

# Katherine G. Nabel

## EDUCATION

### Harvard Medical School

*MD-PhD Student*

**Boston, MA**

06/17-present

- NIH Medical Scientist Training Program (MSTP) Grant recipient
- Harvard-MIT Health Sciences and Technology (HST) Program
- Harvard Medical School PhD Program in Virology

### Stanford University

*Bachelor of Science with Honors*

**Stanford, CA**

09/10-06/14

- Major: Molecular, Cellular, and Developmental Biology
- Coursework included: Molecular Biology, Biochemistry, Immunology, Organic Chemistry, Genetics, Biomedical Research, Computer Science, and African Studies

### National Cathedral School

*High School Diploma*

**Washington, DC**

09/06-06/10

- Member of the Cum Laude Society, National Merit Commended, and A.P. Scholar with Honors
- Winner of School's Prize Day Science Award
- Tennis Team Captain and League Champion, President of the Science Club, Editor-in-Chief of School Newspaper

## RESEARCH EXPERIENCE

### Assembly Biosciences

*Research Associate I, Virology*

**San Francisco, CA**

04/15-04/17

*Lab Manager*

- Developing and performing high throughput cell-based assays with hepatocyte-derived cell lines to examine the effect of Hepatitis B Virus (HBV) Core Protein Allosteric Modulators (CpAMs) on viral load, HBsAg and HBeAg secretion, and cytotoxicity
- Engineering novel cell lines using molecular cloning and gene construction to assess the impact of drug candidates on HBV-specific biological markers HBsAg and HBeAg
- Using robotic systems to analyze and record data for high throughput screening
- Maintaining and culturing Hepatitis B Virus (HBV), Human Rhinovirus (HRV), and Herpes Simplex Virus I (HSV-1)
- Writing and updating Standard Operating Protocols (SOPs) and maintaining electronic laboratory notebook (ELNs)

### Stanford Cancer Institute

*Research Assistant, Laboratory of Professor Howard Chang, Program in Epithelial Biology and Cancer Biology*

**Stanford, CA**

09/11-06/14

- Honors thesis work investigated the role of the long non-coding RNA DINO on p53 function via post-translational modification
- Conducted molecular and cellular biology techniques, including Western Blot, qRT-PCR, gel electrophoresis, site-directed mutagenesis, RNA immunoprecipitation, and chromatin immunoprecipitation

### National Institutes of Health

*Research Assistant, Laboratory of Dr. Karen Berman, National Institute of Mental Health*

**Bethesda, MD**

06/08-08/10

- Developed MATLAB scripts to analyze rCBF in brain-derived neurotrophic factor Val<sup>66</sup>Met genotype patients
- Analysis of clinical imaging studies using MRI and PET scanners

## AWARDS & HONORS

### Lauren D. Weinstein Award, *Department of Biology*

**Stanford, CA**

- Recognized for dedication and excellence in mentorship, life science education, and student advising
- One of three undergraduate prizes awarded by the Biology Department

### Bing Honors College, *Department of Biology and Department of Human Biology*

**Stanford, CA**

- Selected as one of two Honors Biology students to participate in a fully funded, three-week program to actively engage in honors research, receive mentorship from faculty, and learn approaches to thesis writing

### Intel Science Talent Search, *Semi-Finalist*

**Washington, DC**

- Project entitled "*Alternative Genotypes of Brain-Derived Neurotrophic Factor (BDNF) Differentially Affect Cerebral Blood Flow: A Two-Year Study of Individual Variation in Human Brain Function, Learning, and Personality*"

### Intel International Science and Engineering Fair, *Finalist and Foundation Award Winner*

**Reno, NV**

- Received the Chetty Foundation Award for outstanding creativity, ingenuity, the potential to alleviate the human condition, and a substantive advance in the scientific field

**DC Mathematics, Science, and Technology Fair, First Place, Senior Biochemistry Division Winner** **Washington, DC**

- Awarded the Walter Reed Army Institute of Research Science and Engineering Apprentice Program Fellowship, Society of Manufacturing Engineers Second Prize, and The Office of Naval Research Naval Science Prize

**LEADERSHIP EXPERIENCE**

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**Stanford FACE AIDS**

**Stanford, CA**

*President*

09/12-06/14

- Mobilized college students to advocate for HIV/AIDS awareness and destigmatization
- Brought global health speakers to campus, including Dr. Paul Farmer and Nicholas Kristof
- Taught Bay Area middle school students about HIV/AIDS biology, anti-retroviral therapy, and socioeconomic and cultural barriers to treatment and prevention
- Raised over \$50,000 for Partners in Health (PIH) to fund HIV/AIDS treatment programs in PIH's Rwandan clinics

**Partners in Health | Engage**

**Stanford, CA**

*Founder*

01/14

- Started the first PIH Engage chapter at Stanford dedicated to advancing the movement of health as a human right
- Collaborated with Stanford faculty, FACE AIDS staff, and Partners in Health staff to transition the Stanford FACE AIDS chapter into joining forces with the student arm of PIH

**Stanford Biology Department**

**Stanford, CA**

*Student Advisor, BioBridge Program*

09/13-06/14

- One of five students selected to advise over 350 sophomore, junior, and senior Biology majors, as well as freshman considering the Biology major
- Provided guidance to Biology majors on how to participate in undergraduate research, specifically how to find a lab, contact faculty, propose research projects, and apply for funding
- Organized informational programs and presentations for Biology majors on topics related to research, grants, employment and other post-graduate opportunities

**Stanford Biology Department**

**Stanford, CA**

*Undergraduate Studies Committee Member*

09/13-06/14

- Collaborated with department faculty to improve undergraduate Biology curriculum
- Provided department faculty with feedback from students and suggestions on how to better serve Biology students
- Assisted department faculty in revising current Biology department programs and syllabi

**Stanford GlobeMed**

**Stanford, CA**

*Global Health Education Coordinator*

09/10-06/12

- Promoted global health issues on campus and encouraged students to advocate for global health equity
- Maintained GlobeMed website and resources, distributed weekly newsletter, and planned networking events

**Stanford Service in Global Health Journal**

**Stanford, CA**

*Article Editor and Staff Writer*

09/10-06/12

- Reporting, writing, and editing international health-related service articles in the Stanford community

**Stanford Women's Tennis Team**

**Stanford, CA**

*Team Manager*

09/10-06/12

- Collected and analyzed individual player and team statistics for NCAA competitions and tournaments
- Fostered communication between players, coaches, and competing teams

**The Stanford Daily**

**Stanford, CA**

*Staff Writer*

09/10-06/11

- Reported on emerging scientific discoveries and key events occurring at the Stanford University School of Medicine

**COMMUNITY SERVICE**

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**Crimson Care Collaborative**

**Boston, MA**

*Senior Director, MGH Revere HealthCare Center*

09/17-present

- Delivering pediatric primary care in a student faculty collaborative clinic serving ethnically diverse, predominantly lower socioeconomic status populations
- Performing history taking and physical examinations, managing common pediatric conditions, and studying normal child development and physiology

**Leverett House, Harvard College***Non-Resident Premedical Tutor***Cambridge, MA**

12/17-present

- Serving as the primary advisor for two Harvard undergraduates applying to medical school
- Assisting advisees throughout the application process, providing feedback on personal statements, and conducting practice interviews

**San Francisco AIDS Foundation***Volunteer, Syringe Access Program***San Francisco, CA**

02/16-04/17

- Providing safe injection supplies and collecting used injection equipment through street-based syringe access stations to reduce the spread of HIV, Hepatitis C, and Hepatitis B in San Francisco
- Promoting harm reduction among injecting drug users (IDUs) and promoting community health by offering clean syringes, condoms, anonymous HIV testing, and referrals to drug treatment programs and social services

**Stanford Cancer Center***Volunteer, Infusion Treatment Center***Stanford, CA**

01/14-01/15

- Escorting patients and families to hospital destinations, performing hourly rounds to check on patient's personal needs, and offering emotional support to patients and families
- Aiding clinical staff by organizing and stocking supplies in treatment wards and patient rooms, keeping nursing areas clean and organized, answering patient lights and paging RN/MAs at the Nursing Station

**Stanford School of Medicine***Volunteer, Flu Crew***Stanford, CA**

10/11-06/13

- Assisting first year medical students in providing free annual flu immunizations to Stanford students, faculty, and staff
- Directing flu shot recipients among immunization areas, collecting and organizing paperwork, and stocking supplies within patient areas

**PUBLICATION**

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Wei S.M., Eisenberg D.P., **Nabel K.G.**, Kohn P.D., Kippenhan J.S., Dickenson D., Kolachana B., Berman K.F. *Brain-Derived Neurotrophic Factor Val66Met Polymorphism Affects the Relationship Between an Anxiety-Related Personality Trait and Resting Regional Cerebral Blood Flow*. Cerebral Cortex. (2017) Mar 1; 27(3): 2175-2182. PMID: 27005989.

**POSTER PRESENTATIONS**

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*An Inducible Cell Culture Model to Evaluate Kinetics of HBV Antigen Production*, **K. G. Nabel**, Q. Huang, E. Connelly, Y. Zong, U. Lopatin. 2015 International Meeting on the Molecular Biology of Hepatitis B Virus. Bad Nauheim, Germany. October 2015.

*Preclinical Characterization of Potent Core Protein Assembly Modifiers for the Treatment of Chronic Hepatitis B*. Q. Huang, A. Mercier, Y. Zhou, K. Henne, G. Kumar, S. Sun, L. Guo, Y. Zong, **K. G. Nabel**, E. Connelly, C. Mahon, G. Chen, W. Turner, A. Zlotnick, L. Arnold, U. Lopatin, R. Colonna. The International Liver Congress 2016, EASL. Barcelona, Spain. April 2016.

*Interactions between p53 and the lncRNA DINO: Effects on Post-Translational Modifications on RNA Binding*. **K. G. Nabel**, A. Schmitt, H. Chang. Biology Department Honors Poster Session 2014. Stanford, California. May 2014.

*Alternative Genotypes of Brain-Derived Neurotrophic Factor (BDNF) Differentially Affect Cerebral Blood Flow: A Two-Year Study of Individual Variation in Human Brain Function, Learning, and Personality*. **K. G. Nabel**, S.M. Wei, A. Padmanabhan, P. Kohn, J. Kippenhan, K. Roe, B. Kolachana, D. Weinberger, K. Berman. 2010 Intel Science Talent Search. Washington, DC. January 2010.

*Brain-Derived Neurotrophic Factor Val66Met Polymorphism Differentially Affects Regional Cerebral Blood Flow*. **K. G. Nabel**, S.M. Wei, A. Padmanabhan, P. Kohn, J. Kippenhan, K. Roe, B. Kolachana, D. Weinberger, K. Berman. 2009 Intel International Science and Engineering Fair. Reno, Nevada. March 2009.

**GRANTS**

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