

When DNA is Not Our Destiny



John Denu
Professor, Biomolecular Chemistry

CURRENT RESEARCH

Epigenetics as a major player for increased healthspan and lifespan

Recent research has suggested that we are not simply the outcome of our DNA blueprint, but that we also have an epigenome that sits on top of our DNA and ultimately dictates which of our genes are expressed. In this way, DNA is not our destiny. Rather, the relationship between our DNA, the environment we live in, and our lifestyle choices become intertwined. Dr. John Denu, Professor of Biomolecular Chemistry at the University of Wisconsin, studies the underlying mechanisms of how lifestyle and diet controls our epigenome and how that knowledge can be used to make decisions to improve our lives. Specifically, he and his team are exploring how diet, metabolism, and our gut microbiome influence our epigenome to affect diabetes, cancer, and neurological disorders. In so doing, Dr. Denu hopes to learn how to change the epigenome in order to combat disease and aging.

For the last twenty years, Dr. Denu and his team of Ph.D. students and postdocs have successfully been making novel connections between biological processes that have not been discovered. Additionally, rather than simply focusing on correlation, his research takes a bench-to-bedside approach by probing the true mechanistic underpinnings of aging and disease to then make discoveries about how to impact the lives of patients. Therefore, Dr. Denu and his team's results could have a profound affect on the way we choose to live our lives and the medicines that could rebalance gene expression through epigenetic pathways. Strengthened by collaborations with about seven research groups throughout the world, Dr. Denu's research provides unique expertise to accelerate discovery by making breakthroughs that extend our healthspan.

Current research...

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AFFILIATION



University of Wisconsin-Madison

EDUCATION

- B.S., 1988 , University of Wisconsin
- Ph.D., 1993 , Texas A&M University
- Post-Doc, 1996 , University of Michigan

AWARDS

- Research Scholar Award (American Cancer Association), 2001-2004
- Awarded Fellow of the American Association for the Advancement of Science, 2011
- National Institutes of Health MERIT Award, 2013 - current
- Epigenetics Theme Director, Wisconsin Institute for Discovery, 2009 - current
- Associate Editor of The Journal of Biological Chemistry, 2013 - current

RESEARCH AREAS

Health & Wellness, Longevity, Immortality Research

FUNDING REQUEST

Your contributions will support the continued research of Dr. John Denu, at the University of Wisconsin, as he uses the epigenome to combat disease and aging. Donations will fund the necessary \$400K/year for personnel, \$200K/year for reagents and materials, \$75K/year for equipment, and \$300K/year for overhead costs. In choosing to donate, you will play a role in advancing graduate students and postdocs towards careers in science and give Dr. Denu the opportunity to explore novel connections between biological processes that have not yet been discovered!