SAMUEL DADD HAMILTON

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EDUCATION

Northwestern University, Evanston *September 2013 - June 2017*
Bachelor of Arts with Departmental Honors, Biology.
Weinberg College of Arts and Sciences

Northwestern University, Chicago *September 2019 - Present*
Ph.D Student
Driskill Graduate Program at Feinberg School of Medicine, Biomedical Informatics Track

RESEARCH EXPERIENCES

Rong Lab, UIC College of Medicine, Chicago IL June 2015 - August 2015
Summer Intern

· Produced Marburg and Ebola pseudovirions for high throughput antiviral drug testing.

Wagenius Lab, Chicago Botanic Garden, Glencoe IL September 2016 - March 2017
Undergraduate Researcher

· Quantified the impact of fire on the pollination success of a prairie perennial, *Echinacea Angustifolia*.

Andersen Lab, Northwestern University, Evanston IL September 2016 - April 2017
Undergraduate Researcher

· Performed Crispr-CAS9 genetic editing and analyzed results from high-throughput phenotyping experiments to assist in the discovery that the DBT-1 locus mediates resistance to a chemotherapeutic, arsenic trioxide, in *C. elegans*.

De Cabo Lab, National Institute on Aging, Baltimore MD July 2017 - April 2019
Postbaccalaureate Fellow

· Lead data analyst, data manager, and data collection team member for a 2,600 mouse longitudinal study of aging.
· Analyzed RNA-seq and whole genome bisulfite sequencing data to evaluate the effect of dietary interventions in mice.
· Developed software for processing data from high throughput assays.
· Collected, managed, analyzed data for a variety of studies investigating dietary interventions in aging mice.

Winter Lab, Northwestern University, Chicago IL July 2019 - September 2019
Rotation Student

· Analyzed single cell and longitudinal RNA-seq data from arthritic mouse models to elucidate macrophage function in arthritic mouse joints.

Luo Lab, Northwestern University, Chicago IL September 2019 - December 2019
Rotation Student

· Developed tool to generate co-reference gene networks from PubMed free text.

Braun Lab, Northwestern University, Chicago IL January 2020 - March 2020
Rotation Student

· Developed a derivation of Approximate Entropy, Sliding Window Approximate Entropy, to enable the comparison of regularity in time series of varying lengths

· Applied Sliding Window Approximate Entropy to quantify the effects of time restricted feeding and melatonin on the metabolic circadian rhythm, as measured by a continuous glucose monitoring system in adult humans.

AWARDS

Northwestern Undergraduate Research Grant *December 2016*

National Merit Scholar *March 2013*

PUBLICATIONS

Hamilton, S., de Cabo, R., Bernier, M. (2019). Maternally Expressed Gene 3 in metabolic programming. *Biochimica et Biophysica Acta, Gene Regulatory Mechanisms.*

POSTERS AND CONFERENCES

Oral Presentation, National Institute on Aging Annual Retreat, Baltimore *May 2018*
Study of Longitudinal Aging in Mice: Perspectives on Morbidity on Mortality

Poster Presentation, National Institute on Aging Annual Retreat, Baltimore *May 2018*
Study of Longitudinal Aging in Mice: Perspectives on Morbidity on Mortality

Poster Presentation, Translation Gerontology Branch Retreat, Baltimore *June 2018*
Changes in Maternally Imprinted Dlk-Dio3 Region are Associated with Lifespan Extension by Caloric Restriction