health Care Communicators of San Diego / AMN Healthcare Scholarship](#)
- [Dr. Glen A. Livesay Science Scholarship](#)
- [Kyoto Scholarship Semi-Finalist](#)

RESEARCH EXPERIENCE

Johns Hopkins University, Dept. of Bioengineering Advisor: Taekjip Ha, Ph.D. Optical conformational control of superhelicases	11/2016 - Present
UCSF School of Medicine, Division of Transplant Surgery Advisor: Minnie Sarwal, M.D. Ph.D. Development of a noninvasive kidney transplant failure diagnostic assay	09/2015 – Present
UCSD School of Medicine, Division of Rheumatology Advisor: Mary Patricia Corr, M.D. Roles of cfDNA in rheumatoid arthritis (RA)	12/2011 – 08/2015
UCSD Jacobs School of Engineering, Dept. of Bioengineering Advisor: Shyni Varghese, Ph.D. Development of a lung-on-a-chip microfluidic platform	09/2014 – 05/2015
Spanish National Cancer Research Centre (CNIO), Cell Signaling Group Advisor: Daniel Lietha, Ph.D. Protein-protein interactions between AKT and PDK1 kinases	06/2014 – 08/2014
UCSD Jacobs School of Engineering, Dept. of Bioengineering Advisor: Gert Cauwenberghs, Ph.D. Development of a combined ultrasound Doppler and applanation tonometer	01/2013 – 06/2014

PRESENTATIONS

Novel biomarkers for segregating lung transplant rejection phenotypes

- American Transplant Congress 2017

A non-invasive urinary Common Rejection Module (uCRM) gene expression score enables accurate discrimination of acute rejection in kidney transplant patients

- JHU Alumni Weekend Student Presentation 2017
- JHU Medical Student Research Symposium 2017
- JHU 12th Annual Bayview Research Symposium 2017

Kidney Injury Test – KIT Bio, Inc.

- 3rd Annual Rosenman Institute Symposium
- 62nd Annual ASAIO Conference’s 5th Annual Medical Device Entrepreneur’s Forum
- 17th Annual UC/BIC Systemwide Bioengineering Symposium Mentored Showcase / Shark Tank
- 7th Annual Caltech-UCSF Innovation Symposium

Cell-Free DNA is an Endogenous Mediator in Inflammatory Arthritis

- Qualcomm Institute Poster Session 2012
- 26th, 27th, 28th Annual UCSD Undergraduate Research Conference 2013/2014/2015
- UCSD Summer Undergraduate Research Conference 2013
- UCSD Biology Student Research Showcase 2013/2015

Development of an Ultrasound Doppler Tonometer

- 8th Annual UCSD Bioengineering Day 2014

Lung Mimetic-On-A-Chip Device for Gas Exchange

- 9th Annual UCSD Bioengineering Day 2015

CERTIFICATIONS

HeartSaver CPR/AED | American Heart Association, License CA02939 / MD01499

Naloxone Administration | Maryland Department of Health and Mental Hygiene, Certificate #3619

Certificate in Intercultural Leadership | Robertson Center for Intercultural Leadership at UC Berkeley, 2016

Alexa Student Developer Diploma | Amazon Alexa, August 31, 2017

LEADERSHIP EXPERIENCE

APAMSA National Diversity Committee Committee Member, Chair: Janki Patel.	11/2017 - Present
Gertrude Stein Society / Student LGBT Curriculum Team Co-Chair, Advisor: Neal Naff, M.D.	01/2017 - Present
Arthritis Foundation, Pacific Region Arthritis Walk Committee Member and Volunteer Coordinator, Advisor: Tina Lorimer, M.B.A.	09/2007 – 06/2015
UCSD Revelle College Council Director of Administration, Advisor: Liora Kian-Gutierrez	09/2011 – 06/2014

OTHER EXPERIENCE

UCSD Competitive Ballroom Dance and Salsa DanceSport Varsity Team Member, Advisor: Peter Edwards Salsa Team Member, Advisor: Tony Caligagan	09/2013 – 08/2015
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