

Shikan Zheng

Bioinformatics Research Analyst
Blood Research Institute, Computational Biology Core
8727 W Watertown Plank Rd
Milwaukee, WI 53226
(414) 458-5088
Email: szheng0221@gmail.com

Analytical Expertise:

- Proficient in multi-omics data integration, single-cell RNA-seq, and ATAC-seq analysis.
- Skilled in using Seurat and Monocle for advanced single-cell analytics.
- Expertise in WNN (Weighted Nearest Neighbor) analysis for multimodal data interpretation.
- Proficient in R and Linux-based pipelines for bioinformatics workflow.
- Advanced analysis of bulk RNA seq data, including differential expression and pathway enrichment.
- Proficient in epigenetic analysis, such as DNA methylation, chromatin accessibility, histone modification, and cut-and-tag analysis.

Education:

2017 – 2019

M.S. Marquette University – Milwaukee, Bioinformatics

2011 – 2016

B.S. University of Wisconsin – Milwaukee, Biomedical Science

Authored Manuscripts:

Yu G, Liang Y, Zheng S, Zhang H. Inhibition of Myeloperoxidase by N-Acetyl Lysyltyrosylcysteine Amide Reduces Oxidative Stress -Mediated inflammation, Neuronal Damage, and Neural Stem cell Injury in a Murine Model of Stroke. Journal of Pharmacology and Experimental Therapeutics, Dec 2017

Yu G, Zheng S, Zhang H. Inhibition of myeloperoxidase by N-acetyl amide reduces experimental autoimmune encephalomyelitis-induced injury and promotes oligodendrocyte regeneration and neurogenesis in a murine model of progressive multiple sclerosis. Neuroreport 29(3):1 Dec 2017

Bluemn T, Schmitz J, Chen Y, Zheng Y, Zhang Y, Zheng S, Burns R, DeJong J, Christiansen L, Izaguirre-Carbonell J, Wang D, Zhu N. Arid2 regulates hematopoietic stem cell differentiation in normal hematopoiesis, Experimental Hematology 94:37-46, Dec 2020

Topchyan P, Xin G, Chen Y, Zheng S, Burns R, Shen J, Kasmani M, Kudek M, Yang N, Cui W. Harnessing the IL-21-BATF Pathway in the CD8⁺ T Cell Anti-Tumor Response, Cancer 13(6), Mar 2021

Chen Y, Zander R, Wu X, Schauder D, Kasmani M, Shen J, Zheng S, Burns R, Taparowsky E, Cui W. BATF regulates progenitor to cytolytic effector CD8 T cell transition during chronic viral infection, *Nat Immunol* 22(8):996-1007, Aug 2021

Bluemn T, Schmitz J, Zheng Y, Burns R, Zheng S, DeJong J, Christiansen L, Arnold O, Lzaguirre-Carbonell J, Wang D, Deshpande A, Zhu N. Differential roles of BAF and PBAF subunits, Arid1b and Arid2, in MLL-AF9 Leukemogenesis, *Leukemia*, Jan 2022

Wu X, Kasmani M, Zheng S, Khatun A, Chen Y, Winkler W, Zander R, Burns R, Taparowsky E, Sun J, Cui W. BATF promotes group 2 innate lymphoid cell-mediated lung tissue protection during acute respiratory virus infection. *Sci Immunol* 7(67):eabc9934 Jan 2022

Zander R, Kasmani M, Chen Y, Topchyan P, Shen J, Zheng S, Burns R, Ingram J, Cui C, Joshi N, Craft J, Zajac A, Cui W. Tfh-cell-derived interleukin 21 sustains effector CD8 T cell responses during chronic viral infection, *Cell Immunity* 55(3):475-493, Mar 2022

WU X, Khatun A, Kasmani M, Chen Y, Zheng S, Atkinson S, Nguyen C, Burns R, Taparowsky E, Salzman N, Hand T, Cui W. Group 3 innate lymphoid cells require BATF to regulate gut homeostasis in mice, *J Exp Med*, 2022

Eaton N, Boyd E, Biswas R, Lee-Sundlov M, Dlugi T, Ramsey H, Zheng S, Burn R, Sola-Visner M, Hoffmeister K, Falet H. Endocytosis of the thrombopoietin receptor Mpl regulates megakaryocyte and erythroid maturation in mice. *Front Oncol*. Aug 2022

Sharma G, Kosura R, Lakshmikanthan S, Zheng S, Chen Y, Burns R, Xin G, Cui W, Chrzanowska M. Endothelial Rap1B mediates T-cell exclusion to promote tumor growth: a novel mechanism underlying vascular immunosuppression, *Angiogenesis*, 26(2):265-278, 2023

Peramangalam P, Surapally S, Zheng S, Burns R, Zhu N, Rao S, Muller-Tidow C, Pulikkan J. N-MYC regulates Cell Survival via eIF4G1 in inv(16) Acute Myeloid Leukemia. *Science Advances*, Feb 2024.

Yu F, Zheng S, Yu C, Gao S, Shen Z, Nar R, Liu Z, Huang S, Wu L, Gu T, Qian Z. KRAS Mutants Confer Platinum Resistance by Regulating ALKBH5 Post-translational Modifications in Lung Cancer. *J Clin Invest*. Feb 2025

Awards:

ASCLS-Wisconsin Convention – 3rd Place – 2016

Working Experience:

Bioinformatics Research Analyst – Blood Research Institute – 2019 - Present

Laboratory Technician – Medical College of Wisconsin – 2016 – 2017