

A. Name and Contact Information

Name: Kristen E. Funk, PhD

Date: August 5, 2025

Current Position: Assistant Professor
Department of Biological Sciences
University of North Carolina at Charlotte
9201 University City Blvd
Charlotte, NC 28223
kfunk@charlotte.edu

B. Education and Degrees

2012	Ph.D. Molecular, Cellular, and Developmental Biology	Ohio State University	Columbus, Ohio
2007	B.A. Zoology	Miami University	Oxford, Ohio
2004	Post-Secondary Enrollment Option	Marietta College	Marietta, Ohio
2004	Diploma	Marietta High School	Marietta, Ohio

C. Academic Positions and Training

2019-present	Assistant Professor, University of North Carolina at Charlotte, Department of Biological Sciences
2023-present	Honors Faculty, University of North Carolina at Charlotte
2014-19	Postdoctoral Research Associate with Robyn Klein, M.D., Ph.D., Washington University School of Medicine, Department of Internal Medicine, Division of Infectious Diseases
2012-14	Postdoctoral Research Scholar with Marc Diamond, M.D., Washington University School of Medicine, Department of Neurology
2007-12	Graduate Research Associate with Jeff Kuret, Ph.D., Ohio State University, Department of Molecular and Cellular Biochemistry

D. Research, Community Engaged Scholarship, Creative Activity

Publications

Peer Reviewed Publications

1. Price TM, Tucker AE, and **Funk KE**. *Molecular and environmental factors that promote pathogenic tau post-translational modifications and aggregation*. In preparation.
2. Jensen KA, Weller J, and **Funk KE**. *A bioinformatics approach reveals distinct post-transcriptional modification signals in Alzheimer's disease*. Under Review.
3. Reagin KL, Lee R, and **Funk KE**. *A novel method for in vitro culture of microglia from aged mice: implications for the future of aging neurobiology research*. Current Protocols. In press.
4. Elyaman W, Stern LJ, Jiang N, Dressman D, Bradley P, Klatzmann D, Bradshaw EM, Farber DL, Kent SC, Chizari S, **Funk K**, Devanand D, Thakur KT, Raj T, Dalahmah OA, Sarkis RA, Weiner HL, Shneider NA, Przedborski S. *Exploring the role of T cells in Alzheimer's and other neurodegenerative diseases: Emerging therapeutic insights from the T Cells in the Brain symposium*. *Alzheimers Dement*. 2025 Feb;21(2):e14548. Epub 2025 Jan 27. PMID: 39868844; PMCID: PMC11851166.
<https://doi.org/10.1002/alz.14548>

5. Reagin KL, Lee R, Williams LA, Cocciolone L, and **Funk KE**. *Compromised CD8⁺ T cell immunity in the aged brain increases severity of neurotropic coronavirus infection and post-infectious cognitive impairment*. Aging Cell. 2024; Nov 17:e14409. <https://doi.org/10.1111/accel.14409>
6. Blackhurst BM and **Funk KE**. *Molecular and cellular mechanisms underlying neurologic manifestations of flavivirus infections*. Viruses. 2023; 15(11) 2200. <https://doi.org/10.3390/v15112200>
7. Lee R and **Funk KE**. *Imaging blood-brain barrier disruption and neuroinflammation in Alzheimer's disease*. Front Aging Neurosci. 2023 Mar 17; 15:1144036. doi: 10.3389/fnagi.2023.1144036. eCollection 2023. PMID 37009464
8. Reagin KL and **Funk KE**. *The Role of Antiviral CD8⁺ T cells in Cognitive Impairment*. Curr Opin Neurobiol. 2022 Oct;76:102603. doi: 10.1016/j.conb.2022.102603. Epub 2022 Jul 8. PMID 35810534
9. **Funk KE***, Arutyunov AD*, Desai P, White JP, Soufng AL, Rosen SF, Diamond MS, Klein RS. *Decreased antiviral immune response within the central nervous system of aged mice is associated with increased lethality of West Nile virus encephalitis*. Aging Cell. 2021 Aug;20(8):e13412. PMID 34327802
*These authors contributed equally to this work
10. Wessel AW, Dowd KA, Biering SB, Zhang P, Edeling MA, Nelson CA, **Funk KE**, DeMaso CR, Klein RS, Smith JL, Cao TM, Kuhn RJ, Fremont DH, Harris E, Pierson TC, and Diamond MS. *Levels of circulating NS1 impact West Nile virus spread to the brain*. J Virol. 2021 Aug 4; JVI0084421. PMID 34346770
11. Lotz SK, Blackhurst BM, Reagin KL, and **Funk KE**. *Microbial infections are a risk factor for neurodegenerative diseases*. Front Cell Neurosci. 2021; 15:691136. PMID: 34305533
12. **Funk KE** and Lotz SK. *Assessing the Expression of Major Histocompatibility Complex Class I on Primary Murine Hippocampal Neurons by Flow Cytometry*. J Vis Exp. 2020; 159. PMID: 32510500.
13. Klein RS, Garber CJ, **Funk KE**, Salimi H, Soung A, Kanmogne M, Manivasagam S, Agner S, and Cain M. *Neuroinflammation during RNA viral infections*. Annu Rev of Immunol. 2019; 37:73-95. PMID: 31026414
14. **Funk KE** and Klein RS. *CSFR1 antagonism limits local restimulation of antiviral CD8⁺ T cells during viral encephalitis*. J Neuroinflammation. 2019; 16(1):22. PMID 30704498
15. Vasek MJ, Garber C, Dorsey D, Durrant DM, Bollman B, Soung A, Yu J, Perez-Torres C, Frouin A, Wilton DK, **Funk K**, DeMasters BK, Jiang X, Bowen JR, Mennerick S, Robinson JK, Garbow JR, Tyler KL, Suthar MS, Schmidt RE, Stevens B, and Klein RS. *A complement-microglial axis drives synapse loss during virus-induced memory impairment*. Nature. 2016 Jun 23; 534 (7608): 538-43. PMID: 27337340.
16. **Funk KE**, Mirbaha H, Jiang H, Holtzman DM, Diamond MI. *Distinct therapeutic mechanisms of Tau antibodies: promoting microglial clearance vs. blocking neuronal uptake*. J Biol Chem 2015; 290(35): 21652-62. PMID: 26126828
17. **Funk KE***, Thomas SN*, Schafer KN, Cooper GL, Liao Z, Clark DJ, Yang AJ, Kuret J. *Lysine methylation is an endogenous post-translational modification of tau protein in human brain and a modulator of aggregation propensity*. Biochem J 2014; 462(1): 77-88. PMID: 24869773
*These authors contributed equally to this work
18. Thomas SN*, **Funk KE***, Wan Y, Liao Z, Davies P, Kuret J, Yang AJ. *Dual modification of Alzheimer's disease PHF-tau protein by lysine methylation and ubiquitylation: a mass spectrometry approach*. Acta Neuropathol 2012; 123(1):105-117. PMID: 22033876
*These authors contributed equally to this work

19. **Funk KE** and Kuret J. *Lysosomal fusion dysfunction as a unifying hypothesis for Alzheimer's disease pathology*. Int J Alzheimers Dis 2012; 2012: 752894. PMID: 22970406
20. **Funk KE**, Mrak RE, and Kuret J. *Granulovacuolar degeneration (GVD) bodies of Alzheimer's disease (AD) resemble late-stage autophagic organelles*. Neuropathol Appl Neurobiol 2011; 37: 295-306. PMID: 20946470
21. Jensen JR, Cisek K, **Funk KE**, Naphade S, Schafer KN, Kuret J. *Research towards tau imaging*. J Alzheimers Dis. 2011; 26 Suppl 3:147-57. PMID: 21971459
22. Kim S, Jensen JR, Cisek K, **Funk KE**, Naphade S, Schafer K, and Kuret J. *Imaging as a strategy for premortem diagnosis and staging of tauopathies*. Curr Alzheimer Res 2010; 7: 230-234. PMID: 20088805
23. Chang E, Honson NS, Bandyopadhyay B, **Funk KE**, Jensen JR, Kim S, Naphade S, and Kuret J. *Modulation and detection of tau aggregation with small-molecule ligands*. Curr Alzheimer Res 2009; 6: 409-414. PMID: 19874263

Edited Publications

24. **Funk KE**. *Measuring antibody-mediated Tau fibril uptake in microglia by flow cytometry*. Methods Mol Biol. 2024; 2754:437-444. doi: 10.1007/978-1-0716-3629-9_23. PMID: 38512680.
25. Salinas S and **Funk KE**. *Editorial: Cellular and Molecular Mechanisms of Neurotropic Viral Infection*. Front Cell Neurosci. 2024; 18: 1365755. doi: 10.3389/fncel.2024.1365755.
26. Reagin KL and **Funk KE**. *CD8⁺ T cells Pump the Brakes on Alzheimer's Disease*. Nat Immunol. 2023. Sep 7; doi: 10.1038/s41590-023-01622-x. PubMed PMID: 37679550.
27. Blackhurst BM and **Funk KE**. *Viral pathogens increase risk of neurodegenerative diseases*. Nat Rev Neurol. 2023. Mar 2:1-2. PMID 36864169.
28. **Funk KE**, Montagne A, Falcão AM, Da Mesquita S. *Editorial: Multifaceted interactions between immunity and the diseased brain*. Front Cell Neurosci. 2022; 16:941590. PMID: 35755776

Patents

Attorney Docket No. 9812.25PR Date of Provisional Patent: 6/5/2025
 Project Title: *Methods of identifying and quantifying post-transcriptional RNA Modifications and Methods of use thereof*

Patent Number US 9,738,709 B2 Date of Patent: 8/22/2017
 Project Title: *Methylated peptides derived from tau protein and their antibodies for diagnostic and therapeutic reagents for Alzheimer's disease*.

Current Research Support

NIA— RF1AG084104 PI: Funk Role: PI Award Period: 9/1/2023-8/31/2028
Investigating the interactions between viral infection, Tau pathology, and neuroinflammation
 Award Amount: \$1,461,434 + \$764,991 (direct + indirect)

Completed Research Support

IDSA— Microbial Pathogenesis of Alzheimer's Disease PI: Funk Award Period: 1/24/2022-12/24/2024

Role of Apobec3 in MHC-I antigen presentation and neuronal synaptic stability in viral neuroinflammation and Alzheimer's disease

Award Amount: \$250,000 (direct only)

NIA— R00AG053412 PI: Funk Role: PI Award Period: 8/19/2019-5/31/2024
Neurotropic Viral Infection in CNS Aging and Alzheimer's Disease
 Award Amount: \$494,320 + \$239,484 (direct + indirect)

NIA—R00AG053412-04S1 PI: Funk Role: PI Award Period: 9/8/2020-5/31/2024
Neurotropic Viral Infection in CNS Aging and Alzheimer's Disease COVID-19 Supplement
 Award Amount: \$111,175 + \$79,667 (direct + indirect)

NIA—K99AG053412 PI: Funk Role: PI Award Period: 8/1/2016-5/31/2019
Neurotropic Viral Infection in CNS Aging and Alzheimer's Disease
 Award Amount: \$150,000 (direct only)

BrightFocus Foundation—A2014164F PI: Funk Role: PI Award Period: 7/1/2014-6/30/2016
Differential Uptake of Tau Fibrils into Neurons and Glia
 Award Amount: \$120,000 (direct only)

Pending Research Support

Burroughs Wellcome Fund PI: Funk Role: PI Award Period: 7/1/2026-6/30/2031
 Investigators in the Pathogenesis of Infectious Disease (PATH)
Coronavirus Infection and the Aging Immune System: TCR Specificity, the Immunoproteome, and Autoimmunity
 Award Amount: \$505,000 (direct only)
 LOI Submitted 6/30/2025

NIA— R01AG100320 PI: Funk Role: PI Award Period: 4/1/2026-3/31/2031
 Age-related cell-intrinsic and microenvironment factors that affect the entry, retention, and memory establishment of CD8 T cells in the brain post-coronavirus infection
 Co-I: Miranda Orr, Washington University School of Medicine
 Award Amount: \$2,288,039 + \$1,006,379 (direct + indirect)
 Submitted 6/5/2025

IPF2025-0934 PI: Truman Role: Co-I Award Period: 4/1/2026-3/31/2028
 Pilot study to assess de novo designed Hsp70 activators in neurodegenerative disease
 Award Amount: \$275,000 + \$148,500 (direct + indirect)
 Submitted: 6/11/2025

E. Teaching and Instructional Activities

<u>Year</u>	<u>Semester</u>	<u>Course</u>	<u>Enrollment</u>	<u>Eval 1</u>	<u>Eval 2</u>	<u>Eval 3</u>	<u>Eval 4</u>
2024	Fall	Neurobiology (BIOL 4279/5279)	42	4.64*	4.62*		
2024	Spring	Neurobiology (BIOL 4279/5279)	47	4.48*	4.26*		
2022	Fall	Neurobiology (BIOL 4279/5279)	38	4.62*	4.49*		
2021	Fall	Neurobiology (BIOL 4279/5279)	36	4.56*	4.56*		
2025	Spring	Cell Biology (BIOL 3111)	121	4.50	4.03	4.68	4.24
2023	Spring	Cell Biology (BIOL 3111)	121	4.42*	4.35*		

5 = "Strongly Agree", 1 = "Strongly Disagree"

Eval 1: The course used evaluation methods that were clearly defined and consistently applied

Eval 2: The teaching strategies (e.g., lectures, activities, texts) helped me learn the course content

Eval 3: The instructor facilitated a respectful environment for all students.

Eval 4: I have a better understanding of the concepts because of this course.

Eval 1*: Overall, I learned a lot in this course

Eval 2*: Overall, this instructor was effective

Student Advising and Committees

Current

Primary Advisor

Postdoctoral Advisor, Niklas Reich, Charlotte Biological Sciences (2024 – present)

PhD Thesis Advisor, Britanie Blackhurst, Charlotte Biological Sciences (2020 - present)

PhD Thesis Advisor, Trevor Price*, Charlotte Biological Sciences (2022 – present)

*Winner, *Biomolecules* Best Poster Award at UNC Charlotte Biomedical Sciences Symposium 2024

Undergraduate Research Advisor, Aayush Bhatt, Charlotte Biological Sciences (2024 - present)

Undergraduate Research Advisor, Bree Kurtz, Charlotte Biological Sciences (2025 - present)

Undergraduate Research Advisor, Swastika Dey, Charlotte Biological Sciences (2025 - present)

Committee Member

PhD Dissertation Committee, Katie Jensen, Charlotte Bioinformatics (2022 – present)

PhD Dissertation Committee, Andrew Dunphy, Charlotte Biological Sciences (2022 – present)

PhD Dissertation Committee, Hannah Justin, Charlotte Biological Sciences (2022 – present)

PhD Dissertation Committee, Madison Osbourne, Charlotte Biological Sciences (2023 – present)

PhD Dissertation Committee, Valeria Uvarova, Charlotte Biological Sciences (2024 – present)

PhD Dissertation Committee, Pranamita Chakraborti, Charlotte Nanoscale Science (2024 – present)

PhD Dissertation Committee, Jacob Hawkins, Charlotte Biological Sciences (2025 – present)

Completed

Primary Advisor

Postdoctoral Advisor, Katie Reagin*, Charlotte Biological Sciences (2020 - 2024)

*Finalist, Glenn Foundation for Medical Research Postdoctoral Fellowships in Aging Research 2023

MS Thesis Advisor, Sarah Lotz, Charlotte Biological Sciences (2020 - 2022)

MS Non-Thesis Advisor, Rae Lee, Charlotte Biological Sciences (2021 - 2023)

BS Honors Thesis Advisor, Olivia Pike, Charlotte Biological Sciences (2020-2021)

BS Honors Thesis Advisor, Morgan Russ, Charlotte Biological Sciences (2021 - 2022)

BS Honors Thesis Advisor, Kristen Minehart*, Charlotte Biological Sciences (2022 - 2023)

*Winner, Phi Kappa Phi Honor Society Oral Presentation Award at URC 2023

BS Honors Thesis Advisor, Erik Sopiotti, Charlotte Biological Sciences (2023 - 2025)

BS Honors Thesis Advisor, Luke Williams, Charlotte Biological Sciences (2023 - 2025)

Undergraduate Research Advisor, Anna D'Amour, Charlotte Biological Sciences (2020-2021)

Undergraduate Research Advisor, Ashton McKane, Charlotte Biological Sciences (2021 - 2022)

Undergraduate Research Advisor, Michael Gonzalez, Charlotte Systems Engineering (2022)

Undergraduate Research Advisor, Tonson Pham, Charlotte Biological Sciences (2022 - 2023)

Undergraduate Research Advisor, Loren Cocciolone, Charlotte Biological Sciences, SPARC4 (2022 - 2023)

Undergraduate Research Advisor, Katie Hale, Charlotte Biological Sciences (2023)

Undergraduate Research Advisor, Priyanka Amalean, Charlotte Biological Sciences (2023)

Undergraduate Research Advisor, Emily Kretchmer, Charlotte Biological Sciences (2024)

Committee Member

PhD Dissertation Committee, Nydia Chang, Rutgers University Neuroscience (2021 - 2023)

PhD Dissertation Committee, Sean Krysak, Charlotte Biological Sciences (2019 – 2023)

Kristen E. Funk, Ph.D.

Curriculum Vitae

MS Non-Thesis Committee, Chelsea Wright, Charlotte Biological Sciences (2022)
 MS Non-Thesis Committee, Nour Abufoul, Charlotte Biological Sciences (2021)
 Undergraduate Honors Thesis Committee Chair, Hannah Gleason and Weylin Johns, Charlotte University Honors Program (2022 – 2023)
 Undergraduate Honors Thesis Committee, Emily Keck, Charlotte University Honors Program (2023)

F. Professional Service and Leadership

Public Service and Leadership

2022-present Advisor for Youth Neuroscience Association of Charlotte
 2023-2024 Booth participant for STEAMfest at Woodlawn School with IYNA
 2024 Invited presentation for Biomedizone, Weddington High School
 2023 Invited presentation and discussion to International Youth Neuroscience Association, Weddington High School Chapter
 2020 Volunteer judge for science fair at Reid Park Academy, Charlotte Mecklenburg School district

University, College, and Departmental Service and Leadership

2025-present Member of Undergraduate Committee, Charlotte Biological Sciences
 2025-present Member of Library Committee, Charlotte Biological Sciences
 2024-present Leader of Immunology, Microbiology, and Virology working group, Charlotte Biological Sciences
 2024-present Representative to College of Science Faculty Council, Charlotte Biological Sciences
 2023-present Member of Departmental Self-Study Committees for Graduate Program Assessment and Executive Summary, Charlotte Biological Sciences
 2021-present Presentation Judge for Undergraduate Research Conference, UNC Charlotte
 2022-present Reviewer for Graduate School Summer Fellowship Program, UNC Charlotte
 2022-present Presentation Judge for Association for Biological Sciences Graduate Students Research Symposium, Charlotte
 2024-2025 Member of Chair's Advisory Committee, Charlotte Biological Sciences
 2022-2024 Member of Graduate Committee, Charlotte Biological Sciences
 2022-2024 Member of Search Committee for Belk Distinguished Professor of Biological Sciences, Charlotte
 2020-2022 Member of Seminar Committee, Charlotte Biological Sciences
 2021-2022 Member of Search Committee for Assistant Professor of Biological Sciences, Charlotte
 2021 Member of Ad hoc Working Group for Vivarium Director/Attending Veterinarian Position Review, Charlotte
 2021 Presentation Judge for Mining for Gold Trainee Grant Proposal Competition, Charlotte
 2019 Member of Ad hoc Committee for Faculty Award Nominations, Charlotte Biological Sciences
 2019 Co-Chair for Gordon Research Seminar on Neuroimmune Communication in Health and Disease, Ventura Beach, California
 2017-2018 Co-Mentor for Fellowship Writing Workshop, Washington University
 2013-2018 Member of Postdoc Scientific Symposium Planning Committee, Washington University
 2013-14 Mentor for Young Scientist Program, Washington University
 2008-09 Vice President of Molecular, Cellular, and Developmental Biology Graduate Student Organization, Ohio State University

Editorial Contributions

2024-current *Journal of Neuroimmunology*, Associate Editor
 2024 *Frontiers in Cellular Neuroscience*, Guest Associate Editor for Research Topic on "Cellular and Molecular Mechanisms of Neurotropic Viral Infection."
 2022 *Frontiers in Cellular Neuroscience*, Guest Associate Editor for Research Topic on "Multifaceted interactions between immunity and the diseased brain."

Scholarly Peer Review (Ad hoc)

Acta Neuropathologica Communications
 Kristen E. Funk, Ph.D.

Aging Cell
 Curriculum Vitae

Brain Communications
Cells
Cellular and Molecular Neurobiology
Elsevier STEM Textbooks
Frontiers in Cellular Neuroscience
Frontiers in Immunology
Frontiers in Microbiology
Journal of Clinical Investigation
Journal of Clinical Investigation Insight
Journal of Immunology

Journal of Neuroimmunology
Journal of Neuroinflammation
Journal of Visualized Experiments
Journal of Women's Health
mBio
Nature Aging
Nature Neuroscience
Neuroscience
PLoS Pathogens
STAR Protocols

Grant Review

2025 Clinical Neuroimmunology and Brain Tumors (CNBT); National Institutes of Health (*Invited*)
2025 Microbial Pathogenesis in Alzheimer's Disease [ID-ALZ]; Infectious Diseases Society of America (*Invited*)
2025 Doctoral Fellowship for Austrian Academy of Sciences (*Invited*)
2022-2024 Special Emphasis Panel on Alzheimer's Disease and its Related Dementias [ZRG1 AN Z55]; National Institutes of Health (*Recurring Invited*)
2023 Open Competition Domain Science Proposal; NOW Dutch Research Council (*Invited*)
2023 Special Emphasis Panel on Role of Neuroimmune, Neuroinflammation, and Microbiome-Gut-Brain Axis in Alzheimer's disease and its related Dementias [ZRG1 AN-Z (55)]; National Institutes of Health (*Invited*)
2023 Graduate Research Fellowship Program, Neurosciences Panel; National Science Foundation (*Invited*)
2022 Special Emphasis Panel on Lipids and Brain Aging [ZAG1 ZIJ-5 (J1)]; National Institutes of Health (*Invited*)
2022 Career Development Fellowship Proposal; Medical Research Council, UK Research and Innovation (*Invited*)
2021 Chronic Medical Conditions and Aging [RRD6]; Rehabilitation, Research, and Development Service; US Department of Veterans Affairs (*Invited*)
2021 Career Development Facilitating Transition to Independence [AGCD-1]; National Institute on Aging; National Institutes of Health (*Invited*)

Media Citations and Press

Gullapalli S, *Neurons, Infections, and the Future of Brain Health with Dr. Kristen Funk*. Her Path to Success Podcast. Published April 17, 2025. <https://open.spotify.com/episode/75Wp4oql7bGagOIVGzAFnW>>.
Sima, R. *Serious infections linked to dementia risk, study shows*. Wash Post. Published October 18, 2024. <https://www.washingtonpost.com/wellness/2024/10/18/dementia-risk-infections-flu-herpes-respiratory/>
Reactions: pre-publication claims part of dementia cases are caused by herpes-like viruses. Science Media Center Spain. Published May 29, 2023. <https://sciencemediacentre.es/en/reactions-pre-publication-claims-part-dementia-cases-are-caused-herpes-viruses>
Kozlov, M. *Massive health-record review links viral illnesses to brain disease*. Nature. Published Jan 23, 2023. doi: 10.1038/d41586-023-00181-3 <https://www.nature.com/articles/d41586-023-00181-3>
Wadman M. *Study links viral infections to Alzheimer's, Parkinson's—with many caveats*. Science. Published Jan 19, 2023. doi: 10.1126/science.adg7705 <https://www.science.org/content/article/study-links-viral-infections-alzheimer-s-parkinson-s-many-caveats>

Presentations

Oral

- 2025 Duke University, GliaCamp Neuroimmunology Symposium, Chapel Hill, NC. *CD8⁺ T cell immunity in the aged brain in response to viral infection.*
- 2025 UNC Charlotte, Immunology, Microbiology, and Virology Working Group, Charlotte, NC. *CD8⁺ T cell immunity in the aged brain in response to viral infection.*
- 2024 COVID Information Commons Webinar. Online Webinar. *Compromised CD8⁺ T cell immunity in the aged brain increases severity of neurotropic coronavirus infection and post-infectious cognitive impairment.* <https://youtu.be/h3SRNNu8F6k?si=cLmjlpUUqO0XMyeZ>
- 2024 UNC Charlotte Biomedical Sciences Symposium. Charlotte, NC. *Compromised CD8⁺ T cell immunity in the aged brain increases severity of neurotropic coronavirus infection and post-infectious cognitive impairment.*
- 2024 UNC Charlotte Biophysics Seminar. Charlotte, NC. *Investigating the interactions between viral infection, Tau pathology, and neuroinflammation.*
- 2024 Columbia University Medical Center Symposium on T cells in the Brain. New York, NY. *The role of advanced age in recovery from neurotropic coronavirus infection.* (Invited)
- 2022 FASEB Translational Neuroimmunology Conference. Asheville, NC. **Funk KE**, Arutyunov A, Desai P, White JP, Diamond MS, and Klein RS. *Decreased immune response within the central nervous system of aged mice is associated with increased lethality of viral encephalitis.*
- 2022 Charleston Conference on Alzheimer's Disease. Oahu, HI. Reagin KL and **Funk KE**. *Decreased immune response within the central nervous system of aged mice is associated with increased lethality of viral encephalitis.* (Invited)
- 2019 Gordon Research Conference on Neuroimmune Communication in Health and Disease. Ventura, CA. **Funk KE** and Klein RS. *CSF1R antagonism limits local restimulation of antiviral CD8⁺ T cells during viral encephalitis.*
- 2019 University of North Carolina at Charlotte, Department of Biological Sciences. Charlotte, NC. *Harnessing the immune system for neurological disorder therapeutics.*
- 2019 Northwestern University, Department of Neurology. Chicago, IL. *Harnessing the immune system for neurological disorder therapeutics.*
- 2019 University of Kentucky, Department of Neuroscience. Lexington, KY. *Harnessing the immune system for neurological disorder therapeutics.*
- 2019 Miami University, Department of Biology. Oxford, OH. *Harnessing the immune system for neurological disorder therapeutics.*
- 2018 University of Washington, Department of Immunology. Seattle, WA. *Harnessing the immune system for neurological disorder therapeutics.*
- 2018 Kent State University, Department of Biological Sciences. Kent, OH. *Harnessing the immune system for neurological disorder therapeutics.*

Poster

- 2025 Gordon Research Conference on Neuroimmune Communication in Health and Disease. Lucca, Italy. Reagin KL, Lee R, Williams LA, Cocciolone L, and **Funk KE**. *Compromised CD8⁺ T cell immunity in the aged brain increases severity of neurotropic coronavirus infection and post-infectious cognitive impairment.*
- 2023 American Society for Neurochemistry Annual Meeting. Lexington, KY. Reagin KL, Lee R, Cocciolone L and **Funk KE**. *The role of advanced age in recovery from neurotropic coronavirus infection.*
- 2022 FASEB Translational Neuroimmunology Conference. Asheville, NC. Reagin KL, Lee R, and **Funk KE**. *The role of advanced age in recovery from neurotropic coronavirus infection.*
- 2021 Keystone Symposium on NeuroImmune Interactions in Health and Disease. Virtual. **Funk KE**, Arutyunov A, Desai P, White JP, Soung AL, Rosen SF, Diamond MS, Klein RS. *Decreased antiviral immune response within the central nervous system of aged mice is associated with increased lethality of West Nile virus encephalitis.*
- 2019 Gordon Research Conference on Neuroimmune Communication in Health and Disease. Ventura, CA. **Funk KE**, Klein RS. *CSF1R antagonism limits local restimulation of antiviral CD8⁺ T cells during viral encephalitis.*

- 2018 Keystone Symposium on New Frontiers in Neuroinflammation: What Happens when the CNS and Periphery Meet? Keystone, CO. **Funk KE** and Klein RS. *Microglia are critical in activating cytotoxic T cells during West Nile virus encephalitis.*
- 2017 Cell Press Symposium on Neuro-Immune Axis: Reciprocal Regulation in Development, Health, and Disease. Sitges, Spain. **Funk KE**, King M, Klein RS. *Apobec3 regulates the type I interferon response during West Nile virus encephalitis.*
- 2017 Gordon Research Conference on Neuroimmune Communication in Health and Disease. Ventura, CA. **Funk KE**, King M, Klein RS. *West Nile encephalitis alters DNA methylation patterns in hippocampal neurons.*
- 2016 Keystone Symposium on Microglia in the Brain. Keystone, CO. **Funk KE**, Mirbaha H, Jiang H, Holtzman DM, Diamond MI. *Distinct therapeutic mechanisms of tau antibodies: promoting microglial clearance vs blocking neuronal uptake*
- 2015 Keystone Symposium on Neuroinflammation in Diseases of the Central Nervous System. Taos, NM. **Funk KE**, Mirbaha H, Jiang H, Holtzman DM, Diamond MI. *Distinct therapeutic mechanisms of tau antibodies: promoting microglial clearance vs blocking neuronal uptake*
- 2011 Society for Neuroscience Annual Meeting, Washington, DC. **Funk KE**, Thomas SN, Wan Y, Liao Z, Davies P, Yang AY, Kuret J. *Lysine methylation of tau protein in Alzheimer's disease: Identification of sites and potential for modification crosstalk*

G. Recognition and Awards

- 2025 Klein College of Science, Award for Excellence in Research – Rising Star, UNC Charlotte
- 2025 Klein College of Science Pre-Tenured Faculty Development Award (Fall), UNC Charlotte
- 2018 Finalist for Charleston Conference on Alzheimer's Disease New Vision Award
- 2014 Best Poster Presentation, Center for Neuroimmunology and Neuroinfectious Diseases, Washington University
- 2011 Outstanding Oral Presentation, Molecular Life Sciences Graduate Programs Symposium, Ohio State University
- 2011 Outstanding Poster Presentation, Medical Center Research Day, Ohio State University
- 2010 Outstanding Oral Presentation, Molecular Life Sciences Graduate Programs Symposium, Ohio State University

H. Professional Memberships

American Association for Immunologists (since 2019)
 American Society for Neurochemistry (since 2023)
 American Society for Virology (since 2023)
 Society for Neuroscience (since 2011)