# Paul W. Hook

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#### **EDUCATION**

Johns Hopkins School of Medicine, Baltimore, MD 2014 – Present

Ph.D., Human Genetics (in progress)

The Pennsylvania State University, University Park, PA May 2012

B.S., Biochemistry and Molecular Biology

Area of concentration: Molecular and Cell Biology

# RESEARCH EXPERIENCE

Graduate Student 2014 – Present

Johns Hopkins School of Medicine, Baltimore, MD

Advisor: Andrew McCallion

Research Technologist 2012 – 2014

Johns Hopkins School of Medicine, Baltimore, MD

Advisor: Andrew McCallion

Science Undergraduate Laboratory Internship Summer 2011

Department of Energy, Pacific Northwest National Laboratory, Seguim, WA

Advisor: Michael Huesemann

Chemical Research Intern 2010 – 2011

The Pennsylvania State University, University Park, PA

Advisor: Joseph Keiser

### **TEACHING EXPERIENCE**

Teaching Assistant Fall 2016

Evolution of Ideas in Human Genetics

Johns Hopkins University School of Medicine, Baltimore, MD

Presenter November 14, 2015

The Genome Geeks Are In

Smithsonian National Museum of Natural History, Washington, DC

Peer Learning Assistant Fall 2011

BMB 430: Developmental Biology

The Pennsylvania State University, University Park, PA

#### LEADERSHIP AND MENTORING

# **Membership Engagement Committee**

The American Society of Human Genetics

2020 - 2022

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## **Student Faculty Representative**

2016 - Present

Human Genetics Pre-Doctoral Training Program
Johns Hopkins University School of Medicine, Baltimore, MD

## **Peer Mentoring Leader**

2017 – Present

Institute of Genetic Medicine Peer Mentoring Families
Johns Hopkins University School of Medicine, Baltimore, MD

#### PROFESSIONAL ASSOCIATIONS

The American Society of Human Genetics

2015, 2016, 2018, 2019

#### PREPRINTS AND PEER-REVIEWED PUBLICATIONS

**Hook, P.W.**, McCallion, A.S. (2018). Heritability enrichment in open chromatin reveals cortical layer contributions to schizophrenia. *bioRxiv*, 427484.

McClymont, S.A, **Hook, P.W.**, Soto, A.I., Reed, X., Law, W.D., Kerans, S.J., Waite, E.L., Briceno, N.J., Thole, J.F., Heckman, M.G., Diehl, N.N., Wszolek, Z.K., Moore, C.D., Zhu, H., Akiyama, J.A., Dickel, D.E., Visel, A., Pennacchio, L.A., Ross, O.A., Beer, M.A., McCallion, A.S. (2018). Parkinson Associated *SNCA* Enhancer Variants Revealed by Open Chromatin in Mouse Dopamine Neurons. *The American Journal of Human Genetics*, *103*(6), 874–892.

**Hook, P.W.**, McClymont, S.A., Cannon, G.H., Law, W.D., Morton, A.J., Goff, L.A., & McCallion, A.S. (2018). Single-Cell RNA-Seq of Mouse Dopaminergic Neurons Informs Candidate Gene Selection for Sporadic Parkinson Disease. *The American Journal of Human Genetics*, 102(3), 427–446.

Turner, T.N., Hormozdiari, F., Duyzend, M.H., McClymont, S.A., **Hook, P.W.**, Iossifov, I., ... Eichler, E.E. (2016). Genome Sequencing of Autism-Affected Families Reveals Disruption of Putative Noncoding Regulatory DNA. *The American Journal of Human Genetics*, *98*(1), 58–74.

Maragh, S., Miller, R.A., Bessling, S.L., Wang, G., **Hook, P.W.**, & McCallion, A.S. (2014). Rbm24a and Rbm24b are required for normal somitogenesis. *PLoS ONE*, 9(8).

Van Wagenen, J., Miller, T.W., Hobbs, S., **Hook, P.**, Crowe, B., and Huesemann, M. (2012). Effects of light and temperature on fatty acid production in *Nannochloropsis salina*. *Energies 5*, 731–740.

#### PLATFORM AND INVITED TALKS

**Hook, P.W.**, McCallion, A.S. "Refining cell populations and fine-mapping variants for schizophrenia and bipolar disorder using mouse open chromatin profiles" The American Society of Human Genetics, Houston, TX, 2019.

**Hook, P.W.**, McClymont S.A., Cannon, G.H., Law, W.D., Morton, A.J., Goff, L.A., McCallion, A.S. "Prioritizing genes for sporadic Parkinson disease using single-cell expression profiling of mouse dopaminergic neurons" 11<sup>th</sup> Leena Peltonen School of Human Genomics, Les Diablerets, Switzerland, 2018.

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**Hook**, **P.W.**, McClymont, S.A., Goff, L.A., McCallion, A.S. "RNA-seq analysis identifies phenotypic heterogeneity among *ex vivo* purified dopamine neurons and highlights their progressive temporal diversification" The American Society of Human Genetics, Vancouver, BC, Canada, 2016.

# **HONORS AND AWARDS**

ASHG/Charles J. Epstein Trainee Award for Excellence in Human Genetics Research – Semifinalist The American Society of Human Genetics - Houston, TX "Refining cell populations and fine-mapping variants for schizophrenia and bipolar disorder using mouse open chromatin profiles"	2019
C.W. Cotterman Award The American Society of Human Genetics – San Diego, CA "Single-Cell RNA-Seq of Mouse Dopaminergic Neurons Informs Candidate Gene Selection for Sporadic Parkinson Disease"	2018
Leena Peltonen School of Human Genomics Trainee Les Diablerets, Switzerland	Summer 2018
Graduated with Distinction  Eberly College of Science  The Pennsylvania State University, University Park, PA	May 2012
Dean's List Eberly College of Science The Pennsylvania State University, University Park, PA	2008-2012
Gail A. and Thomas G. Ernst Scholarship	2009 – 2011
Kimberly Clark Bright Futures Scholarship	2008 – 2012