Biochemistry and Molecular Biology

THE UNIVERSITY of NEW MEXICO — SCHOOL of MEDICINE

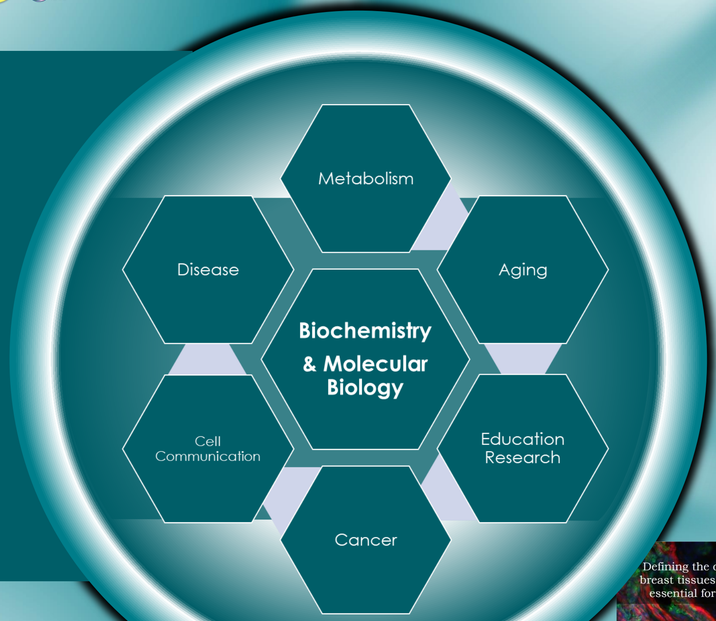
Accepting Graduate Students

The Department of Biochemistry was established in August, 1964 as one of the UNM School of Medicine's founding departments. In 1969, the Department was tasked with providing undergraduate biochemistry instruction at UNM.

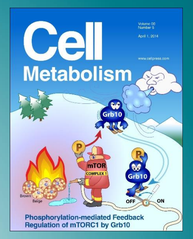
The undergraduate program, implemented in 1984, attracts many of the university's best students, and provides graduate students opportunities to develop their teaching skills.

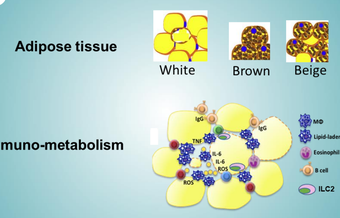
In 1996, the dean of the School of Medicine reorganized the departments of Anatomy, Biochemistry, Cell Biology, Microbiology, Physiology and Pharmacology to strengthen programmatic research. The four resulting basic science departments, including the present Department of Biochemistry and Molecular Biology, were formally established on July 1, 1997.

Faculty research interests include metabolism and metabolic disease, cancer biology and therapeutics, and biochemistry education research.



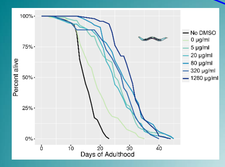
Liu Lab: Obesity and Diabetes





McCormick Lab: Delaying onset of Age-related Diseases

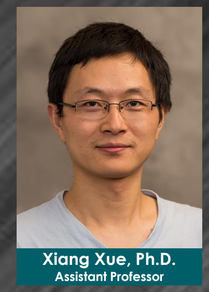
https://www.labmccormick.org



Combining biochemistry, molecular biology, and geneticswith data science and machine learning

Meilian Liu, Ph.D.
Assistant Professor

Mark McCormick, Ph.D.
Assistant Professor

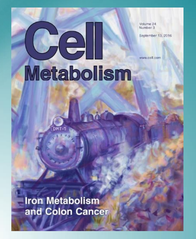


Xiang Xue, Ph.D.
Assistant Professor

Curt Hines, Ph.D.
Assistant Professor

Karlett Parra, Ph.D.
Professor and Chair

Xue Lab: Micronutrients and Colon Cancer



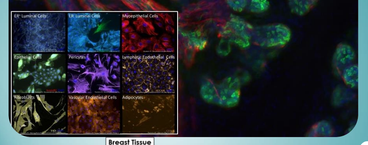
- Why are micronutrients essential for cancer cell growth?
- How is mitochondrial metabolism and stress activated pathways involved in colon cancer?
- What role does hypoxia signaling have in intestinal inflammation and colorectal cancer?

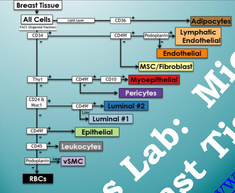
Summer Hayek, Ph.D.
Research Assistant Professor

Sherman Garver, Ph.D.
Assistant Professor

Hines Lab: Microenvironment of Breast Tissues and Tumors

www.breastcancerlab.com

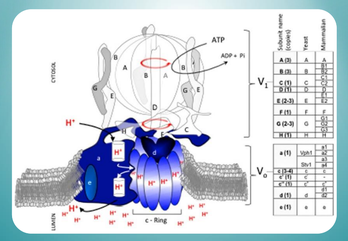




Marcy Osgood, Ph.D.
Associate Professor

Robert Orlando, Ph.D.
Associate Professor

Parra Lab: V-ATPase Physiology



Investigating molecular mechanisms that regulate V-ATPase proton pumps and downstream consequences of V-ATPase proton transport inhibition in fungi (S. cerevisiae, C. albicans), cancer cell lines and primary cells.

Key Techniques and Methods

- Metabolic Profiling
- RNA Sequencing
- Mass Spectrometry
- CRISPR Genome Editing
- Confocal Imaging
- Animal Models
- Patient-Derived Xenografts
- Yeast Models
- Primary Human Cell Culture
- Advanced Flow Cytometry
- Histology & Immunostaining
- Single Cell Techniques
- …And more!

Natalie Adolphi, Ph.D.
Associate Professor

Andy Hu, Ph.D.
Associate Professor

Martina Rosenberg, Ph.D.
Assistant Professor

Raj Shah, Ph.D.
Professor