

Zhuo “April” Fu, Ph.D.

Instructor

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Education

Ph.D. Virginia Polytechnic Institute and State University. Human Nutrition Food and Exercise. 2005-2011

B.S. China Agriculture University, Biology, Beijing, China. 1999-2003

Professional Experience

Instructor, School of Neuroscience, Virginia Tech. 2018-present.

Assistant Professor, Department of Internal medicine, University of Virginia. 2016-2018.

Postdoctoral Research Fellow, Department of Internal medicine, University of Virginia.2011-2016.

Molecular Biology Lab Specialist, Chinese Academy of Sciences, Beijing, China, 2003-2005.

Teaching Experience

Undergraduate Courses (Total Course Sessions Taught at VT: 45 | SPOT Evaluation Mean \pm SD: 5.7 \pm 0.18)

Introduction to Neuroscience lab I (NEUR2035, 30+ students, VT): 2018 -present

Experimental Neuroscience (NEUR2554, ~30 students, VT): 2021-2023

Introduction to Neuroscience II (NEUR 2026, ~20 students, VT): 2023-present

Human Anatomy (ISS1095, 50+ students, Hanyang University, South Korea): 2017- 2019

Human Nutrition (ISS1096, 50+ students, Hanyang University, South Korea): 2017- 2019

Student Development (SDV100, ~10 students, Piedmont Virginia Community College): 2018

General Biology Lab II (BIO102L, ~20 students, Piedmont Virginia Community College):2017-2018

General Biology Lab I (BIO101L, 20+ students, Piedmont Virginia Community College):2017-2018

Graduate and Professional Workshops

Current Topics in Neuroscience (NEUR 5074, VT): 2024 spring

Data Analysis for Scientists and Engineers. Federal Reserve Board, Washington DC. Nov 2016 ([link](#))

Data Analysis for Biological Researchers. USDA, Stoneville MS. Jan 2016 ([link](#))

Data Analysis for Biological Researchers. Stanford University Neurosciences Institute. April 2016 ([link](#))

Data Analysis for Biological Researchers. Virginia Tech. Oct 2015. ([link](#))

Data Analysis for Biological Researchers. UVA Health Science library. Mar 2015

Automated Image Analysis with ImageJ: UVA Health Science library. (Oct 2015, Mar & Oct 2016, Mar & Oct 2017)

Pedagogical Publications and Funding

Fu Z, Huda A, Kimbrough IF, Ni L. Using Drosophila Two-Choice Assay to Study Optogenetics in Hands-On Neurobiology Laboratory Activities. *Journal of Undergraduate Neuroscience Education* (JUNE). 2023; Volume 22. Available from: <https://doi.org/10.59390/SDWH9124>.

Fu Z. Making an Effective Flipped Neuroscience Lab by Approaching Students from Their Limbic Brain. Presentation at the Faculty for Undergraduate Neuroscience Summer (FUN) Workshop, July 2023.

Fu Z, Jones B, Komelski M. Applying the MUSIC Model of Motivation to Improve Attendance Post-COVID. Conference poster presented at the 15th Virginia Tech Annual Conference on Higher Education Pedagogy, February 2022.

Fu Z. Teaching Lab Improvement Grant: Virginia Tech. Grant No. J0919427, \$2000, 2021.

Fu Z, Komelski M, Kumar A. Physically Active Diabetics Report Lower Rates of Impaired Cognitive Function: Findings from the 2012 National Health Interview Survey. Conference poster presented at the American Diabetes Association 67th Scientific Sessions, 2018. Available from: <https://doi.org/10.2337/db18-734-P>. (Independent study project for undergraduates).

Research Fundings

Research Scientist Career Development Award (1 K01 DK107731-01A1): NIDDK, Microvascular and Metabolic Effects of Angiotensin(1-7), 09/25/2016-9/24/2020 (relinquished in 2020)

Postdoctoral Fellowship Award (1-16-PDF-037): American Diabetes Association, Angiotensin(1-7) regulation of microvascular perfusion and insulin action, 01/01/2016-12/31/2018 (relinquished on 09/24/2016)

Ruth L. Kirschstein National Research Service Award (NRSA) (Parent T32, 1-T32-DK07646): NIH, Angiotensin(1-7) and microvascular insulin sensitivity, 08/01/2013-12/31/2015

Research Publications

Peer-reviewed Publication list : [Link](#) | Total publicans: 23 | First-author publication: 9

Representative publications

Assistant Professor:

Fu Z, Gong L, Liu J, Wu J, Barrett EJ, Aylor KW, Liu Z. "Brain endothelial cells regulate glucagon-like peptide 1 entry into the brain via a receptor-mediated process." *Frontiers in Physiology*. 2020 May 29;11:555. doi: 10.3389/fphys.2020.00555.

Postdoctoral Training:

Fu Z, Wu J, Nesil T, Li MD, Aylor KW, Liu Z. "Long-term high-fat diet induces hippocampal microvascular insulin resistance and cognitive dysfunction." *American Journal of Physiology-Endocrinology and Metabolism*. 2017 Feb 1;312(2):E89-E97. doi: 10.1152/ajpendo.00297.

Ph.D. Training:

Fu Z, Zhang W, Zhen W, Lum H, Nadler J, Bassaganya-Riera J, Jia Z, Wang Y, Misra H, Liu D. "Genistein induces pancreatic beta-cell proliferation through activation of multiple signaling pathways and prevents insulin-deficient diabetes in mice." *Endocrinology*. 2010 Jul;151(7):3026-37. doi: 10.1210/en.2009-1294.

Molecular Biology Lab Specialist:

Deng W, Zhu X, Skogerboe G, Zhao Y, **Fu Z**, et al. "Organization of the *Caenorhabditis elegans* small non-coding transcriptome: genomic features, biogenesis, and expression." *Genome Research*. 2006 Jan;16(1):20-9. Epub 2005 Dec 12.

University Services

Lab Manager for Neuroscience Lab I (2019-present)

Faculty Senate (2021-present)

Climate Action, Sustainability, and Energy Committee Member (2021 - Present)

Undergrad Curriculum Committee of the Department Member (2022 - present)

Excusive Committee of the Department Member (2020)

Community Outreach

Member of Asian Pacific Islander Desi American (APIDA) communities. (2023-present)

Coordinator for Kipps Elementary School's fall festival and Virginia Tech science fair (2018-present)

Coordinator for neuroscience exhibition at Virginia Tech science fair (2018-present)

Coordinator for Roanoke STEAM Day (2022fa)

Charlottesville Chinese school (non-profit) instructor, Charlottesville, VA. August, 2016- May, 2017

Woman in Science Elementary School Visit, Red Hill elementary school, Charlottesville. Oct 25,2015 and April 18, 2016

Charlottesville High School Poster Symposium mentor, University of Virginia, Charlottesville. March 2, 2016.

Walker Upper Elementary Health Fair, Walker Upper Elementary School, Charlottesville. March 8, 2016