

Katrina “Katie” M. Volk, B.S.

Curriculum Vitae

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EDUCATION

Vanderbilt University School of Medicine Nashville, TN
Ph.D. Graduate Student, Department of Molecular Physiology and Biophysics August 2018—Present
Ph.D. Advisor: Alyssa Hasty, Ph.D.

Washington and Lee University Lexington, VA
Bachelor of Science in Neuroscience, Art History Minor 2014—2018
Magna cum laude
Dean’s List, Honor Roll, President’s List
Cumulative GPA: 3.899/4.000

RESEARCH EXPERIENCE

Vanderbilt University School of Medicine Nashville, TN
Ph.D. Graduate Student, Molecular Physiology and Biophysics May 2019—Present
Role of microglial cell iron-handling in neurodegenerative disease
Advisor: Alyssa Hasty, Ph.D.

IGP Rotation Student Oct.– Dec. 2018
Characterizing a CUL9-knockdown in differentiating cortical neurons
Advisor: Vivian Gama, Ph.D.

IGP Rotation Student Jan.– Mar. 2019
Optimizing an iDisco protocol for TrkA staining of whole embryo
Advisor: Richard Simerly, Ph.D.

IGP Rotation Student: Mar.– April 2019
Effects of Exendin-4 on HFD-fed mice switched to chow diet
Advisor: Julio Ayala, Ph.D.

Washington and Lee University Lexington, VA
HHMI Undergraduate Research Fellow, Neuroscience Summer 2016-2018
Effects of High-Fat, High-Sugar Diet on reproductive function in polycystic ovary syndrome
Advisor: Natalia Toporikova, Ph.D.

University of California, San Diego San Diego, CA
HHMI Summer Research Fellow, Obstetrics, Gynecology, and Reproductive Sciences Summer 2017
Effects of restraint stress on reproductive hormone release
Advisor: Alexander (Sasha) Kauffman, Ph.D.

FELLOWSHIPS

Howard Hughes Medical Institute Fellowship 2016-2018
NIH T-32 Training Grant in Molecular Endocrinology (T32DK007563-32), *PI: Richard O’Brien* 2019—Present

PUBLICATIONS

Volk, K.M., Pogrebna, V. V., Roberts, J.A., Zachry, J.E., Blythe, S., and Toporikova, N. (November, 2017). “High-Fat, High-Sugar Diet Disrupts the Pre-ovulatory Hormone Surge and Induces Cystic Ovaries in Cycling Female Rats”. *Journal of the Endocrine Society*.

Yang, J., Hughes, J., Parra, R., **Volk, K.**, and Kauffman, A. (October, 2018). “Stress rapidly suppresses in vivo LH pulses and increases activation of RFRP-3 neurons in male mice”. *Journal of Endocrinology*.

Winn, N.C., **Volk, K.M.**, and Hasty, A.H. (January, 2020). “Regulation of tissue iron homeostasis: the macrophage ‘ferrostat’.” *JCI Insight*, 5(2): e132964.

CONFERENCE PRESENTATIONS

Poster Presentations

Veronika V. Pogrebna, Jennifer E. Zachry, Jackson A. Roberts, **Katrina M. Volk**, and Natalia Toporikova. “High-Sugar, High-Fat Diet Increased Estradiol Surge during Proestrus and Induced Polycystic Ovaries in Cycling Female Rats.” Central Virginia Chapter of the Society for Neuroscience (CVCSN) Annual Symposium Poster Session. Roanoke, Virginia. March 26-27, 2017.

Veronika V. Pogrebna, Jennifer E. Zachry, Jackson A. Roberts, **Katrina M. Volk**, and Natalia Toporikova. “High-Sugar, High-Fat Diet Increased Estradiol Surge during Proestrus and Induced Polycystic Ovaries in Cycling Female Rats.” Endocrine Society Annual Meeting (ENDO) Poster Session. Orlando, Florida. April 1-4, 2017.

Katrina M. Volk, Jackson A. Roberts, Natalia Toporikova. “High-fat, high-sugar diet disrupts hormonal balance during pre-ovulatory surge and induces cystic ovaries.” Society for Neuroscience (SFN) Annual Meeting Poster Session. Washington D.C. November 11-15, 2017.

Jennifer A. Yang, Jessica K. Hughes, Ruby A. Parra, **Katrina M. Volk**, and Alexander S. Kauffman (2018). Effects of acute psychosocial stress on LH pulses, Kiss1, and RFRP-3 in male mice. International Congress of Neuroendocrinology, Toronto, Canada, July 15-18, 2018.

HONORS AND SCHOLARSHIPS

Phi Beta Kappa Honor Society Member	2018—Present
Phi Eta Sigma Honor Society Member	2015—Present
Beta Beta Beta Biological Honor Society Formal Member	2016—Present
Psi Chi International Honor Society Member	2016—Present
Antelope Valley Hospital Scholarship Recipient	2014
Johnson Opportunity Grant Award Recipient	2017
Vanderbilt IGP Director’s Award Recipient	2018
Co-SIDA Academic All-District Honor	2016-2017

MEMBERSHIPS

Endocrine Society	2016—2018
Society for Neuroscience	2016—2018
American Association for the Advancement of Science	2018—Present

MENTORING

Vanderbilt University School of Medicine	Nashville, TN
Natalie Favret – Rotating Graduate Student, Interdisciplinary Graduate Program	Aug.– Oct. 2019

PROFESSIONAL DEVELOPMENT

Vanderbilt University	
Responsible Conduct of Research (<i>Office of Biomedical Research Education & Training</i>)	May 2019
Bystander Intervention Training (<i>Project Safe</i>)	November 2019
<i>Fair Play: A Workshop about Bias in Academia</i>	June 2019

LEADERSHIP & EXTRACURRICULAR

Vanderbilt University School of Medicine	
<i>Newsletter Chair</i> , Department of Molecular Physiology & Biophysics Graduate Student Association	2019—Present

Washington and Lee University

Intercollegiate Varsity Volleyball Team Member	2014-2017
University Student Recruitment Committee Tour Guide	2014-2018
Duchossois Tennis Center Head Work Study	2014-2018
Chi Omega, Xi Lambda Executive Board Member	2015-2016
Generals Leadership Academy Member	2016-2017
InterVarsity Christian Fellowship Leader	2017-2018
The Outing Club Member	2014-2018

SKILLS AND INTERESTS

Computer Skills: Proficient in R, Adobe Photoshop, GraphPad PRISM

<https://rna.wlu.edu/shiny-apps/bio185/Pink-Ribbon-Project/>

Interests: Hiking, Volleyball, Running, Piano