



# BaDoi N. Phan

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## EDUCATION

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### MD/PhD in Computational Biology

2017-2025  
(expected)

*University of Pittsburgh and Carnegie Mellon University*  
Joint Medical Scientist Training Program (MSTP)

### BS Biomedical Engineering

2012-2016

*Johns Hopkins University*

General and Departmental Honors. Academic/Research advisors: JJ Green, BJ Maher, AE Jaffe

## RESEARCH EXPERIENCE

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### Rotation student

Summer 2018

*University of Pittsburgh, Department of Computational and Systems Biology*

Mentor: Anne-Ruxandra Carvunis, PhD, Unannotated genes in GWAS gene-desert loci

### Rotation student

Summer 2017

*Carnegie Mellon University, Department of Computational Biology*

Mentor: Andreas Pfenning, PhD, Age- and brain region-specific open chromatin

### Research Assistant

2014-2017

*Lieber Institute for Brain Development*

Mentors: Andrew Jaffe, PhD, Brady Maher, PhD, Convergent gene pathways across intellectual disability syndromes using RNAseq of murine models

### Summer Research Assistant

Summer 2015

*Oxford University, Department of Psychiatry*

Mentor: Paul Harrison, DM, FRCPsych, Novel ZNF804a transcripts in postmortem fetal human brain

## TEACHING

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*@ Johns Hopkins University:*

- Fall 2015: **580.221 Molecules and Cells**

Teaching Assistant for sophomore BME students in the department's biochemistry and cellular/molecular biology course. Mentor: Dr. Eileen Haase

- Spring 2016 & 2017: **580.222 Systems and Controls**

Teaching Assistant for sophomore BME students in the department's signals, systems, and control theory course. Mentors: Drs. Michael Miller and Sridevi Sarma

## PUBLICATIONS [\[Google Scholar\]](#)[\[ORCID\]](#)

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3. Page SC, Hamersky GR, Gallo RA, Rannals MD, Calcaterra NE, Campbell MN, Mayfield B, Briley A, [Phan BN](#), Jaffe AE, Maher BJ, “[The schizophrenia- and autism-associated gene, transcription factor 4 regulates the columnar distribution of layer 2/3 prefrontal pyramidal neurons in an activity-dependent manner](#)”, *Mol Psychiatry* **23**, 304–315 (2018).
2. Haase EB, [Phan BN](#), Goldberg H, “[Molecules and Cells: Team-based and Multi-modal Learning Improves Comprehension and Increases Content Retention](#)”, *ASEE Annual Conference & Exposition* **78**, 19703 (2017).
1. Rannals MD, Hamersky GR, Page SC, Campbell MN, Briley A, Gallo RA, [Phan BN](#), Hyde TM, Kleinman JE, Shin JH, Jaffe AE, Weinberger DR, Maher BJ, “[Psychiatric Risk Gene Transcription Factor 4 Regulates Intrinsic Excitability of Prefrontal Neurons via Repression of SCN10a and KCNQ1](#)”, *Neuron* **90**, 43-55 (2016).

### Manuscripts in Progress:

- [Phan BN](#)\*, Bohlen JF\*, Davis B, Mayfield B, Page SC, Campbell MN, Thaxton CL, Simon JM, Burke EE, Shin JH, Kennedy AJ, Sweatt JD, Philpot BD, Jaffe AE, Maher BJ, “[Defects of myelination are common pathophysiology in syndromic and idiopathic autism spectrum disorders](#)”, *bioRxiv/2017/05/11/128124*.
- Maynard KR, Hobbs JW, [Phan BN](#), Gupta A, Rajpurohit S, C Williams, Rajpurohit N, Shin JH, Jaffe AE, Martinowich K, “[BDNF-TrkB signaling in oxytocin neurons contributes to maternal behavior](#)”, *bioRxiv/2018/01/19/250332*.
- Burke EE, Chenoweth JG, Shin JH, Collado-Torres L, Kim SK, Micali N, Wang Y, Straub RE, Hoepfner DJ, Chen HY, Lescure A, Shibbani K, Hamersky GR, [Phan BN](#), Ulrich WS, Valencia C, Jaishankar A, Price AJ, Rajpurohit A, Semick SA, Bürli R, Barrow JC, Hiler DJ, Page SC, Martinowich K, Hyde TM, Kleinman JE, Berman KF, Apud JA, Cross AJ, Brandon NJ, Weinberger DR, Maher BJ, McKay DG, Jaffe AE, “[Dissecting transcriptomic signatures of neuronal differentiation and maturation using iPSCs](#)”, *bioRxiv/2018/07/31/380758*.

\*These authors contributed equally

## AWARDS & HONORS

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- 2018 Recognition of Excellence in Collaborative Learning, University of Pittsburgh School of Medicine
- 2017 Pre-doctoral Fellowship, University of Pittsburgh School of Medicine (MSTP Training Grant T32- GM8208)
- 2016 David T. Yue Memorial Award “outstanding teaching or mentoring as an undergraduate teaching assistant”, JHU Department of Biomedical Engineering
- 2015 Vredenburg Scholarship for study abroad at Oxford University, JHU School of Engineering
- 2013 Technology Fellowship Grant for developing tutorial videos for undergraduate biomedical engineering students, JHU Center for Educational Resources
- 2013 Benjamin A. Gilman International Scholarship for study abroad at the National University of Singapore, U.S. Department of State

## **SERVICE**

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- 2018-Present: Founder/coordinator, Knitt Med Student Group, University of Pittsburgh, mental health awareness and community service for students and patients through knitting and crocheting
- 2018-Present: Mentor, Letters to a Pre-scientist, Engaging a middle school pen pal in STEM