



Dear members of the Institute for Successful Longevity,

My foundational training in scientific inquiry began in geroscience within the laboratory of Dr. Matt Kaeberlein (former Co-Director of the Dog Aging Project and current CEO of Optispan). As an undergraduate research assistant, I co-authored several studies investigating the conserved molecular mechanisms of aging using yeast replicative lifespan models. This work entailed comprehensive analyses of single-gene deletions (McCormick et al., 2015), dietary restriction (Schleit et al., 2013), pH neutralization (Murakami et al., 2012), and mitochondrial function (Delaney et al., 2013). These contributions have helped establish rapamycin and TOR inhibition as primary targets for lifespan extension. In the Kaeberlein lab, I collaborated with peers who are now leaders in the biology of aging including Dr. Joe Delaney (Medical University of South Carolina), Dr. Scott Leiser (University of Michigan), and Dr. George Sutphin (University of Arizona) and gained an appreciation for biological mechanisms that dictate healthspan and resilience.

Although my graduate and faculty research transitioned from basic biology in model organisms to human population genetics and clinical informatics, the early geroscience exposure continues to shape my approach to complex human traits. In the School of Communication Science & Disorders, my current research program integrates clinical electronic health record (EHR) data with large-scale biobanks to unravel the genetic architecture of speech disfluency. Some of my recent work has included the largest genome-wide association study (GWAS) of stuttering to date along (Polikowsky et al., 2025) with EHR-based phenome-wide investigations into neurodevelopmental comorbidities (Pruett et al., 2021) and drug-induced stuttering (Pruett et al., 2025).

Affiliating with the Institute for Successful Longevity (ISL) provides an opportunity to bridge speech-language pathology, human genomics, and healthy aging. Communication preservation is a key pillar of cognitive healthspan, functional independence, and social connectedness in older adults. Furthermore, I can envision future opportunities to explore shared neurogenetic vulnerabilities between motor speech traits and late-life neurological conditions.

As FSU Health expands its clinical footprint and health data ecosystem, my expertise in linking high-dimensional EHR phenotyping with genomic biobanks offers a framework for precision medicine initiatives. This background helps position me to serve as an interdisciplinary link for ISL to bridge basic geroscience, clinical informatics, and communication health across the lifespan. I look forward to the opportunity to work with colleagues within the FSU Institute for Successful Longevity.

Sincerely,

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