

American Chemical Society's highest honor goes to pioneer of diagnostic 'DNA chips'

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Jacqueline K. Barton, Ph.D., professor of chemistry and chair of the division of chemistry and chemical engineering at the California Institute of Technology, has been named winner of the 2015 Priestley Medal by the American Chemical Society (ACS). It is the highest honor bestowed by the world's largest scientific society.

The award recognizes Barton's pioneering work to deepen the fundamental understanding of charge transport through DNA. More recently, her research has led to the development of a "DNA chip" that could potentially probe strands of a person's genetic material for telltale signs of disease.

"Barton's results have truly engaged the [chemical](#) community and spawned both theoretical and experimental studies across the world to examine the conductivity of DNA," said Harry Gray, Ph.D., who nominated Barton for the award.

Barton has received widespread recognition for her influential work. She received the 2010 U.S. National Medal of Science, the nation's highest honor for scientific achievement, for discovering that cells use the double strands of the DNA helix like a wire for signaling, which is critical to detecting and repairing genetic damage. She was also elected a fellow of the American Association for the Advancement of Science and a member of the National Academy of Sciences.

"Jackie Barton is an extraordinary chemist who has made hugely

important contributions to science and is a most fitting choice to receive ACS' highest honor," said Madeleine Jacobs, ACS executive director and [chief executive officer](#). "She is a gifted leader and mentor who has been an inspiration to countless students and colleagues, both within her field and within the larger chemistry community."

Barton has served on multiple editorial boards, including those of ACS publications: the *Journal of the American Chemical Society*, *Accounts of Chemical Research*, *Chemical & Engineering News*, *Bioconjugate Chemistry* and *Inorganic Chemistry*. She has mentored more than 60 graduate students and postdoctoral scholars.

Since 1923, the ACS has recognized groundbreaking chemists with the Priestley Medal. The annual award includes a gold medallion designed to commemorate the work of Joseph Priestley, who lived from 1733 to 1804, and is best remembered for his 1774 discovery of the gas that would later be named "oxygen."

Provided by American Chemical Society

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