

Stanford



Kristy Zera

Postdoctoral Scholar, Neurology and Neurological Sciences

Bio

BIO

Kristy did her undergraduate work at Bates College in Lewiston, ME where she received a BA in Biology in 2012. She then moved to Athens, GA where she obtained a PhD in Pharmaceutical and Biomedical Sciences from the University of Georgia in 2017. Her research investigated the role of the transcription factor HIF-1 α in thiamine (vitamin B1) deficiency-induced neurological damage. She joined the Buckwalter lab in late 2017 to continue researching mechanisms of neurodegeneration and neuroinflammation. She is interested in investigating the role of astrocytes in neuroinflammation following stroke. Ultimately, understanding how astrocytes mediate neuroinflammation in the context of disease and neurological injury may identify therapeutic targets to protect the brain following injury.

HONORS AND AWARDS

- Outstanding Teaching Assistant, University of Georgia Graduate School (2017)

BOARDS, ADVISORY COMMITTEES, PROFESSIONAL ORGANIZATIONS

- Member, American Association of Pharmaceutical Scientists (2013 - present)
- Member, Sigma Xi (2012 - present)

PROFESSIONAL EDUCATION

- Bachelor of Arts, Bates College (2012)
- Doctor of Philosophy, University of Georgia (2017)

Research & Scholarship

LAB AFFILIATIONS

- Marion Buckwalter (11/1/2017)

Publications

PUBLICATIONS

- **Machine learning models of plasma proteomic data predict mood in chronic stroke and tie it to aberrant peripheral immune responses.** *Brain, behavior, and immunity*
Bidoki, N. H., Zera, K. A., Nassar, H., Drag, L. L., Mlynash, M., Osborn, E., Musabbir, M., Eun K Kim, D., Paula Mendez, M., Lansberg, M. G., Aghaeepour, N., Buckwalter, M. S.
2023
- **Targeting VCAM1 to reduce neuroinflammation in ischemia-triggered vascular dementia.** *Alzheimer's & dementia : the journal of the Alzheimer's Association*
Zera, K. A., Peterson, T., Yousef, H., Lee, D., Wyss-Coray, T., Buckwalter, M. S.

1800; 17 Suppl 3: e053849

- **Brain profiling in murine colitis and human epilepsy reveals neutrophils and TNFalpha as mediators of neuronal hyperexcitability.** *Journal of neuroinflammation*
Barnes, S. E., Zera, K. A., Ivison, G. T., Buckwalter, M. S., Engleman, E. G.
2021; 18 (1): 199
- **T cells direct microglial repair of white matter after stroke.** *Trends in neurosciences*
Zera, K. A., Buckwalter, M. S.
2021
- **The Local and Peripheral Immune Responses to Stroke: Implications for Therapeutic Development.** *Neurotherapeutics : the journal of the American Society for Experimental NeuroTherapeutics*
Zera, K. A., Buckwalter, M. S.
2020
- **Aged blood impairs hippocampal neural precursor activity and activates microglia via brain endothelial cell VCAM1** *NATURE MEDICINE*
Yousef, H., Czupalla, C. J., Lee, D., Chen, M. B., Burke, A. N., Zera, K. A., Zandstra, J., Berber, E., Lehallier, B., Mathur, V., Nair, R. V., Bonanno, L. N., Yang, et al
2019; 25 (6): 988-+
- **Stabilization of the hypoxia-inducible transcription Factor-1 alpha (HIF-1 alpha) in thiamine deficiency is mediated by pyruvate accumulation** *TOXICOLOGY AND APPLIED PHARMACOLOGY*
Zera, K., Zastre, J.
2018; 355: 180-88
- **Thiamine deficiency activates hypoxia inducible factor-1 alpha to facilitate pro-apoptotic responses in mouse primary astrocytes** *PLOS ONE*
Zera, K., Zastre, J.
2017; 12 (10): e0186707
- **Role of HIF-1 alpha in the hypoxia inducible expression of the thiamine transporter, SLC19A3** *GENE*
Zera, K., Sweet, R., Zastre, J.
2016; 595 (2): 212-20