

# Curriculum Vitae

## John R. Lukens

### Contact Information:

1809 River Inn Ln  
Charlottesville, VA 22901  
Office: 434-924-7782  
Cell: 804-651-8797  
John.Lukens@virginia.edu

University of Virginia  
Department of Neuroscience & Center  
for Brain Immunology and Glia (BIG)  
409 Lane Road, MR4- 6102  
Charlottesville, VA 22908

### Academic Degrees:

Ph.D.	University of Virginia
December 2008	Charlottesville, Virginia
B.S.	University of Richmond
May 2003	Richmond, Virginia

### Professional Appointments:

2024-Present	Director - University of Virginia's Harrison Family Translational Research Center in Alzheimer's and Neurodegenerative Diseases
2020-Present	Associate Professor - Department of Neuroscience University of Virginia
2014-2020	Assistant Professor - Department of Neuroscience University of Virginia
2008-2014	Postdoctoral Fellowship St. Jude Children's Research Hospital
2003-2008	Graduate Fellowship University of Virginia

### Publications:

1. Zengeler KE\*, **Lukens JR\***. Microglia pack a toolbox for life. *Trends Immunol.* 2024 May;45(5):338-345. doi: 10.1016/j.it.2024.03.010. Epub 2024 Apr 13.\*Co-corresponding authors. PMID: 38616144
2. Mangalmurti A, **Lukens JR**. Suppressing activity in the lateral habenula improves arthritic and depressive-like symptoms in a model of rheumatoid arthritis. *Brain Behav Immun.* 2024 Feb 24;118:115-116. doi: 10.1016/j.bbi.2024.02.026. Online ahead of print. PMID: 38408497
3. Sun X, Eastman G, Shi Y, Saibaba S, Oliveira AK, **Lukens JR**, Norambuena A, Thompson JA, Purdy MD, Dryden K, Pardo E, Mandell JW, Bloom GS. Structural and functional damage to neuronal nuclei caused by extracellular tau oligomers. *Alzheimers Dement.* 2024 Mar;20(3):1656-1670. doi: 10.1002/alz.13535. Epub 2023 Dec 9. PMID: 38069673
4. Samuels JD, **Lukens JR**, Price RJ. Emerging roles for ITAM and ITIM receptor signaling in microglial biology and Alzheimer's disease-related amyloidosis. *J Neurochem.* 2023 Oct 11. doi: 10.1111/jnc.15981. Online ahead of print. PMID: 37822118
5. Ennerfelt H\*, Holliday C, Shapiro DA, Zengeler KE, Bolte AC, Ulland TK, **Lukens JR\***. CARD9 attenuates A $\beta$  pathology and modifies microglial responses in an Alzheimer's disease mouse model. *Proc Natl Acad Sci. U S A.* 2023 Jun 13;120(24):e2303760120. doi: 10.1073/pnas.2303760120. Epub 2023 Jun 5. \*Co-corresponding authors. PMID: 37276426

6. D'Alessandro A, **Lukens JR**, Zimring JC. The role of PIMT in Alzheimer's disease pathogenesis: A novel hypothesis. *Alzheimers Dement*. 2023 Nov;19(11):5296-5302. doi: 10.1002/alz.13115. Epub 2023 May 8. PMID: 37157118
7. Samuels JD, Moore KA, Ennerfelt HE, Johnson AM, Walsh AE, Price RJ, **Lukens JR**. The Alzheimer's disease risk factor INPP5D restricts neuroprotective microglial responses in amyloid beta-mediated pathology. *Alzheimers Dement*. 2023 Nov;19(11):4908-4921. doi: 10.1002/alz.13089. Epub 2023 Apr 15. PMID: 37061460
8. Zengeler KE\*, **Lukens JR\***. Misguided antibodies change the course of brain development. *Mol Psychiatry*. 2023 Mar 27. doi: 10.1038/s41380-023-02042-x. Online ahead of print. \*Co-corresponding authors. PMID: 36973346
9. Johnson AM, **Lukens JR**. The innate immune response in tauopathies. *Eur J Immunol*. 2023 Mar 18:e2250266. doi: 10.1002/eji.202250266. Online ahead of print. PMID: 36932726
10. Walsh AE, **Lukens JR**. Engineering mighty microglia. *J Exp Med*. 2023 Mar 6;220(3):e20222070. doi: 10.1084/jem.20222070. Epub 2023 Jan 17. PMID: 36648421
11. Ennerfelt H\*, **Lukens JR\***. Microglia rely on SYK signalling to mount neuroprotective responses in models of Alzheimer's disease and multiple sclerosis. *Clin Transl Med*. 2023 Jan;13(1):e1178. doi: 10.1002/ctm2.1178. \*Co-corresponding authors. PMID: 36629045
12. Kumar S, Budhathoki S, Oliveira CB, Kahle AD, Calhan OY, **Lukens JR\***, Deppmann CD\*. Role of the Caspase-8/RIPK3 axis in Alzheimer's disease pathogenesis and A $\beta$ -induced NLRP3 inflammasome activation. *JCI Insight*. 2023 Jan 5:e157433. doi: 10.1172/jci.insight.157433. Online ahead of print. \*Co-corresponding authors. PMID: 36602874
13. Bolte AC\*, Shapiro DA, Dutta AB, Ma WF, Bruch KR, Kovacs MA, Royo Marco A, Ennerfelt HE, **Lukens JR\***. The meningeal transcriptional response to traumatic brain injury and aging. *Elife*. 2023 Jan 3;12:e81154. doi: 10.7554/eLife.81154. \*Co-corresponding authors. PMID: 36594818
14. Zengeler KE, Shapiro DA, Bruch KR, Lammert CR, Ennerfelt H, **Lukens JR**. SSRI treatment modifies the effects of maternal inflammation on in utero physiology and offspring neurobiology. *Brain Behav Immun*. 2022 Nov 4;108:80-97. doi: 10.1016/j.bbi.2022.10.024. PMID: 36343752
15. Ennerfelt H, Frost EL, Shapiro DA, Holliday C, Zengeler KE, Voithofer G, Bolte AC, Lammert CR, Kulas JA, Ulland TK, **Lukens JR**. SYK coordinates neuroprotective microglial responses in neurodegenerative disease. *Cell*. 2022 Oct 27;185(22):4135-4152.e22. doi: 10.1016/j.cell.2022.09.030. Epub 2022 Oct 17. PMID: 36257314
16. **Lukens JR\***, Williams JL\*. An introduction to neuroimmunology. *Immunol Rev*. 2022 Oct;311(1):5-8. doi: 10.1111/imr.13133. Epub 2022 Aug 30. \*Co-corresponding authors. PMID: 36039857
17. Zengeler KE\*, **Lukens JR\***. Taking the parkin brakes off of neuronal NLRP3 drives inflammasome activation and neurodegeneration in Parkinson's disease. *Neuron*. 2022 Aug 3;110(15):2356-2358. doi: 10.1016/j.neuron.2022.06.015. \*Co-corresponding authors. PMID: 35926449
18. Natale NR, **Lukens JR\***, Petri WA Jr\*. The nervous system during COVID-19: Caught in the crossfire. *Immunol Rev*. 2022 Oct;311(1):90-111. doi: 10.1111/imr.13114. Epub 2022 Jun 30. \*Co-corresponding authors. PMID: 35770683

19. Mangalmurti A, **Lukens JR**. How neurons die in Alzheimer's disease: Implications for neuroinflammation. *Curr Opin Neurobiol*. 2022 Jun 9;75:102575. doi: 10.1016/j.conb.2022.102575. Online ahead of print. PMID: 35691251
20. **Lukens JR\***, Eyo UB\*. Microglia and neurodevelopmental disorders. *Annu Rev Neurosci*. 2022 Jul 8;45:425-445. doi: 10.1146/annurev-neuro-110920-023056. Epub 2022 Apr 18. \*Co-corresponding authors. PMID: 35436413
21. Zengeler KE\*, **Lukens JR\***. Maternal inflammation is hard for offspring to stomach. *Immunity*. 2022 Jan 11;55(1):6-8. doi: 10.1016/j.immuni.2021.12.005. \*Co-corresponding authors. PMID: 35021058
22. Bolte AC, **Lukens JR**. Neuroimmune cleanup crews in brain injury. *Trends Immunol*. 2021 Jun;42(6):480-494. doi: 10.1016/j.it.2021.04.003. PMID: 33941486
23. Belanger MC, Ball AG, Catterton MA, Kinman AWL, Anbaei P, Groff BD, Melchor SJ, **Lukens JR**, Ross AE, Pompano RR. Acute Lymph Node Slices Are a Functional Model System to Study Immunity Ex Vivo. *ACS Pharmacol Transl Sci*. 2021 Jan 8;4(1):128-142. doi: 10.1021/acspsci.0c00143. eCollection 2021 Feb 12. PMID: 33615167
24. Zengeler KE\*, **Lukens JR\***. Innate immunity at the crossroads of healthy brain maturation and neurodevelopmental disorders. *Nat Rev Immunol*. 2021 Jul;21(7):454-468. doi: 10.1038/s41577-020-00487-7. \*Co-corresponding authors. PMID: 33479477
25. Zengeler KE\*, **Lukens JR\***. Inflammation stresses out brain development. *Nat Neurosci*. 2021 Feb;24(2):155-157. doi: 10.1038/s41593-020-00775-4. \*Co-corresponding authors. PMID: 33361821
26. Satkovich J, Anderson CJ, Medina CB, Ottolini M, **Lukens JR**, Kendall MM. RIPK3-Dependent Recruitment of Low-Inflammatory Myeloid Cells Does Not Protect from Systemic Salmonella Infection. *mBio*. 2020 Oct 6;11(5):e02588-20. doi: 10.1128/mBio.02588-20.
27. Bolte AC, Dutta AB, Hurt ME, Smirnov I, Kovacs MA, McKee CA, Ennerfelt HE, Shapiro D, Nguyen BH, Frost EL, Lammert CR, Kipnis J, **Lukens JR**. Meningeal lymphatic dysfunction exacerbates traumatic brain injury pathogenesis. *Nat Commun*. 2020 Sep 10;11(1):4524. doi: 10.1038/s41467-020-18113-4. PMID: 32913280
28. Batista SJ, Still KM, Johanson D, Thompson JA, O'Brien CA, **Lukens JR**, Harris TH. Gasdermin-D-dependent IL-1 $\alpha$  release from microglia promotes protective immunity during chronic *Toxoplasma gondii* infection. *Nat Commun*. 2020 Jul 23;11(1):3687. doi: 10.1038/s41467-020-17491-z. PMID: 32703941
29. Ennerfelt HE, **Lukens JR**. The role of innate immunity in Alzheimer's disease. The role of innate immunity in Alzheimer's disease. *Immunol Rev*. 2020 Sep;297(1):225-246. doi: 10.1111/imr.12896. Epub 2020 Jun 26. PMID: 32588460
30. **Lukens JR**, Anand PK. Adapt(ed) to repair - TH2 immune responses in the bladder promote recurrent infections. *Nat Immunol*. 2020 Jun;21(6):597-599. doi: 10.1038/s41590-020-0689-2. PMID: 32424364
31. Lammert CR, Frost EL, Bellinger CE, Bolte AC, McKee CA, Paysour MJ, Hurt ME, Ennerfelt HE, and **Lukens JR**. AIM2 inflammasome surveillance of DNA damage shapes neurodevelopment. *Nature*. 2020 Apr;580(7805):647-652. PMID: 32350463
32. Przanowska RK, Sobierajska E, Su Z, Jensen K, Przanowski P, Nagdas S, Kashatus JA, Kashatus DF, Bhatnagar S, **Lukens JR**, Dutta A. miR-206 family is important for

- mitochondrial and muscle function, but not essential for myogenesis in vitro. *FASEB J*. 2020 Jun;34(6):7687-7702. doi: 10.1096/fj.201902855RR. Epub 2020 Apr 11. PMID: 32277852
33. Su Z, Frost EL, Lammert CR, Przanowska RK, **Lukens JR\***, Dutta A\*. tRNA-derived fragments and microRNAs in the maternal-fetal interface of a mouse maternal-immune-activation autism model. *RNA Biol*. 2020 Aug;17(8):1183-1195. doi: 10.1080/15476286.2020.1721047. \*Co-corresponding authors PMID: 31983265
  34. Kumar S, **Lukens JR**. NLRP3 sets the table for a parasitic meal. *J Leukoc Biol*. 2019 Sep;106(3):505-507. doi: 10.1002/JLB.4CE0319-088R. Epub 2019 May 7. PMID: 31063612
  35. Paysour MJ, Bolte AC, **Lukens JR**. Crosstalk between the microbiome and gestational immunity in autism-related disorders. *DNA Cell Biol*. 2019 May;38(5):405-409.
  36. Lammert CR, **Lukens JR**. Modeling autism-related disorders in mice with maternal immune activation (MIA). *Methods Mol Biol*. 2019;1960:227-236.
  37. Ruhl D, Du TT, Wagner EL, Hwan Choi J, Li S, Reed R, Kim K, Freeman M, Hashisaki G, **Lukens JR**, Shin JB. Necroptosis and apoptosis contribute to cisplatin and aminoglycoside ototoxicity. *J Neurosci*. 2019 Apr 10;39(15):2951-2964.
  38. Louveau A, Herz J, Alme MN, Salvador AF, Dong MQ, Viar KE, Herod SG, Knopp J, Setliff JC, Lupi AL, Da Mesquita S, Frost EL, Gaultier A, Harris TH, Cao R, Hu S, **Lukens JR**, Smirnov I, Overall CC, Oliver G, Kipnis J. CNS lymphatic drainage and neuroinflammation are regulated by meningeal lymphatic vasculature. *Nat Neurosci*. 2018 Oct;21(10):1380-1391.
  39. Lammert CR, Frost EL, Bolte AC, Paysour MJ, Shaw ME, Bellinger CE, Weigel TK, Zunder ER, and **Lukens JR**. Critical roles for microbiota-mediated regulation of the immune system in a prenatal immune activation model of autism. *J Immunol*. 2018 Aug 1;201(3):845-850.
  40. Bolte AC, **Lukens JR**. Th17 Cells in Parkinson's Disease: The Bane of the Midbrain. *Cell Stem Cell*. 2018 Jul 5;23(1):5-6.
  41. Gharagozloo M, Gris KV, Mahvelati T, Amrani A, **Lukens JR**, Gris D. NLR-Dependent Regulation of Inflammation in Multiple Sclerosis. *Front Immunol*. 2018 Jan 18;8:2012.
  42. Gurung P, Fan G, Lukens JR, Vogel P, Tonks NK, Kanneganti TD. Tyrosine Kinase SYK Licenses MyD88 Adaptor Protein to Instigate IL-1 $\alpha$ -Mediated Inflammatory Disease. *Immunity*. 2017 Apr 18;46(4):635-648.
  43. Rhoads JP, **Lukens JR**, Wilhelm AJ, Moore JL, Mendez-Fernandez Y, Kanneganti TD, Major AS. Oxidized Low-Density Lipoprotein Immune Complex Priming of the Nlrp3 Inflammasome Involves TLR and Fc $\gamma$ R Cooperation and Is Dependent on CARD9. *J Immunol*. 2017 Mar 1;198(5):2105-2114.
  44. McKee CA, **Lukens JR**. Emerging roles for the immune system in traumatic brain injury. *Front Immunol*. 2016 Dec 5;7:556.
  45. Frost EL, **Lukens JR**. The brain's reward circuitry regulates immunity. *Nat Med*. 2016 Aug 4;22(8):835-837.
  46. Gadani SP, Walsh JT, **Lukens JR\***, Kipnis J\*. Dealing with danger in the CNS: The response of the immune system to injury. *Neuron*. 2015 Jul 1;87(1):47-62. \* Co-corresponding author
  47. **Lukens JR**, Gurung P, Shaw PJ, Barr MJ, Zaki MH, Brown SA, Vogel P, Chi H, Kanneganti TD. The NLRP12 sensor negatively regulates autoinflammatory disease by modulating interleukin-4 production in T cells. *Immunity*. 2015 Apr 21;42(4):654-64.

48. Walsh JT, Hendrix S, Boato F, Smirnov I, Zheng J, **Lukens JR**, Gadani S, Hechler D, Gözl G, Rosenberger K, Kammertöns T, Vogt J, Vogelaar C, Siffrin V, Radjavi A, Fernandez-Castaneda A, Gaultier A, Gold R, Kanneganti TD, Nitsch R, Zipp F, Kipnis J. MHCII-independent CD4<sup>+</sup> T cells protect injured CNS neurons via IL-4. *J Clin Invest*. 2015 Feb;125(2):699-714.
49. Edwards BA, Harris TL, Floersch H, **Lukens JR**, Zaki MH, Vogel P, Kanneganti TD, Bui JD, McGargill MA. Drak2 is not required for tumor surveillance and suppression. *Int Immunol*. 2015 Mar;27(3):161-6.
50. Gurung P, **Lukens JR**, Kanneganti TD. Mitochondria: diversity in the regulation of the NLRP3 inflammasome. *Trends Mol Med*. 2015 Mar;21(3):193-201.
51. **Lukens JR**, Gurung P, Vogel P, Johnson RG, Carter RA, McGoldrick DJ, Bandi SR, Calabrese CR, Vande Walle L, Lamkanfi M, Kanneganti TD. Dietary modulation of the microbiome affects autoinflammatory disease. *Nature*. 2014 Dec 11;516(7530):246-9.
52. **Lukens JR**, Kanneganti TD. SHP-1 and IL-1 $\alpha$  conspire to provoke neutrophilic dermatoses. *Rare Diseases*. 2014 Jan 31;2:e27742.
53. **Lukens JR**, Kanneganti TD. Beyond canonical inflammasomes: emerging pathways in IL-1-mediated autoinflammatory disease. *Seminars in Immunopathology*. 2014 Sep;36(5):595-609.
54. **Lukens JR**, Gross JM, Calabrese CR, Iwakura Y, Lamkanfi M, Vogel P, Kanneganti TD. Critical role for inflammasome-independent IL-1 $\beta$  production in osteomyelitis. *PNAS*. 2014 Jan 21;111(3):1066-71.
55. Weinlich R, Oberst A, Dillon CP, Janke LJ, Milasta S, **Lukens JR**, Rodriguez DA, Gurung P, Savage C, Kanneganti TD, Green DR. Protective Roles for Caspase-8 and cFLIP in Adult Homeostasis. *Cell Reports*. 2013 Oct 2. doi:pii: S2211-1247(13)00505-6.
56. **Lukens JR**, Vogel P, Johnson GR, Kelliher MA, Iwakura Y, Lamkanfi M, Kanneganti TD. RIP1-driven autoinflammation targets IL-1 $\alpha$  independently of inflammasomes and RIP3. *Nature*. 2013 Jun 13;498(7453):224-7.
57. **Lukens JR**, Gross JM, Kanneganti TD. IL-1 family cytokines trigger sterile inflammatory disease. *Front Immunol*. 2012;3:315.
58. **Lukens JR**, Kanneganti TD. Fat chance: not much against NKT cells. *Immunity*. 2012 Sep 21;37(3):447-9.
59. Anand PK, Malireddi RK, **Lukens JR**, Vogel P, Bertin J, Lamkanfi M, Kanneganti TD. NLRP6 negatively regulates innate immunity and host defence against bacterial pathogens. *Nature*. 2012 Aug 16;488(7411):389-93.
60. **Lukens JR**, Barr MJ, Chaplin DD, Chi H, Kanneganti TD. Inflammasome-derived IL-1 $\beta$  and the IL-1R1/MYD88 signaling axis regulate the production of GM-CSF by CD4<sup>+</sup> T cells and  $\gamma\delta$  T cells. *J Immunol*. 2012 Apr 1;188(7):3107-15. \*JI Author Choice Article.
61. **Lukens JR**, Dixit VD, Kanneganti TD. Inflammasome activation in obesity-related inflammatory diseases and autoimmunity. *Discov Med*. 2011 Jul;12(62):65-74.
62. Shaw PJ, Barr MJ, **Lukens JR**, McGargill MA, Chi H, Mak TW, Kanneganti TD. Signaling via the RIP2 adaptor protein in central nervous system-infiltrating dendritic cells promotes inflammation and autoimmunity. *Immunity*. 2011 Jan 28;34(1):75-84.

63. Shaw PJ, **Lukens JR**, Burns S, Chi H, McGargill MA, Kanneganti TD. Cutting edge: Critical role for PYCARD/ASC in the development of experimental autoimmune encephalomyelitis. *J Immunol.* 184(9):4610-4614, 2010.
64. Lassen MG, **Lukens JR**, Dolina JS, Brown MG, Hahn YS. Intrahepatic IL-10 maintains NKG2A+Ly49- liver NK cells in a functionally hyporesponsive state. *J Immunol.* 184(5):2693-2701, 2010.
65. **Lukens JR**, Dolina JS, Kim TS, Tacke RS, Hahn YS. Liver is able to activate naïve CD8+ T cells with dysfunctional anti-viral activity in the murine system. *PLoS One.* 4(10):e7619, 2009.
66. **Lukens JR**, Cruise MW, Lassen MG, Hahn YS. Blockade of PD-1/B7-H1 interaction restores effector CD8+ T cell responses in a hepatitis C virus core murine model. *J Immunol.* 180(7):4875-4884, 2008.
67. Hwang ML, **Lukens JR**, Bullock TN. Cognate memory CD4+ T cells generated with dendritic cell priming influence the expansion, trafficking, and differentiation of secondary CD8+ T cells and enhance tumor control. *J Immunol.* 179(9):5829-5838, 2007.
68. Cruise MW, **Lukens JR**, Nguyen AP, Lassen MG, Waggoner SN, Hahn YS. Fas ligand is responsible for CXCR3 chemokine induction in CD4+ T cell-dependent liver damage. *J Immunol.* 176(10):6235-6244, 2006.
69. Cruise MW, Melief HM, **Lukens J**, Soguero C, Hahn YS. Increased Fas ligand expression of CD4+ T cells by HCV core induces T cell-dependent hepatic inflammation. *J Leukoc Biol.* 78(2):412-425, 2005.
70. Cruise MW, **Lukens JR**, Hahn YS. Hepatitis C virus's immune evasion strategies. *Curr Immunol Rev.* 1(3):223-236, 2005.
71. Holub JM, O'Toole-Colin K, Getzel A, Argenti A, Evans MA, Smith DC, Dalglish GA, Rifat S, Wilson DL, Taylor BM, Miott U, Glersaye J, Lam KS, McCranor BJ, Berkowitz JD, Miller RB, **Lukens JR**, Krumpke K, Gupton JT, Burnham BS. Lipid-lowering effects of ethyl 2-phenacyl-3-aryl-1H-pyrrole-4-carboxylates in rodents. *Molecules.* 9(3):134-157, 2004.
72. Gupton J, Clough S, Miller R, **Lukens J**, Henry C, Kanters R, Sikorski J. The application of vinylogous iminium salt derivatives to the synthesis of ningalin B hexamethyl ether. *Tetrahedron.* 59:207-215, 2003.

### Book Chapters:

1. **Lukens JR** & Kanneganti TD. Inflammasome activation fuels obesity-related inflammatory diseases. *Experimental Medicine.* Volume 30: 1741-1749, 2012. Translated to Japanese for publication. Topic chosen for cover artwork.

### Honors and Awards:

2003	Omicron Delta Kappa National Leadership Honor Society
2003	Phi Beta Kappa Honor Society
2003	Magna cum laude
2003-2008	University of Virginia Dean's Merit Fellowship
2016	Hartwell Foundation Investigator
2017	Simons Foundation Autism Research Initiative Investigator
2018 & 2019	The American Association of Immunologists Early Career Faculty Travel Grant

2022 – Present Harrison Distinguished Teaching Associate Professor  
2024 University of Virginia Early Achievement Award in Biomedical Sciences

### **Professional Society Memberships:**

- The American Association of Immunologists, Member
- The International Society of Neuroimmunology, Member

### **Invited Presentations/Seminars:**

2024 University of Iowa, Graduate Program in Immunology, Iowa City, IA  
2024 University of Virginia, Department of Neuroscience Retreat, Charlottesville, VA  
2024 Neurodysfunction and Neurodegeneration Seminar Series, Consortium between the University of Texas Medical Branch, University of North Dakota, University of Florida, University of Kentucky, and Indiana University, virtual  
2024 FASEB Translational Neuroimmunology Conference, Niagara Falls, NY  
2024 5th Annual Americas School of Neuroimmunology (ASNI) conference, Toronto, Canada  
2024 Focused Ultrasound Foundation, Charlottesville, VA  
2024 41<sup>st</sup> Symposium of the National Neurotrauma Society, San Francisco, CA  
2024 Collège de France, Paris, France  
2024 Spring Brain Conference, Sedona, AZ  
2024 UT Southwestern Peter O’Donnell Brain Institute Neuroimmunology of CNS Disorders Symposium, Dallas, TX  
2024 Johns Hopkins University Neuroimmunology Seminar Series, Baltimore, MD  
2024 Neuroimmune Institute – Improving Quality of Life in Patients with Autism, virtual conference  
2024 University of North Carolina Neuroscience Center, Chapel Hill, NC  
2023 Cleveland Clinic Lerner Research Institute, Department of Neurosciences, Cleveland, OH  
2023 NIH/NIAID Neuroimmune Interface Center Symposium, Bethesda, MD  
2023 University of Illinois, Neuroscience Program, Urbana-Champaign, IL  
2023 16<sup>th</sup> International Congress of Neuroimmunology, International Society for Neuroimmunology (ISNI), Quebec City, Canada  
2023 St. Jude Children’s Research Hospital, Center of Excellence in Innate Immunity and Inflammation, Memphis, TN  
2023 Big Ten Neuroscience Annual Meeting, Indianapolis, IN  
2023 Gastronomists Galapagos 2023 Meeting, Galapagos Islands, Ecuador  
2023 The American Association of Immunologists Annual Meeting, Washington DC  
2023 UT Southwestern, Brain Institute, Dallas, TX

- 2023 Neumora Therapeutics, Watertown, MA
- 2023 American Society for Neurochemistry Conference, Lexington, KY
- 2023 National Capital Area TBI Symposium, Baltimore, MD
- 2023 Cincinnati Children's Hospital Research Foundation Seminar Series, Cincinnati, OH
- 2023 Duke University School of Medicine, Department of Immunology, Durham, NC
- 2023 Gordon Research Conference: Neuroimmune Communication in Health and Disease, Ventura, CA
- 2022 UT Southwestern, Department of Pathology, Dallas, TX
- 2022 University of Wisconsin-Madison, Immunology Training Program, Madison, WI
- 2022 University of Virginia, Department of Pharmacology, Charlottesville, VA
- 2022 InflammZoom International Webinar Series on Inflammasome Signalling. 2022
- 2022 University of Kentucky College of Medicine, Sanders-Brown Center on Aging, Lexington, KY
- 2022 FASEB Neuroimmunology Conference - The Translational Neuroimmunology Conference: From Bench to Bedside and Back, Asheville, NC
- 2022 39th Annual Symposium of the National Neurotrauma Society, Atlanta, GA
- 2022 ImmuneZoom International Virtual Seminar Series sponsored by the NIH
- 2022 University of Virginia, Department of Pathology, Charlottesville, VA
- 2022 Vanderbilt University, Vanderbilt Institute for Infection, Immunology & Inflammation (VI4), Nashville, TN
- 2022 The Ohio State University School of Medicine, Microbial Infection and Immunity Seminar Series, Columbus, OH
- 2022 NIH/NIEHS, Immunity, Inflammation & Disease Laboratory Seminar Series, Research Triangle Park, NC
- 2022 National Institute of Health, National Institute on Aging, Bethesda, MD
- 2022 University of California, Irvine, Institute for Immunology, Irvine, CA
- 2022 University of Virginia, Epilepsy Interest Group, Charlottesville, VA
- 2021 Virginia-Nordic Precision Neuroscience
- 2021 Baylor College of Medicine Immunology & Microbiology Seminar Series, Houston, TX
- 2021 University of Virginia Healthy Brain Development Center, Charlottesville, VA
- 2021 Gastronomes Global 2021, Nantes, France.
- 2021 University of Richmond, Richmond, VA
- 2021 Cardiff University Institute for Tissue Engineering and Repair (CITER), Cardiff, Wales.
- 2021 The Torrey Pines Training Consortium (TPTC) Academic Laboratory Management & Leadership Symposium 2021, La Jolla, CA
- 2021 Robert M. Berne Cardiovascular Research Center Career Development Seminar Series, University of Virginia, Charlottesville, VA
- 2021 University of Kentucky College of Medicine, Spinal Cord and Brain Injury Research Center (SCoBIRC), Lexington, KY
- 2021 Alzheimer's Association, 2021 Brain Summit: A Conference on Alzheimer's and Dementia, Virtual meeting hosted by the Virginia, DC, and Maryland chapters
- 2021 Cleveland Clinic Lerner Research Institute, Department of Neurosciences, Cleveland, OH



- 2021 University of Virginia ,Virginia Alzheimer’s Disease Center (VADC), Charlottesville, VA
- 2020 University of Iowa School of Medicine, Department of Pathology, Iowa City, IA
- 2020 University of Pennsylvania Immunology Colloquium Seminar Speaker, Philadelphia, PA
- 2020 Washington University School of Medicine in St. Louis, Department of Pathology & Immunology, St. Louis, MO
- 2020 University of Virginia Department of Psychology Seminar Series, Charlottesville, VA
- 2020 Spring 2020 Simons Foundation Autism Research Initiative (SFARI) Science Meeting: Panel on Maternal & Immune Contributions to Autism, New York City, NY
- 2020 University of Virginia, Center for Immunity, Inflammation and Regenerative Medicine (CIIR), Charlottesville, VA
- 2020 University of Virginia School of Medicine Faculty Retreat, Microbiome: “Friend or Foe?” Session, Charlottesville, VA
- 2019 Virginia Autism Research Consortium, Charlottesville, VA
- 2019 University of Virginia, Molecular Imaging and Biology Seminar Series hosted by the Department of Radiology and Medical Imaging, Charlottesville, VA
- 2019 UVA Brain Symposium, Charlottesville, VA.
- 2019 The American Association of Immunologists Annual Meeting, San Diego, CA
- 2019 Autism Research Institute Think Tank, Dallas, TX
- 2019 University of Virginia, Department of Neuroscience Retreat
- 2019 University of Richmond, Department of Biology, Richmond, VA
- 2019 Gordon Research Conference: Neuroimmune Communication in Health and Disease, Ventura, CA
- 2018 Microbiome Movement: Gut-Brain Axis Meeting, Boston, MA
- 2018 The University of Mississippi Medical Center, Department of Neurobiology and Anatomical Sciences Jackson, MS
- 2018 Virginia Tech University, Department of Biomedical Sciences and Pathobiology, Blacksburg, VA
- 2018 Joint Meeting of the Society for Leukocyte Biology & the International Endotoxin and Innate Immunity Society, Chandler, AZ
- 2018 Hartwell Foundation Annual Meeting, Johns Hopkins University, Baltimore, MD
- 2018 FASEB Conference: Translational Neuroimmunology, Snowmass, CO
- 2018 University of Virginia, Center for Immunity, Inflammation and Regenerative Medicine (CIIR), Charlottesville, VA
- 2018 Duke University School of Medicine, Department of Medicine, Durham, NC
- 2017 The 6th Annual Southeastern Immunology Symposium at Vanderbilt University, Nashville, TN
- 2017 Autism Pathways Symposium, University of Virginia, Charlottesville, VA
- 2017 University of Virginia, Department of Biochemistry and Molecular Genetics, Charlottesville, VA
- 2017 Georgetown University School of Medicine, Department of Neuroscience Seminar Series, Washington, DC
- 2017 Hartwell Foundation Annual Meeting, Duke University, Durham, NC
- 2017 Genome Sciences Seminar hosted by the University of Virginia Center for Public Health Genomics, Charlottesville, VA
- 2016 Johns Hopkins University School of Medicine, Department of Neurology, Baltimore, MD
- 2016 FASEB Translational Neuroimmunology: From Mechanisms to Therapeutics, Big Sky, MT
- 2016 NIH/NIEHS, Immunity, Inflammation & Disease Laboratory Seminar Series, Research

- Triangle Park, NC
- 2016 Hartwell Foundation Annual Meeting, Case Western Reserve University, Cleveland, OH
- 2016 Virginia Commonwealth University, Department of Biochemistry and Molecular Biology Seminar Series, Richmond, VA
- 2016 Pfizer, Boston, MA
- 2015 Beirne B. Carter Center for Immunology Research Seminar Series, Charlottesville, VA
- 2015 Virginia Biosciences Health Research Corporation, Arlington, VA
- 2015 Neuroscience Graduate Program Seminar Series, Charlottesville, VA
- 2015 The American Association of Immunologists Annual Meeting, New Orleans, LA
- 2015 The Carter Immunology Center Faculty Retreat, Wintergreen, VA
- 2014 The Virginia Symposium on Brain Immunology and Glia, Charlottesville, VA
- 2014 Medical University of South Carolina, Department of Pathology and Laboratory Medicine
- 2014 Gilead Sciences, Inc., Foster City, CA
- 2014 University of Maryland, Department of Cell Biology & Molecular Genetics
- 2014 Bristol-Myers Squibb, Inc., Princeton, NJ
- 2014 Gilead Sciences, Inc., New Haven, CT
- 2014 Medical University of South Carolina, Department of Microbiology and Immunology
- 2014 Indiana University-Purdue University Indianapolis, Department of Anatomy & Cell Biology and The Stark Neurosciences Research Institute
- 2013 University of Virginia, Department of Neuroscience
- 2013 Vanderbilt University, The Department of Pathology, Microbiology & Immunology
- 2013 The American Association of Immunologists Annual Meeting, Honolulu, HI

**Sessions chaired at national/international meetings:**

- 2024 FASEB Translational Neuroimmunology Conference “Diverse Career Paths in Neuroimmunology” Workshop Discussion Leader, Niagara Falls, NY. 2024. Co-lead with Drs. Peter Calabresi and Ursula Utz
- 2024 Spring Brain Conference, Sedona, AZ. 2024. Session: Mechanisms of neurodegeneration. Co-chaired with Dr. Jasmin Herz
- 2023 16th International Congress of Neuroimmunology, International Society for Neuroimmunology (ISNI), Quebec City, Canada. 2023. Session: Learning about neuroimmunology through Parkinson’s disease. Co-chaired with Dr. Michael Heneka
- 2022 FASEB Neuroimmunology Conference - The Translational Neuroimmunology Conference: From Bench to Bedside and Back, Asheville, NC. Chaired session: Scientific Transparency & Rigor
- 2022 FASEB Neuroimmunology Conference - The Translational Neuroimmunology Conference: From Bench to Bedside and Back, Asheville, NC. Chaired session: Innate Immune Sensing and Neuroinflammation
- 2021 Nature Conferences: 2021 Glial Biology in Medicine Conference. Virtual Conference. Chaired session: Glial-Neuronal Interaction and Synapse Formation
- 2021 The American Association of Immunologists Annual Meeting, Virtual. Session: Transforming the study of human disease through systems immunology. Co-chaired with Dr. Jennifer Anolik.

- 2021 Current Topics in TBI Virtual Symposium
- 2019 Cell Press Neuro-Immune Axis: Reciprocal Regulation in Development, Health, and Disease Symposia, Long Beach, CA. Session: Neurodegenerative disorders
- 2019 The American Association of Immunologists Annual Meeting, San Diego, CA. Session: Regulatory Mechanisms. Co-chaired with Dr. Elina Zuniga.
- 2017 2nd Americas School of Neuroimmunology, Charlottesville, VA. Session: Immune molecules in CNS function, development and disease. Co-chaired with Dr. Jorge Alvarez.

**Grant Review:**

*Permanent member*

- The National Multiple Sclerosis Society – Biomedical Research Grant Review Committee B member – 2019 – Present
- Hartwell Foundation Fellowship Internal Review Committee – 2018 – Present
- Summer Research Internship Program (SRIP) Admissions Committee – 2019 – Present
- University of Virginia Presidential Fellowship for Collaborative Neuroscience Research Review Committee – 2017 – 2021
- The National Multiple Sclerosis Society – Pilot grant committee member – 2016 – 2019

*Ad hoc reviewer*

- NIH Peer Review Committee - 2024/10 ZDA1 SXC-N (O1) R: Targeting Inflammasomes in HIV and Substance Use – July 8, 2024
- University of Virginia Searle Scholars Program Internal Competition Review Committee – July 2024
- Carter Immunology Center 2024 Collaborative Research Award Review Committee – April 2024
- NIH Peer Review Committee – 2024/05 ZRG1 CN-K (57) COVID19 and Brain Health Special Emphasis Panel – March 6, 2024
- The FUS Foundation Research Award Program – January 2024
- The 2023 Ernest J. Del Monte Institute for Neuroscience Pilot Program – January 2024
- NIH Peer Review Committee – 2024/01 ZRG1 CN-W (90) S Neurological Disorders: cerebrovascular disorders, Ischemic stroke, traumatic brain injury, and VCID Special Emphasis Panel – December 7, 2023
- Florida Department of Health Ed and Ethel Moore Alzheimer’s Disease Research Program 23-24, Peer Review - Alzheimer's Disease Panel – October 5, 2023
- Auckland Medical Research Foundation Review Committee – August 2023
- NIH Peer Review Committee – ZRG1 AN-Z (55) R - RFA: Alzheimer's Disease and its Related Dementias Special Emphasis Panel – June 29-30, 2023
- Alzheimer’s Association – AD Strategic Fund: Endolysosomal Activity in Alzheimer’s (E2A) Grant Program
- Auckland Medical Research Foundation Review Committee – April 2023
- University of Virginia Presidential Fellowship in Collaborative Neuroscience Grant Review Committee – April 2023
- Roy J. Carver Charitable Trust Grant Review Committee – December 2022

- NIH Peer Review Committee – 2023/01 ZRG1 CN-M (90) S Neuroimaging and Mechanisms in Development and Psychopathology Special Emphasis Panel – December 15, 2022
- University of Virginia BIG Steps Forward P2PE Transformative Neuroinflammation in Neurodegeneration Pilot Grant Study Section – November 16, 2022
- Florida Department of Health Ed and Ethel Moore Alzheimer’s Disease Research Program 22-23, Peer Review - Alzheimer's Disease Panel – November 2-3, 2022
- NIH Peer Review Committee – ZRG1 BDCN Z (02) Special Emphasis Panel for the Brain Injury and Neurovascular Pathologies (BINP) members – July 14, 2022
- Alzheimer’s Association – AD Strategic Fund: APOE Biology in Alzheimer’s (ABA) Review Committee – June, 2022
- Commonwealth of Virginia Alzheimer’s and Related Diseases Research Award Fund Review Committee – June, 2022
- NIH Peer Review Committee – ZRG1 MDCN-B (56) The Molecular and Cellular Causal Aspects of Alzheimer's Disease – June 2, 2022
- NIH Peer Review Committee – ZRG1 MDCN-J (03) Member Conflict: Biology of Neurodegenerative Diseases – March 17, 2022
- The Royal Society University Research Fellowship review panel – February 1, 2022
- Florida Department of Health Ed and Ethel Moore Alzheimer’s Disease Research Program 21-22, Peer Review - Alzheimer's Disease Panel – November 17-18, 2021
- NIH Peer Review Committee – 2022/01 ZRG1 IDIA-D (90) S Innate Immunity and Inflammation (III) study section overflow special emphasis panel – October 13, 2021
- NIH Peer Review Committee – 2021/10 ZRG1 MDCN-J (02) M Member Conflict: Synapse formation and function – July 15, 2021
- Weston Family Foundation review panel – June 29, 2021
- Rutherford Discovery Fellowship review panel – June 3, 2021
- NIH Peer Review Committee – ZRG1 MDCN-G (05) Member Conflict: Neurodevelopment, Neuroimmunology, Neurovascular and Neurodegeneration – March 25, 2021
- NIH Peer Review Committee – 2021/05 ZRG1 F03A-T (20) L NRSA fellowship applications for the NIH Neurodevelopment, Synaptic Plasticity, and Neurodegeneration panel (F03A) – March 4-5, 2021
- Florida Department of Health Ed and Ethel Moore Alzheimer’s Disease Research Program 20-21, Peer Review - Alzheimer's Disease Panel – November 16, 2020
- NIH Peer Review Committee – ZRG1 BDCN-E (55) R Complementary and Integrative Approaches to Modulation of Glymphatic-Lymphatic Systems – October 21, 2020
- Alzheimer’s Association – Alzheimer’s Association Research Fellowship (AARF) Program – 2017 – 2020
- NIH Peer Review Committee Cellular and Molecular Biology of Glia (CMBG) Study Section – June 4-5, 2020
- International Rett Syndrome Foundation Grant Review – February 24-25, 2020
- University of Virginia TransUniversity Microbiome Initiative (TUMI) Pilot and Feasibility Grant Review Committee – 2020 – 2021
- NIH Peer Review Committee – ZRG1 BDCN-W (92) S Special Topics in Aging: Frailty,

Delirium, Immunosenescence, Cognition, and Alzheimer's Disease – August 8, 2019

- NIH Peer Review Committee – ZRG1 IMM-T (50) R Targeting Inflammasomes in Substance Abuse and HIV – July 30, 2019
- University of Virginia Brain Institute Transformative Neuroscience Pilot Grants Review Committee – 2019
- Carter Immunology Center Collaborative Project Research Award Review Committee – 2019
- Supporting Transformative Autism Research (STAR) Pilot Grant Review Committee – 2019
- Virginia Tech Office of the Vice President for Research and Innovation initiated Junior Faculty NIH Grant pre-review – 2019
- NIH Peer Review Committee – ZRG1 BDCN-W (04) Member Conflict: Traumatic Brain Injury, Cerebrovascular Disorders, and Epilepsy – April 4, 2019
- The Waterloo Foundation: Child Development Fund Review Committee – 20019
- DoD Multiple Sclerosis Research Program (MSRP): Exploration-Hypothesis Development Award Review Panel – 2018
- Commonwealth of Virginia Alzheimer's and Related Diseases Research Award Fund – Committee member – 2017 – 2018
- Harrison Undergraduate Research Award Review Committee – 2018
- Double Hoo Undergraduate Research Award Review Committee – 2018
- NIH Center for Scientific Review (CSR) Anonymization Study (IMM IRG) - Hypersensitivity, Autoimmune, and Immune-mediated (HAI) study section – 2018
- Focused Ultrasound Foundation Research Award Program – Ad hoc reviewer – 2018
- 4-VA at UVA Collaborative Research Grant – Ad hoc reviewer - 2018
- National Children's Research Centre – Ad hoc reviewer – 2017
- The Netherlands Organisation for Scientific Research – Ad hoc reviewer – 2015
- MS Research Australia – Ad hoc reviewer – 2015
- NIH Peer Review Committee: Innate Immunity and Inflammation (III) – Ad hoc reviewer – June 4-5, 2015
- Israel Science Foundation – Ad hoc reviewer – 2015
- Alzheimer's Association 2015 International Research Grant Program – Ad hoc reviewer – 2014 – 2015

## **Review Service to Professional Publications:**

### *Editorial boards*

- *Journal of Neuroinflammation* – Associate Editor – 2024 – present
- *Glial Health Research* – Editorial Board – 2024 – present
- *Brain, Behavior, and Immunity* – Editorial Board – 2016 – present
- *Frontiers in Immunology* – Review Editor – 2017 – 2022
- *The Journal of Immunology* – Associate Editor – 2017 – 2022

### *Ad hoc reviewer*

- *Cell* – 4 manuscripts in total

- *Nature* – 2 manuscripts in total
- *Science Magazine* – 3 manuscripts in total
- *Nature Aging* – 5 manuscripts in total
- *Nature Cell Biology* – 1 manuscript in total
- *Nature Immunology* – 3 manuscripts in total
- *Nature Medicine* – 3 manuscripts in total
- *Nature Neuroscience* – 13 manuscripts in total
- *Nature Reviews Neurology* – 1 manuscript in total
- *Immunity* – 17 manuscripts in total
- *Neuron* – 10 manuscripts in total
- *Nature Communications* – 9 manuscripts in total
- *Cell Reports* – 20 manuscripts in total
- *Cell Stem Cell* – 2 manuscripts in total
- *The Journal of Clinical Investigation* – 36 manuscripts in total
- *EMBO* – 5 manuscripts in total
- *Science Translational Medicine* – 5 manuscripts in total
- *Science Signaling* – 4 manuscripts in total
- *Science Advances* – 8 manuscripts in total
- *Journal of Experimental Medicine* – 8 manuscripts in total
- *PNAS* – 3 manuscripts in total
- *Glia* – 2 manuscripts in total
- *Molecular Psychiatry* – 7 manuscripts in total
- *Alzheimer's & Dementia* – 5 manuscripts in total
- *eLife* – 3 manuscripts in total
- *Cellular & Molecular Immunology* – 3 manuscripts in total
- *The Journal of Immunology* – 43 manuscripts in total
- *The Journal of Neuroscience* – 2 manuscripts in total
- *Journal of Virology* – 1 manuscript in total
- *Trends in Immunology* – 3 manuscripts in total
- *Trends in Neurosciences* – 2 manuscripts in total
- *Trends in Molecular Medicine* – 1 manuscript in total
- *Advanced Science* – 1 manuscript in total
- *Brain* – 3 manuscripts in total
- *Brain, Behavior, and Immunity* – 79 manuscripts in total
- *Molecular Neurodegeneration* – 3 manuscripts in total
- *Cells* – 1 manuscript in total
- *Cellular and Molecular Life Sciences* – 1 manuscript in total
- *Cell Death & Disease* – 1 manuscript in total
- *Communications Biology* – 2 manuscripts in total
- *Computational and Structural Biotechnology Journal* – 1 manuscript in total
- *Current Opinion in Neurobiology* – 2 manuscripts in total
- *Hepatology* – 1 manuscript in total

- *Immunological Reviews* – 7 manuscripts in total
- *iScience* – 1 manuscript in total
- *Life Science Alliance* – 1 manuscript in total
- *Neuropsychopharmacology* – 3 manuscripts in total
- *Neurobiology of Disease* – 3 manuscripts in total
- *Nutrition Reviews* – 1 manuscript in total
- *Molecular and Cellular Neuroscience* – 1 manuscript in total
- *Molecular Immunology* – 3 manuscripts in total
- *PLOS Neglected Tropical Diseases* – 1 manuscript in total
- *Progress in Neurobiology* – 1 manuscript in total
- *Chemical Engineering Journal* – 1 manuscript in total
- *Clinical & Translational Immunology* – 1 manuscript in total
- *EBioMedicine* – 1 manuscript total
- *Frontiers in Immunology* – 16 manuscripts in total
- *Frontiers in Neuroscience* – 1 manuscript in total
- *Frontiers in Molecular Neuroscience* – 1 manuscript in total
- *The Journal of Leukocyte Biology* – 5 manuscripts in total
- *Gut Microbes* – 1 manuscript in total
- *eNeuro* – 2 manuscripts in total
- *Clinical and Translational Medicine* – 1 manuscript in total
- *Immunology* – 1 manuscript in total
- *Journal of Cancer* – 1 manuscript in total
- *Journal of Inflammation Research* – 1 manuscript in total
- *Journal of Neurochemistry* – 7 manuscripts in total
- *Journal of Neuroimmunology* – 7 manuscripts in total
- *Journal of Neuroinflammation* – 11 manuscripts in total
- *Journal of Neurotrauma* – 1 manuscript in total
- *Journal of Translational Medicine* – 1 manuscript in total
- *Molecular Aspects of Medicine* – 1 manuscript in total
- *Neurobiology of Learning and Memory* – 1 manuscript in total
- *Gut Microbes* – 1 manuscript in total
- *Critical Reviews in Immunology* – 1 manuscript in total
- *Immunobiology* – 1 manuscript in total
- *Scientific Reports* – 3 manuscripts in total
- *Journal of Parkinson's Disease* – 2 manuscripts in total
- *Brain and Behavior* – 1 manuscript in total
- *ASN Neuro* – 1 manuscript in total
- *PLoS One* – 2 manuscripts in total
- *Seminars in Immunology* – 1 manuscript in total
- *Translational Neurodegeneration* – 1 manuscript in total
- *Translational Research* – 2 manuscripts in total

- *Neuroscience and Behavioral Reviews* – 1 manuscript in total
- *International Journal of High School Research* – 1 manuscript in total
- *Viruses* – 1 manuscript in total

### Teaching Activity:

- 2024 BIMS8131/PATH8130: Topics in the Molecular Basis of Human Disease – Instructor – Lecture: Emerging topics in autism spectrum disorder research
- 2024 Mini-Med School Lab Night
- 2024 American Association of Immunologists (AAI) Introductory Course in Immunology – Instructor – Lecture: Neuroimmunology
- 2024 MICR 8202: Integration and Diversification of the Immune System – Instructor – Lecture: “Neuroimmunology”
- 2024 NESC 8000: Foundations of Neuroscience – Behavior & Disease NGP core – Instructor – Lecture: “Autism Spectrum Disorder”
- 2024 MICR 8200: Building Blocks of the Immune System – Instructor – Lectures: “IL-1, NLRs, and inflammasomes in innate immunity”, “CD4<sup>+</sup> T cell differentiation”, “CD4<sup>+</sup> T cell effector functions”
- 2023 NESC 7019: Foundations of Neuroimmunology – Instructor – Two lectures: “The neuroimmunology of multiple sclerosis” and “Emerging roles for the immune system in neurodegenerative diseases”
- 2023 Mini-Med School Lab Night
- 2023 PATH 8470/BIMS 8151: Readings in Molecular Medicine – Instructor – Lecture: “Exploring the roles of ferroptosis in Alzheimer’s disease”
- 2023 MED 7752: Mind Brain and Behavior – Problem Set Leader – “Motor Systems I & II”
- 2023 MED 7752: Mind Brain and Behavior – Instructor – Lecture: “Motor Systems I”
- 2023 BIMS 7100: Responsible Conduct of Research (RCR) – Group Leader – Lecture: “Mentor/Mentee Responsibilities and Relationships”
- 2023 MICR 8202: Integration and Diversification of the Immune System – Instructor – Lecture: “Neuroimmunology”
- 2023 NESC 8000: Foundations of Neuroscience – Behavior & Disease NGP core – Instructor – Lecture: “Autism Spectrum Disorder”
- 2023 MICR 8200: Building Blocks of the Immune System – Instructor – Lectures: “IL-1, NLRs, and inflammasomes in innate immunity”, “CD4<sup>+</sup> T cell differentiation”, “CD4<sup>+</sup> T cell effector functions”
- 2023 BIMS8131/PATH8130: Topics in the Molecular Basis of Human Disease – Instructor – Lecture: Emerging topics in autism spectrum disorder research
- 2022 NESC 7019: Foundations of Neuroimmunology – Instructor – Lecture: “The Neuroimmunology of Multiple Sclerosis”
- 2022 University of Virginia Department of Neurology – Grand Rounds – Seminar Speaker
- 2022 BIMS 7100: Responsible Conduct of Research (RCR) – Group Leader – Lecture: “Authorship, Publication, and Peer Review”



- 2022 BIMS 7100: Responsible Conduct of Research (RCR) – Group Leader – Lecture: “Data Management, Rigor, and Reproducibility”
- 2022 MED 7752: Mind Brain and Behavior – Instructor – Lecture: “Motor Systems I”
- 2022 MICR 8202: Integration and Diversification of the Immune System – Instructor – Lectures: “CD4<sup>+</sup> T cell differentiation” & “CD4<sup>+</sup> T cell effector functions”
- 2022 NESC 8000: Foundations of Neuroscience – Behavior & Disease NGP Core 3 – Instructor – Lecture: “Autism Spectrum Disorder”
- 2022 MICR 8200: Building Blocks of the Immune System – Instructor – Lecture: “IL-1, NLRs, and inflammasomes in innate immunity”
- 2022 BIMS8131/PATH8130: Topics in the Molecular Basis of Human Disease – Instructor – Lecture: Emerging topics in autism spectrum disorder research
- 2021 NESC 7019: Foundations of Neuroimmunology – Instructor – Two lectures: “The Neuroimmunology of Multiple Sclerosis” “Emerging roles for the immune response in neurodevelopmental disorders”
- 2021 MED 6513: Social Issues in Medicine I – Mentor – “Cells to Society” – Sessions I & II
- 2021 MED 7752: Mind Brain and Behavior – Instructor – Lecture: “Motor Systems I”
- 2021 BIMS 7100: Responsible Conduct of Research (RCR) – Group Leader – Lecture: “Authorship, Publication, and Peer Review”
- 2021 BIMS 7100: Responsible Conduct of Research (RCR) – Group Leader – Lecture: “Data Management, Rigor, and Reproducibility”
- 2021 BIOSCI N127: Fundamentals of Neuroimmunology, University of California, Irvine – Guest Lecturer – Lecture: Meningeal immunity
- 2021 MICR 8202: Integration and Diversification of the Immune System – Instructor – Lectures: “CD4<sup>+</sup> T cell differentiation” & “CD4<sup>+</sup> T cell effector functions”
- 2021 NESC 8000: Foundations of Neuroscience – Behavior & Disease NGP Core 3 – Instructor – Lecture: “Autism Spectrum Disorder”
- 2021 University of Virginia Department of Neurosurgery – Grand Rounds – Seminar Speaker
- 2021 MICR 8200: Building Blocks of the Immune System – Instructor – Lecture: “IL-1, NLRs, and inflammasomes in innate immunity”
- 2021 BIMS8131/PATH8130: Topics in the Molecular Basis of Human Disease – Instructor – Lecture: Emerging topics in autism spectrum disorder research
- 2020 NESC 7019: Foundations of Neuroimmunology – Instructor – Lecture: “Emerging roles for the immune response in neurodevelopmental disorders”
- 2020 University of Virginia Department of Neurology – Grand Rounds – Seminar Speaker
- 2020 BIOL 4360: Cytokine Signaling and Neural Development – Instructor – Lecture: “Role of gestational immune dysregulation in autism”
- 2020 American Physician Scientists Association (APSA) journal club discussion leader
- 2020 MICR 8204: Current Topics in Immunology – Instructor – two lectures on the role of the immune system in neurological disease and health
- 2020 MED 6513: Social Issues in Medicine I – Mentor – “Cells to Society” – Sessions I & II
- 2020 Alzheimer’s Association: Virtual Lunch and Lab Tour
- 2020 MED 7752: Mind Brain and Behavior – Instructor – Lecture: “Motor Systems I”

- 2020 MICR 8202: Integration and Diversification of the Immune System – Instructor – Lectures: “CD4<sup>+</sup> T cell differentiation” & “CD4<sup>+</sup> T cell effector functions”
- 2020 NESC 8000: Foundations of Neuroscience – Behavior & Disease NGP Core 3 – Instructor – Lecture: “Autism Spectrum Disorder”
- 2020 MICR 8200: Building Blocks of the Immune System – Instructor – Lecture: “IL-1, NLRs, and inflammasomes in innate immunity”
- 2020 BIMS8131/PATH8130: Topics in the Molecular Basis of Human Disease – Instructor – Lecture: Emerging topics in autism spectrum disorder research
- 2019 NESC 7019: Foundations of Neuroimmunology – Instructor – Lecture: “Emerging roles for the immune response in neurodevelopmental disorders”
- 2019 Linden House Assisted Living – Understanding Alzheimer’s and Dementia: An Education Program Presented by the Alzheimer’s Association – Instructor
- 2019 Mini-Med School Lab Night
- 2019 MICR 8204: Current Topics in Immunology – Instructor – two lectures on the role of the immune system in neurological disease and health
- 2019 MED 6513: Social Issues in Medicine I – Mentor – “Cells to Society” – Sessions I & II
- 2019 Alzheimer’s Association: What’s New in Alzheimer’s Research: Panel Discussion and Conversation – Keswick, VA – Presenter
- 2019 Osher Lifelong Learning Institute at the University of Virginia – Understanding Alzheimer’s and Dementia: An Education Program Presented by the Alzheimer’s Association – Instructor
- 2019 MED 7752: Mind Brain and Behavior – Problem Set Leader – “Motor Systems I & II”
- 2019 MED 7752: Mind Brain and Behavior – Instructor – Lecture: “Motor Systems I”
- 2019 BIMS8131/PATH8130: Topics in the Molecular Basis of Human Disease – Instructor – Lecture: Emerging topics in autism spectrum disorder research
- 2019 BIO 712: Advanced Immunology Missouri State University – Guest Lecturer – Lecture: Emerging concepts in neuroimmunology
- 2019 MED 7752: Mind Brain and Behavior – Wet Lab Instructor – Lab 3: “Deep Structures of the Brain”
- 2019 NESC 8000: Foundations of Neuroscience – Behavior & Disease NGP Core 3 – Instructor – Lecture: “Autism Spectrum Disorder”
- 2019 BIMS 7100: Responsible Conduct of Research (RCR) – Group Leader – Lecture: “Data Management, Rigor, and Reproducibility”
- 2019 BIMS 7100: Responsible Conduct of Research (RCR) – Group Leader – Lecture: “Authorship, Publication, and Peer Review”
- 2019 MICR 8200: Building Blocks of the Immune System – Instructor – Lecture: “IL-1, NLRs, and inflammasomes in innate immunity”
- 2018 NESC 7019: Foundations of Neuroimmunology – Instructor – Lecture: “Emerging roles for the immune response in neurodevelopmental disorders”
- 2018 NESC 7019: Foundations of Neuroimmunology – Instructor – Lecture: “Multiple Sclerosis”
- 2018 Mini-Med School 2018 Lab Night
- 2018 MICR 8204: Current Topics in Immunology – Instructor – two lectures on innate immune signaling
- 2018 MED 6513: Social Issues in Medicine I – Mentor – “Cells to Society” – Sessions I & II
- 2018 MED 7752: Mind Brain and Behavior – Problem Set Leader – “Motor Systems I & II”

- 2018 MED 7752: Mind Brain and Behavior – Instructor – Lecture: “Motor Systems I”
- 2018 MED 7752: Mind Brain and Behavior – Wet Lab Instructor – Labs: “Neuroanatomy: Brain Blood Supply & Dural Sinuses” and “Neuroanatomy: Brain Surface Features & Cranial Nerves”
- 2018 UVA Department of Neurosurgery – Grand Rounds – Seminar Speaker
- 2018 William Monroe High School, Blue Virtual Governor School – Instructor – Lecture: “Current topics in neuroimmunology research”
- 2018 BIMS 7100: Responsible Conduct of Research (RCR) – Group Leader – Lecture: “Data Management and Rigor & Reproducibility”
- 2018 NESC 8000: Foundations of Neuroscience – Behavior & Disease NGP Core 3 – Instructor – Lecture: “Autism Spectrum Disorder”
- 2018 BIMS 7100: Responsible Conduct of Research (RCR) – Group Leader – Lecture: “Mentor Trainee Responsibilities and Relationships”
- 2018 MICR 8200: Building Blocks of the Immune System – Instructor – Lecture: “IL-1, NLRs, and inflammasomes in innate immunity”
- 2017 Neuropsychology Didactic Series for the UVA Health System Department of Neurology and Psychiatry & Neurobehavioral Sciences – Lecture: Immune signaling in neurodegenerative disease
- 2017 PATH 8130 Topics in Molecular Basis of Human Disease I – Instructor – Lecture: Emerging topics in autism spectrum disorder research
- 2017 MICR 8204 Current Topics in Immunology – Four lectures on NLR signaling and inflammasomes
- 2017 NESC 8250 Molecular Basis of Neurological Disease – Instructor – Lecture: “Grant critique and review”
- 2017 Brain Awareness Week Lecturer at Monticello High School – 2 classes
- 2017 NESC 7019 Foundations of Neuroimmunology – Instructor – Lectures: “Inflammation and Neurodegeneration” and “Multiple Sclerosis”
- 2017 MED 7752: Mind Brain and Behavior – Exam Proctor
- 2017 MED 7752: Mind Brain and Behavior – Problem Set Leader – “Motor Systems I & II”
- 2017 MED 7752: Mind Brain and Behavior – Instructor – Lecture: “Motor Systems I”
- 2017 MED 7752: Mind Brain and Behavior – Wet Lab Instructor – Labs: “Neuroanatomy: Brain Blood Supply & Dural Sinuses” and “Neuroanatomy: Brain Surface Features & Cranial Nerves”
- 2017 BIMS 7100: Responsible Conduct of Research (RCR) – Group Leader – Lecture: “Mentor Trainee Responsibilities and Relationships”
- 2017 MICR 8200: Building Blocks of the Immune System – Instructor – Lecture: “IL-1, NLRs, and inflammasomes in innate immunity”
- 2017 NESC 8250 Molecular Basis of Neurological Disease – Instructor – Lecture: “Grant critique and review”
- 2016 MICR 8204 Current Topics in Immunology – Four lectures on NLR signaling, inflammasomes, and microbiota.
- 2016 MED 7752: Mind Brain and Behavior – Wet lab instructor – Labs: “Surface Anatomy of the Brain and Ventricular System” and “Deep Structures of the Brain and Cerebellum”
- 2016 NESC 8250 Molecular Basic of Neurological Disease – Instructor – Lecture: “Grant critique

and review” – sessions I & II

- 2016 MICR 8200: Building Blocks of the Immune System – Instructor – Lecture: “IL-1, NLRs, and inflammasomes in innate immunity”
- 2015 Pavilion Seminar: The Body-Mind Problem (PAVS 4500-003) – Instructor – Lecture: “The Microbiome and CNS Disease”
- 2015 MED 7752: Mind Brain and Behavior – Wet lab instructor – Labs: “Blood Supply to the Brain, and Cranial Nerves”, “Surface Anatomy of the Brain and Ventricular System” and “Deep Structures of the Brain and Cerebellum”

## **Mentoring Experience:**

### *Graduate Students*

- Ben Wendell – Microbiology, Immunology, & Cancer Biology Training Program – February 2024 – Present
- Adeline Walsh – Biophysics Training Program – February 2022 – Present
- Josh Samuels (Co-mentored with Dr. Rich Price) – Neuroscience Graduate Program – February 2022 – Present
- Alexis "Lexi" Johnson – Neuroscience Graduate Program – February 2022 – Present
- Aman Mangalmurti – Medical Scientist Training Program – April 2021 – Present
- Nick Natale (Co-mentored with Dr. William Petri) – Neuroscience Training Program – February 2021 – Present
- Jess Thanos – Neuroscience Graduate Program – February 2021 – Present
- Ana Royo Marco – Microbiology, Immunology, & Cancer Biology Training Program – February 2021 – Present
- Kristine Zengeler – Neuroscience Graduate Program – February 2020 – April 2023 (Graduated PhD)
- Hannah Ennerfelt – Neuroscience Graduate Program – April 2019 – September 2022 (Graduated – PhD)
- Ashley Bolte – Medical Scientist Training Program – April 2018 – January 2021 (Graduated MD, PhD)
- Sushanth Kumar (Co-mentored with Dr. Chris Deppmann) – Neuroscience Graduate Program – July 2017 – July 2023 (Graduated PhD)
- Catherine Lammert – Neuroscience Graduate Program – February 2016 – August 2020 (Graduated PhD)

### *Postdoctoral Fellows*

- Clint Upchurch – December 2023 – Present
- Kristine Zengeler – April 2023 – Present
- Elizabeth Frost – June 2016 – May 2021
- Fátima Rivera-Escalera – December 2015 – April 2017

### *Visiting Faculty*

- Xiuyan Wei (Associate Professor – Shenyang Pharmaceutical University, Department of Pharmacology) – July 2016 – June 2017

### *Visiting Medical School Student*

- Katherine Bruch (UVA Medical School Student) – August 2021 – July 2022

### *Master's Thesis Student*

- Kate Hitpass Romero (University of Auckland, New Zealand) – February 2024

### *Graduate Rotation Students*

- Annie Marchildon (Neuroscience Training Program) – October – November 2024
- Ben Wendell (Cell and Molecular Biology Training Program) – July – August 2023
- Emily Golden (Medical Scientist Training Program) – July 2023
- Samuel Wachamo (Medical Scientist Training Program) – July 2022
- Patryk Krakowiak (Microbiology, Immunology, & Cancer Biology Training Program) - February - March 2022
- Adeline Walsh (Biophysics Training Program) – January – February 2022
- Josh Samuels (Neuroscience Training Program) – October – November 2021
- Sydney Labuzan (Neuroscience Training Program) – July – August 2021
- Alexis Johnson (Neuroscience Training Program) – July – August 2021
- Tula Raghavan (Medical Scientist Training Program) – June 2021
- Sarah Hunter-Chang (Neuroscience Training Program) – February – March 2021
- Nick Natale (Neuroscience Training Program) – January – February 2021
- Jess Thanos (Neuroscience Training Program) – January – February 2021
- Ana Royo Marco (Microbiology, Immunology, & Cancer Biology Training Program) – January – February 2021
- Lydia Sibley (Neuroscience Training Program) – October – November 2020
- Addison Webster (Neuroscience Training Program) – October – November 2020
- Kristine Zengeler (Neuroscience Training Program) – January – February 2020
- David Tyus (Neuroscience Training Program) – July – August 2019
- Niket Yadav (Medical Scientist Training Program) – June 2019
- Hannah Ennerfelt (Biology Training Program) – January – April 2019
- Ogochukwu Uweru (Neuroscience Training Program) – January – February 2019
- Wei Feng Ma (Medical Scientist Training Program) – July – August 2018
- Shayla Clark (Neuroscience Graduate Program) – January – February 2018
- HeeJin Cheon (Medical Scientist Training Program) – July – August 2017
- Zachary Papadopoulos (Neuroscience Graduate Program) – July – August 2017
- Thaddeus Weigel (Neuroscience Graduate Program) – July – August 2017
- Ashley O'Keefe (Medical Scientist Training Program) – July – August 2016
- Elise Braatz (Neuroscience Graduate Program) – January – February 2016
- Ashtyn Smith (Neuroscience Graduate Program) – October – November 2015
- Katherine Still (Neuroscience Graduate Program) – October – November 2015
- Michael Raymond (Neuroscience Graduate Program) – July – August 2015
- Catherine Lammert (Neuroscience Graduate Program) – July – August 2015
- Riley Hannan (Cell Biology & Molecular Biology) – July – August 2015

### *Undergraduate Students*

- Ridhi Pendyala (UVA) – January 2024 – Present
- Ben Davis (UVA) – November 2023 – Present
- Nicholas Cormas (UVA) – September 2023 – Present
- Olivia Campbell (UVA) – August 2023 – Present

- Lexi Vesselinov (UVA) – November 2022 – Present
- Julia Dill (UVA) – November 2022 – Present
- Abhi Verma (UVA) – January 2022 – Present
- Ava Hollis (UVA) – September 2021 – Present
- Coco Holliday (UVA) – May 2020 – May 2023
- Daniel Shapiro (UVA) – August 2019 – May 2022
- Nick Natale (Univ. of Richmond – Summer Research Internship Program) – Summer 2019
- Payton Grimes (UVA) – January 2018 – June 2019
- Makenzie Scanlon (UVA) – January 2018 – June 2019
- Margaret Clinard (UVA) – May 2016 – May 2017
- Calli Bellinger (UVA) – January 2016 – May 2019
- Anugya Mittal (UVA) – January 2016 – May 2019
- Joseph Squillace (Duke University) – May 2015 – August 2015
- Aman Mangalmurti (UVA) – January 2015 – May 2017
- Nishit Mummareddy (Pediatric Oncology Education Program, St. Jude Children’s Research Hospital) – Summer 2013
- Jordan Gross (Pediatric Oncology Education Program, St. Jude Children’s Research Hospital) – Summer 2010 & 2012

#### *Graduate Student Committees*

- Jules King (UVA, Neuroscience Graduate Program) – 2024 – Present
- Hailee Walker (University of Utah, Interdepartmental Program in Neuroscience) – 2024 – Present
- Samuel Wachamo (UVA, Neuroscience Graduate Program, MSTP) – 2024 – Present
- Stephanie Moy (UVA, Neuroscience Graduate Program) – 2024 – Present
- Abigayle Hughes (UVA, Neuroscience Graduate Program) – 2023 – Present
- Sydney Labuzan (Neuroscience Training Program) – 2023 – Present
- Tula Raghavan (UVA, Microbiology, Immunology, & Cancer Biology, MSTP) – 2022 – Present
- Matthew So (St. Jude Children’s Research Hospital) – 2022 – 2024
- Jiachen Shi (UVA, Biology Graduate Program) – 2022 – Present
- Guadalupe Sanchez (Mayo Clinic, Neuroscience Graduate Program) – 2022 – Present
- Lydia Sibley (UVA, Neuroscience Graduate Program) – 2022 – Present
- Abril Gaona (UVA, Biology) – 2022 – 2024
- Dylan Neel (Harvard University, Immunology, MSTP) – 2023 (Graduate – PhD)
- Casey J. Bauchle (UVA, Microbiology, Immunology, & Cancer Biology) – 2021 – Present
- Isaac Babcock (UVA, Neuroscience Graduate Program) – 2021 – Present
- Niket Yadav (UVA, Experimental Pathology, MSTP) – 2021 – Present
- Maira Jalil (UVA, Biology Graduate Program) – 2021 – Present
- Catherine Gorick (UVA, Biomedical Engineering) – 2020 – 2021 (Graduated – PhD)
- Alexander Ball (UVA, Microbiology, Immunology, & Cancer Biology) – 2020 – 2024 (Graduated – PhD)
- Maura Belanger (UVA, Chemistry Graduate Program) – 2020 (Graduated – PhD)
- Sean Cuddy (UVA, Neuroscience Graduate Program) – 2019 – 2023 (Graduated – PhD)
- Zachary Papadopoulos (UVA, Neuroscience Graduate Program) – 2019 – 2021 (Transferred to WashU)

- Victoria Sun (UVA, Biology Graduate Program) – 2019 – 2023 (Graduated – PhD)
- Roza Przanowska (UVA, Biochemistry and Molecular Genetics Program) – 2019 – 2021 (Graduated – PhD)
- Alexandra Donlan (UVA, Microbiology, Immunology, & Cancer Biology) – 2019 – 2021 (Graduated – PhD)
- Ashtyn Wiltbank (UVA, Neuroscience Graduate Program) – 2018 – 2022 (Graduated – PhD)
- Jon Suzich (UVA, Microbiology, Immunology, & Cancer Biology, MSTP) – 2018 – 2021 (Graduated – PhD)
- Amy Van Deusen (UVA, Neuroscience Graduate Program) – 2018 – 2024 (Graduated – PhD)
- Dylan Goldman (UVA, Neuroscience Graduate Program) – 2018 – 2022 (Graduated – PhD)
- Becca Beiter (UVA, Neuroscience Graduate Program) – 2018 – 2022 (Graduated – PhD)
- Andrea Salvador (UVA, Neuroscience Graduate Program) – 2018 – 2023 (Graduate – PhD)
- Xiaoyu Zhao (UVA, Microbiology, Immunology, & Cancer Biology) – 2018 – 2024 (Graduated – PhD)
- Samantha Batista (UVA, Microbiology, Immunology, & Cancer Biology) – 2017 – 2020 (Graduated – PhD)
- Elise Braatz (UVA, Neuroscience Graduate Program) – 2017 – 2021 (Graduated – PhD)
- Katherine Still (UVA, Neuroscience Graduate Program) – 2017 – 2020 (Graduated – PhD)
- Sushanth Kumar (UVA, Neuroscience Graduate Program) – 2017 – 2023 (Graduated – PhD)
- Alyse Frisbee (UVA, Microbiology, Immunology, & Cancer Biology) – 2017 – 2019 (Graduated – PhD)
- Jeremy Thompson (UVA, Neuroscience Graduate Program) – 2015 – 2021 (Graduated – PhD)
- Richard Baylis (UVA, Department of Molecular Physiology and Biological Physics, MSTP) – 2016 – 2019 (Graduated – PhD)
- Mahmoud Saleh (UVA, Infectious Disease Graduate Program, Minor Mentor) – 2015 – 2019 (Graduated – PhD)
- Abigail Rosen (UVA, Pharmacology) – 2015 – 2019 (Graduated – PhD)
- Stephanie Ragland (UVA, Microbiology, Immunology, & Cancer Biology) – 2015 – 2018 (Graduated – PhD)
- Ioana Marin (UVA, Neuroscience Graduate Program) – 2015 – 2017 (Graduated – PhD)

*Postdoctoral Fellow Committees*

- Shaun Steele (UVA, Petri lab) – 2015 – 2017

*Undergraduate Distinguished Thesis Reader*

- Ish Sethi – Neuroscience Distinguished Major Program – 2022
- Sakar Budhathoki – Neuroscience Distinguished Major Program – 2020
- Mary Milam – Neuroscience Distinguished Major Program – 2019
- James Knopp – Neuroscience Distinguished Major Program – 2019
- Alexander Lupi – Neuroscience Distinguished Major Program – 2018
- Priyal Gandhi – Neuroscience Distinguished Major Program – 2017
- Emily Ji – Neuroscience Distinguished Major Program – 2016

**Service:**

- UVA Department of Neuroscience and Harrison Family Translational Research Center in Alzheimer's and Neurodegenerative Diseases Assistant Professor Faculty Hire Search Committee and Chair – 2024 – Present
- UVA Department of Pharmacology Open-Rank Faculty Hire Search Committee – 2024 – Present
- UVA Center for Comparative Medicine (CCM) Faculty & Staff Advisory Committee – 2024 – Present
- UVA School of Medicine Neuroscience Graduate Program Executive Committee – 2023 – committee
- UVA School of Medicine Endowed Professorship Committee – 2023 – Present
- UVA Department of Neuroscience Open-Rank Faculty Hire Search Committee – 2 positions: neuroinflammation and glia biology in neurodegenerative disease and brain vasculature – 2022 – 2023
- UVA Neuroscience Graduate Program Course Director for NESC 8000 (Foundations of Neuroscience): Behavior & Disease – 2022 – 2023
- UVA Institute for Biotechnology – Vivarium Focus Group – 2022 – 2023
- UVA BIG Scholars Symposium Postdoctoral Recruitment Event Planning Committee – 2022
- UVA Medical Scientist Training Program (MSTP) Admissions Committee – 2022 – Present
- National Multiple Sclerosis Society Dinner of Champions. Presented on recent advancements in multiple sclerosis research – 2022
- UVA Immunology Research Day Planning Committee – 2022
- Prominence to Preeminence (P2PE) Neurodegenerative Disease Faculty Hire Search Committee – 2022
- 2022 UVA Biomedical Sciences Graduate Program (BIMS) Reunion Committee – 2021 – 2023
- UVA Department of Neuroscience and Center for Brain Immunology and Glia (BIG) Open-Rank Faculty Hire Search Committee – Co-chair – 2021
- Alzheimer's Association Walk to End Alzheimer's. Lab participated in the walk and raised over \$4,000 for the cause – 2021
- Center for Brain Immunology and Glia (BIG) Executive Committee – 2021 – Present
- Southeastern Neurodegenerative Disease Conference (SENDCon 2022) Organizing Committee – 2021 – 2022
- UVA TransUniversity Microbiome Initiative (TUMI) Steering Committee – 2019 – 2023
- The American Association for Immunologists (AAI) Clinical Immunology Committee – 2018 – 2021
- UVA Department of Neuroscience Research Assistant Professor Search Committee – 2020
- Alzheimer's Association Walk to End Alzheimer's. Lab participated in the walk and raised over \$4,000 for the cause – 2020
- UVA Academic Advancement and Transition: New Faculty Retreat: small group leader to discuss effective strategies for new labs and P&T – 2020
- UVA Neuroscience Graduate Program Admissions Committee – 2019 – 2020
- UVA Microbiome Initiative Steering Committee – 2019 – Present
- UVA *THRIV* Scholars Program Mentor – 2019 – 2022



- UVA Immunology Research Day Planning Committee Chair – 2019
- UVA Department of Neuroscience *BIGNeuro* Symposium Committee Chair – 2019
- UVA Department of Neuroscience Behavior Core Committee Chair and Director – 2018 – Present
- UVA Department of Neuroscience *BIGNeuro* Seminar Series Committee Chair – 2018 – 2020
- 5th Annual UVA Diversity Day interview leader – 2018
- UVA Associate Vice President for Research Development search committee – 2018
- UVA Autism spectrum disorder cluster hire search committee – Co-chair – 2017 – 2018
- UVA Undergraduate Neuroscience Major Research Poster Session, Judge – 2017 – 2022
- Carter Immunology Center Carter Symposium committee – Chair – 2018 symposium
- Southeastern Immunology Symposium Organizing Committee – 2017 – Present
- UVA Immunology Research Day, Judge – 2017
- Brain Awareness Week Lecturer at Monticello High School – 2017
- Undergraduate Research Network's 16th Annual Research Symposium, Judge, University of Virginia – 2017
- UVA Undergraduate Neuroscience major executive committee – 2016 – 2023
- UVA Neuroscience Graduate Program curriculum committee – 2016 – 2020
- UVA Neuroscience Graduate Program retreat faculty advisor – 2017 – 2022
- UVA Department of Neuroscience faculty candidate search committee – 2016 – 2017
- Carter Immunology Center Anderson Symposium planning committee – 2017
- UVA Department of Neuroscience Brainstorming, Research and Ideas Night (BRAIN) meeting organizer – Fall 2016 – 2020
- UVA School of Medicine Integrated space planning committee – 2016 – 2017
- Center for Brain Immunology and Glia (BIG) research in progress (RIP) coordinator – 2016 – 2020
- Undergraduate Research Network Research Symposium, Judge, University of Virginia – 2016
- 24<sup>th</sup> Annual GBS Symposium poster competition, Judge, University of Virginia – 2016
- Peach and Hungerford Award selection committee – 2016 – 2020
- UVA School of Medicine diversity committee – 2016 – 2022
- 3<sup>rd</sup> Annual Postdoctoral Research Symposium poster competition, Judge, University of Virginia – 2015
- Neuroscience Graduate Program seminar speaker selection committee – 2014
- The Virginia Symposium on Brain Immunology and Glia, Judge, University of Virginia – 2014

## **Research Awards and Grants:**

### **Ongoing Research Support**

R01AG087406  
NIH/NIA

PI: Lukens, J.

6/15/24-6/14/29

*Making a case for CASS4 in Alzheimer's disease*

The goals of this proposal are to further define how CASS4 impacts microglial responses, brain pathology, and neuroinflammation in mouse models of Alzheimer's disease.

Role: Principal Investigator

RF1AG078684

PI: Lukens, J.

4/1/23-3/31/28

NIH/NIA

*CLEC7A in microglia biology and Alzheimer's disease*

For this project, we will leverage a unique combination of CLEC7A conditional knockout mouse strains, human-induced pluripotent stem cells from CLEC7A loss-of-function patients, and CLEC7A modulating agents to further uncover roles for CLEC7A in the regulation of microglia responses and Alzheimer's-related disease progression.

Role: Principal Investigator

Philanthropic support

PI: Lukens, J.

7/1/23-6/30/26

Owens Family Foundation

*Role of cell death pathways in Alzheimer's disease*

This award provides flexible funding to study the role of cell death signaling in Alzheimer's disease.

Role: Principal Investigator

R01AG071996

PI: Lukens, J.

6/1/21-5/31/26

NIH/NIA

*Role of the SYK-CARD9 signaling axis in Alzheimer's disease*

This proposal will explore how microglial regulation of CARD9-SYK signaling influences neurodegenerative disease pathogenesis in a mouse model of Alzheimer's disease.

Role: Principal Investigator

Research Grant

PI: Lukens, J.

10/2/23-10/1/25

Cure Alzheimer's Fund

*Elucidating the role of CLEC7A in tau-mediated neurodegenerative disease*

In this study we will explore the role of CLEC7A in tauopathy.

Role: Principal Investigator

### **Completed Research Support**

AZ200084

PI: Lukens, J.

9/1/21-8/31/24

Department of Defense

*TBI-induced disruption of brain drainage as a mechanistic driver of AD pathogenesis*

This work will investigate how TBI-induced brain lymphatic dysfunction contributes to amyloid beta-mediated neurological disease and tauopathy in experimental models of Alzheimer's disease.

Role: Principal Investigator

ADSF-21-816651

Co-PIs: Lukens, J & Kerur, N.

4/15/21-3/31/24

Alzheimer's Association

*AIMing at DNA damage sensors to take the STING out of Alzheimer's disease*

For this project we will investigate to what extent DNA damage-driven immune responses contribute to Alzheimer's disease pathogenesis.

Role: Co-Principal Investigator

R21AG075836

PI: Lukens, J.

1/1/22-12/31/23

NIH/NIA

*Microbial dysbiosis as a driver of neuroinflammation and pathology in Alzheimer's disease*

The goal of this project is to interrogate a role for Alzheimer's disease-associated dysbiosis in neurodegenerative disease progression.

Role: Principal Investigator

R01NS106383  
NIH/NINDS

PI: Lukens, J.

9/15/18-9/14/23

*Inflammasome activation and lymphatic dysfunction in traumatic brain injury*

This project will uncover how defects in meningeal lymphatic-mediated drainage of damage/stress signals from the brain contribute to inflammasome-induced inflammation, brain pathology, and neurological dysfunction.

Role: Principal Investigator

Research Grant  
Cure Alzheimer's Fund

PI: Lukens, J.

8/30/21-8/29/23

*Targeting a master innate immune adaptor molecule in Alzheimer's disease*

In this study we will explore the role of CARD9 in tauopathy.

Role: Principal Investigator

U01AG070960  
NIH

PI: Yan, Z.

9/1/20-8/31/22

*Machine learning-based multi-omics modeling and CRISPR/Cas9-mediated gene editing in elucidating molecular transducer of physical activity*

The goal of this project is to identify candidate molecular transducers of physical activity by machine learning-based multi-omics modeling and to elucidate the role of the identified molecular transducers in health benefits of exercise in genetically engineered mice using CRISPR/Cas9-mediated gene editing and transgenesis. Dr. Lukens is responsible for conducting behavioral assessment of cognitive function and will also contribute to study of other behavioral abnormalities in these mice.

Role: Co-Investigator

1R21MH120412  
NIH/NIMH

PI: Lukens, J.

7/1/19-3/31/22 (NCE)

*Delineating the effects of sex on microglia in neurodevelopmental disorders*

This project will elucidate how sex influences microglia activity in a maternal immune activation (MIA) model of neurodevelopmental disease.

Role: Principal Investigator

Pilot Grant Award  
TransUniversity Microbiome Initiative (TUMI)

PI: Lukens, J.

4/1/21-3/31/22

*Microbial dysbiosis as a driver of neuroinflammation and pathology in Alzheimer's disease*

The goal of this project is to interrogate a role for Alzheimer's disease-associated dysbiosis in neurodegenerative disease progression.

Role: Principal Investigator

AARG-18-566113  
Alzheimer's Association

PI: Lukens, J.

2/15/18-1/31/22

*Lymphatic dysfunction and inflammasomes as drivers of AD pathology*

This project seeks to determine the extent to which brain injury-induced meningeal lymphatic dysfunction contributes to the neuropathological processes underlying Alzheimer's disease.

Role: Principal Investigator

NARSAD Young Investigator Grant  
Brain & Behavior Research Foundation  
*Roles for DNA damage surveillance by AIM2 in psychiatric disease*  
The goal of this project is to define the cellular and molecular mechanisms through which AIM2 inflammasome signaling influences neurological disease.  
Role: Principal Investigator

1R21AI130439-01A1  
NIH/NIAID  
*Mechanisms involved in salmonella immune evasion*  
This proposal seeks to characterize the role of EutR-dependent gene regulation in modulating host responses and to elucidate EutR-regulatory circuits operative during infection that influence disease outcome.  
Role: Collaborator

STAR Pilot Grant Award  
UVA Supporting Transformative Autism Research (STAR)  
*Therapeutic and Diagnostic Potential of Targeting MicroRNAs in Autism*  
In this project we will define the microRNA (miR) expression signature underpinning maternal immune activation-induced neurodevelopmental disorders and interrogate a functional role for miR dysregulation in autism.  
Role: Co-Principal Investigator

Pilot Grant SFARI  
Simons Foundation Autism Research Initiative  
*Mechanistic insight into autism from a sex-specific induction model*  
The goal of this pilot project is to develop mass cytometry staining panels for the study of immune and neural cell types in mouse models of autism.  
Role: Co-Principal Investigator

Hartwell Foundation Research Award  
The Hartwell Foundation  
*Targeting interplay between the immune system and microbiota to treat autism spectrum disorder.*  
This project aims to elucidate how aberrant regulation of IL-1-mediated inflammation and associated changes to the microbiome contribute to autism spectrum disorder.  
Role: Principal Investigator

Global Infectious Disease Institute Seed Grant  
UVA Global Infectious Diseases Institute  
*Defining the roles of inflammasomes in congenital Zika virus infection*  
The goal of this project is to define the roles that inflammasome signaling plays in congenital Zika virus infection  
Role: Co-Principal Investigator

Transformative Neuroscience Pilot Grant  
UVA Brain Institute  
*Short non-coding RNAs in autism-related disorders*  
This project aims to identify the small non-coding RNA signatures that underlie the development of

autism-related phenotypes in a maternal immune activation model of autism.

Role: Co-Principal Investigator

22349 International Rett Syndrome Foundation      PI: Lukens, J.      1/1/16-12/31/17  
Rettsyndrome.org

*Targeting IL-1-mediated inflammation and associated dysbiosis to treat Rett syndrome*

The goal of this application is to characterize the molecular underpinnings of MECP2-mediated regulation of IL-1 production in Rett syndrome.

Role: Principal Investigator

Careers in Immunology Fellowship      PI: Lukens, J.      9/1/16-8/31/17  
AAI

*Defining the Roles of Caspase-8 and RIPK3 in Experimental Multiple Sclerosis*

This fellowship will support a postdoctoral fellow in my lab for one year to investigate the involvement of the caspase-8/RIPK3 signaling axis in multiple sclerosis pathogenesis.

Role: Principal Investigator

Annette Lightner Research Award      PI: Lukens, J.      8/2/16-8/2/17  
Family Foundation

*Dendritic cell-mediated SYK signaling is a central regulator of multiple sclerosis*

The goal of this project is to identify how SYK signaling in dendritic cells influences the pathogenesis of demyelinating neuroinflammatory disease.

Role: Principal Investigator

University of Virginia R&D Pilot Grant      PI: Lukens, J.      6/1/16-5/31/17  
UVA Office for Research & Development

*Interrogating the role of interleukin-1 in promoting traumatic brain injury-induced neurological dysfunction*

The aim of this proposal is to investigate how dysregulated IL-1 production contributes to the development of neurological dysfunction following traumatic brain injury.

Role: Principal Investigator

### ***Trainee Awards***

- Alexis Johnson (UVA, Graduate Student)
  - 2024 Wagner Fellowship Award
- Aman Mangalmurti (UVA, Graduate Student)
  - 2024 Whitfield Randolph Scholarship
- Ava Hollis (UVA, Undergraduate Student)
  - 2024 Hutcheson Undergraduate Research Fellowship Award
- Olivia Campbell (UVA, Undergraduate Student)
  - 2024 Harrison Undergraduate Research Fellowship Award
- Lexi Vesselinov (UVA, Undergraduate Student)
  - 2023 Ingrassia Family Award
- Hannah Ennerfelt (UVA, Graduate Student)
  - 2023 Peach Award for the most outstanding UVA Biomedical Sciences Graduate Program (BIMS) Graduate Student
- Lexi Vesselinov (UVA, Undergraduate Student)

- 2023 Double Hoo Award
- Ava Hollis (UVA, Undergraduate Student)
  - 2023 Ingrassia Family Award
- Abhi Verma (UVA, Undergraduate Student)
  - 2023 Harrison Undergraduate Research Fellowship Award
- Coco Holliday (UVA, Undergraduate Student)
  - 2023 Fozdar Neuroscience Undergraduate Research Symposium – 1<sup>st</sup> Prize Oral Presentation Award
- Abhi Verma (UVA, Undergraduate Student)
  - 2022 Hutcheson Undergraduate Research Fellowship Award
- Ava Hollis (UVA, Undergraduate Student)
  - 2022 Double Hoo Award
- Coco Holliday (UVA, Undergraduate Student)
  - 2022 Harrison Undergraduate Research Fellowship Award
- Ashley Bolte (UVA, Graduate Student)
  - 2021 Peach Award for the most outstanding UVA Biomedical Sciences Graduate Program (BIMS) Graduate Student
- Daniel Shapiro (UVA, Undergraduate Student)
  - 2022 Hutcheson Undergraduate Research Fellowship Award
- Hannah Ennerfelt (UVA, Graduate Student)
  - 2021 Wagner Fellowship Award
- Kristine Zengeler (UVA, Graduate Student)
  - 2021 Wagner Fellowship Award
- Daniel Shapiro (UVA, Undergraduate Student)
  - 2021 Hutcheson Undergraduate Research Fellowship Award
- Ashley Bolte (UVA, Graduate Student)
  - 2021 Most Outstanding Graduate Student in the Department of Microbiology, Immunology, and Cancer Biology
- Catherine Lammert (UVA, Graduate Student)
  - 2020 Jill E. Hungerford Award
- Daniel Shapiro (UVA, Undergraduate Student)
  - 2020 Harrison Undergraduate Research Fellowship Award
- Ashley Bolte (UVA, Graduate Student)
  - 2020 Wagner Fellowship Award
- Catherine Lammert (UVA, Graduate Student)
  - 2019 Wagner Fellowship Award
- Elizabeth L. Frost (UVA, Postdoc)
  - National Multiple Sclerosis Postdoctoral Fellowship 7/1/18 – 6/30/21
- Makenzie Scanlon (UVA, Undergraduate Student)
  - 2018 Hutcheson Undergraduate Research Fellowship Award
- Calli Bellinger (UVA, Neuroscience Undergraduate Program)
  - 2018 Stull Undergraduate Research Fellowship Award
- Calli Bellinger (UVA, Neuroscience Undergraduate Program)
  - 2016 Hutcheson Undergraduate Research Fellowship Award
- Aman Mangalmurti (UVA, Neuroscience Undergraduate Program)
  - 2016 Pediatric Oncology Education (POE) Fellowship
- Aman Mangalmurti (UVA, Neuroscience Undergraduate Program)

- 2015 Hutcheson Undergraduate Research Fellowship Award