



NATHAN SHOCK CENTERS
OF EXCELLENCE IN THE
BASIC BIOLOGY OF AGING

PILOT AWARDEE SPOTLIGHT



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2021 USC-Buck NSC Pilot Award

Investigation of a Conserved, Age-related Mitochondrial Derived Peptide

How did you become interested in aging?

As a child I had a lot of pets which eventually died. Ever since, I've wondered about why things get old and decline in health with age. In college I read a number of books by Drs. Finch and Austad that re-ignited my interest in aging research, and I've been doing aging science ever since.

Briefly describe your project in non-scientific terms. What questions are you trying to answer?

The main question of this project is if there is a genetic cause of diabetes that may be specific to certain ethnic groups. We have discovered a novel genetic variation that predisposes people to diabetes, and we are attempting to discover why this genetic variation increases the likelihood of diabetes.

What previous research or experience informed the development of this proposal?

I have been working on mitochondrial microproteins for over a decade now, and we have just started to look for genetic variations in these microproteins that may lead to disease.

What's exciting about your project's potential impact?

My project has very easy translatability, and it could lead to a precision medicine approach to diabetes.

If your project is successful, what is the next step?

The next step would be to further dissect the exact mechanism of action of this microprotein in mouse models of diabetes.

How has support from and collaboration with the NSCs helped further this project and/or your research overall?

This grant has allowed me to attempt to further discover any human correlates to this SNP in additional cohorts that I would have been unable to analyze.