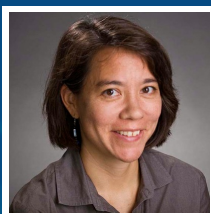


# When DNA Breaks: The Repair Mechanisms Underlying Disease



Tanya Paull  
Professor, Molecular Biosciences

## CURRENT RESEARCH

### Basic research supports clinical therapeutics for cancer and neurodegenerative diseases

When normal cells lose the ability to repair double-strand breaks in DNA, it is likely to cause diseases like cancer or drive the progression of tumor formation. Therefore, it is necessary to make sense of where these pathways fail and perhaps, in doing so, how to prevent cancer initiation. Dr. Tanya Paull, Professor of Molecular Biosciences at The University of Texas at Austin, is working to understand the mechanisms of DNA repair and oxidative stress signaling. She and her team generate data that impacts the translational and clinical science in the field and furthermore, has the potential for transformative effects on cancer, A-T, and neurodegeneration studies. Thus, using a fundamental approach to basic research, Dr. Paull is helping to tackle some of the most pressing health-related problems of our time.

Dr. Paull's team utilizes insights from protein biochemistry to direct experiments in mammalian cells and in yeast that decipher molecular mechanisms. In many cases, these experiments are not being conducted in other laboratories because of the challenges inherent to the biochemistry, thus the approach is very unique. Dr. Paull and her team have found a way to conduct challenging yet rewarding research that illuminates mechanism through a variety of approaches. Additionally, Dr. Paull is committed to introducing young people to molecular biology. Through her efforts, she has helped mentor young students in undergraduate and graduate careers encouraging their interests in the sciences, and fostering their development as many have reached advanced postdoctoral positions. Therefore, Dr. Paull's legacy extends beyond the likely health impacts of her work and to educating the next generation as well.

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## AFFILIATION



The University of Texas at Austin

## EDUCATION

- B.S. & M.S., in Biology, 1991, Stanford University
- Ph.D., in Molecular Biology, 1996, The University of California, Los Angeles

## AWARDS

- National Science Foundation Graduate Student Fellowship, 1991-1993
- Helen Hay Whitney Foundation Post-doctoral Fellowship, 1997-2000
- Kimmel Cancer Research Foundation Scholar Award, 2001-2003
- College of Natural Sciences Teaching Award, UT Austin, 2004
- Howard Hughes Medical Institute Investigator Appointment, 2008

## RESEARCH AREAS

Health & Wellness, Longevity, Immortality Research

## FUNDING REQUEST

Your contributions will support the continued research of Dr. Tanya Paull, of The University of Texas at Austin, as she seeks to understand the molecular basis of cancer and also of neurodegenerative diseases. Donations will fund her ability to push her best projects forward by supporting personnel and the creative process. In choosing to donate, you will play a role in developing the basic research necessary for the next generation of therapeutics for cancers and neurodegenerative disease.