

Jacob Allen

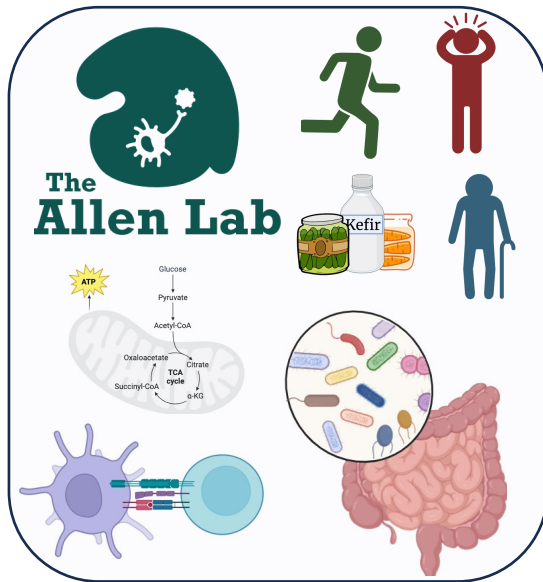
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Dr. Allen's research investigates how environmental factors like diet, stress, exercise and aging influence the gut microbiota in both health and disease. His laboratory's goal is to leverage this knowledge to improve human health.



Keywords

Microbiome, microbe-host interactions, immunology, fermented food, stress, exercise, aging

Research Interests

- Microbe-host interactions during stress and aging
- Microbial metabolites and immunometabolism
- Bioactive metabolites in fermented foods
- Microbial impacts on cancer immunotherapy
- Exercise adaptations and microbial metabolites

Current Projects

- Stress impacts on microbiota and mucosal immune function (NIDDK)
- AIMFAR - Optimizing bioactive metabolites in fermented foods (USDA-NIFA)
- Aging impacts on microbial immunogenicity and lipid metabolism
- Microbial metabolites as regulators of cancer immunotherapy efficacy

Interest Areas for Collaboration/Future Work

Dr. Allen has formed collaborations with clinical study teams with large 'omics of data already collected (scRNAseq, metabolomics, metagenomics, etc). Partnerships with experts who possess bioinformatics toolkits for multi-omics, particularly those who can integrate microbiome data with other omics datasets, would be highly valued.