

Hinton Lab

Assistant Professor (Tenure Track), Molecular Physiology & Biophysics, Vanderbilt University



We are a diverse group of scientists with a research vision of using a broad range of tools to explore mechanisms that regulate molecular transfer between and changes in morphology of the mitochondria and endoplasmic reticulum (ER) and how these mechanisms are altered during the pathophysiological states of diabetes, obesity, and cardiovascular disease.



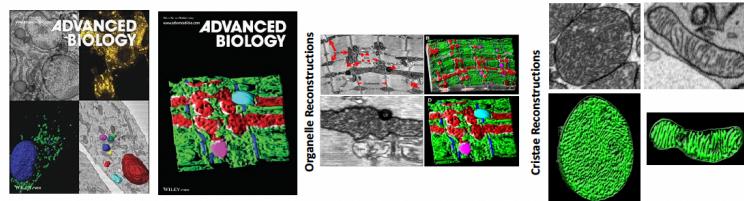
Our Laboratory



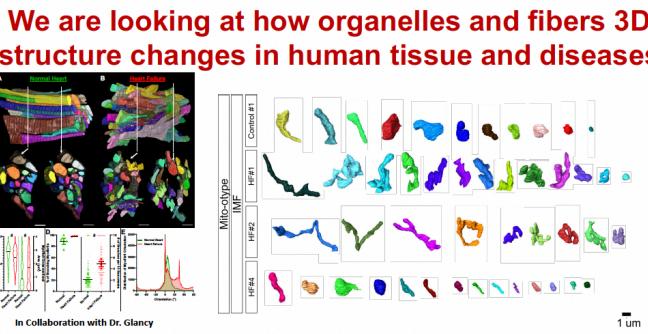
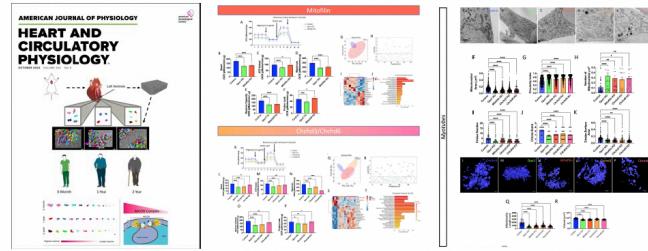
Our Undergraduates



We have developed methods to optimally prepare and quantitatively define mitochondria and other organelles



We are showing how the MICOS complex may be an effector in age-related mitochondria changes



Dr. Hinton's Training

Dr. Yang Xu (Neuronal regulation of energy homeostasis and blood pressure), BCM, Graduate Training	Dr. E. Dale Abel (Mitochondrial Signaling and dynamics), UIowa, Postdoc	Dr. E. Dale Abel (3D and 2D electron microscopy), Jeffrey Salisbury (Technical Expertise), Mayo/Uiowa, Postdoc	

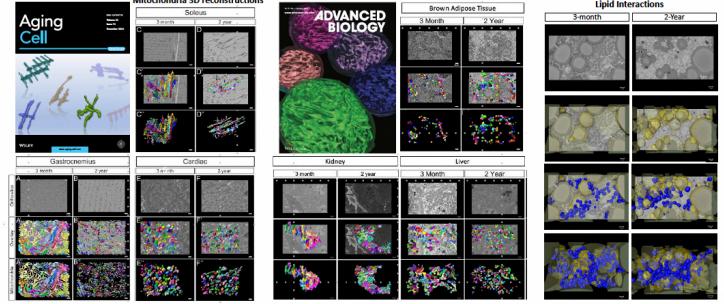
Collaborators: Long-Term



Project-Specific Funding Contact Us



We use 3D reconstruction of mitochondria and cristae to show murine tissue-dependent changes in aging



We are leading diversity, equity, and inclusion across the country in STEMM through publications that propose solutions in inclusion, career development, and STEMM education



Effective Mentorship and broader participation in STEMM via data-backed techniques: Hinton Lab Undergraduate Awards



Margaret Mungai
Fulbright winner
(Spain Research Award), ABRCMS Oral Presentation Award, Minority Health and Health Disparities International Research Training Award (Armenia)



Kit Neikirk
Marshall Scholarship,
2nd Place Undergraduate Poster Award ASCB MAC/Education (2 times), ABRCMS Poster Presentation Award, Promega DOORS Scholar, Chancellor's Scholarship, 1st Place in Division for Translational and Clinical Pharmacology ASPET



Jacob Lam
First-author publication (80+ citations) and Iowa Merit Scholarship
Bryanna Shao
First-author publication

ABRCMS Poster Awards

Faben Zeleke

Michelle Biete

Ben Kirk

Kailee Yoshimura

Han Le

Zoe Evans

Cell Reports Medicine

Learning Beyond CellPress

CellPress