The Australian
Women's Register

Entry type: Person
Entry ID: AWE26091639

Blackburn, Elizabeth

(1948 -)

Born	19481126, Hobart Tasmania Australia
Occupation	Biochemist, Biological scientist

Summary

Elizabeth Blackburn is an Australian–American research molecular biologist and biochemist who won a Nobel Prize in Medicine together with Carol W Greider and Jack W Szostak in 2009, for their work on genetics, specifically telomeres. She is the first Australian woman to win a Nobel Prize.

Details

Elizabeth Blackburn was born in Hobart, Tasmania in 1948. Both her parents were doctors who relocated to Launceston and then to Melbourne. At the age of sixteen, Elizabeth studied at the University High School in Melbourne, a selective public coeducational secondary school, and then at the University of Melbourne where she completed a Bachelor of Science (Honours) in 1970 and a Master of Science in 1972. She went on to study for a PhD at Cambridge University where she developed her doctoral thesis on sequencing of nuclear acids. It was here that met her husband John Sedat. She followed him to Yale University in the United States to do post-doctoral work.

In 1977 Blackburn moved to California, to continue her research into the nature of the telomere projections of chromosomes. Telomeres are the protective caps at the end of each chromosome. An enzyme, telomerase, maintains telomere ends, keeping the chromosome from being broken down by replenishing the telomere as it ages. She worked, as a research fellow, at the University of California Berkeley in the Department of Molecular Biology, then in the Department of Microbiology and Immunology at the University of California San Francisco. There she served as the Department Chair from 1993 to 1999 and was the Morris Herzstein Professor of Biology and Physiology. In 2015 she was appointed President of the Salk Institute for Biological Studies in La Jolla, California. She has a son, born in 1986.

She serves as a mentor and advocate for scientific research and policy and has taken an interest in the ethical implications of research by contributing to the creation of a code regulating the field. Blackburn has been a strong supporter and advocate for women combining the pleasures of family life and the passion for a career in science. In 2001 she was appointed to the President's Council on Bioethics, but after criticising the stance of the Bush administration on embryonic stem cell science she was controversially dropped. Furthermore, with the contribution of the psychologist Elissa Epel, Elizabeth discovered that chronic stress shortens telomeres and plays a role in various diseases, including in particular cardiovascular diseases. The cure? Improve our lifestyles. She continues to study the effects of stress on telomerase and whether lifestyle interventions can promote telomere repair, and shared her findings in her 2017 book *The Telomere Effect: The New Science of Living Younger*.

Some of Professor Blackburn's prestigious awards, honours and recognitions include: the Eli Lilly Research Award for Microbiology and Immunology (1988), the United States National Academy of Sciences Award in Molecular Biology (1990), the Harvey Society Lecturer at the Harvey Society in New York (1990), an honorary Doctorate of Science from Yale University (1991), Fellow of the American Academy of Arts and Sciences (1991), Fellow of the Royal Society (1992), Fellow of the American Academy of Microbiology (1993), Foreign Associate of the National Academy of Sciences (1993), the Australia Prize (1998), the Gairdner Foundation International Award (1998), the Harvey Prize (1999), the Keio Medical Science Prize (1999), the Passano Award (1999), California Scientist of the Year (1999), the American Academy of Achievement's Golden Plate Award (2000), the American Association for Cancer Research – GHA Clowes Memorial Award (2000), the American Cancer Society Medal of Honor (2000), Fellow of American Association for the Advancement of Science (2000), the AACR-Pezcoller Foundation International Award for Cancer Research (2001), the General Motors Cancer Research Foundation Alfred P Sloan Award (2001), the EB Wilson Award of the American Society for Cell Biology (2001), the Bristol-Myers Squibb Award (2003), the Robert J and Claire Pasarow Foundation Medical Research Award (2003), the Dr AH Heineken Prize for Medicine (2004), the Benjamin Franklin Medal in Life Science of The Franklin Institute (2005), the Albert Lasker Award for Basic Medical Research (shared with Carol W Greider and Jack Szostak 2006), the Genetics Prize from the Peter Gruber Foundation (2006), an honorary Doctorate of Science from Harvard University (2006), the Wiley Prize in Biomedical Sciences from the Wiley Foundation (shared with Carol W Greider 2006), Fellow of the Australian Academy of Science (2007), the L'Oreal-UNESCO Award for Women in Science (2008), the Nobel Prize in Medicine (shared with Carol W Greider and Jack Szostak 2009), Companion of the Order of Australia (2010), and Fellow of the Royal Society of New South Wales (2010). Elizabeth Blackburn Sciences at the University High School in Melbourne was established in 2014 'to cater and engage young people in years 11 and 12 who have a passion and the potential for success in the fields of science and mathematics.'

Published resources

Book Section
'What's a Nice Girl like you Doing with a Nobel Prize?' Elizabeth Blackburn, 'Australia's' First Woman Nobel Laureate and Women's Scientific Leadership, Carey, Jane, 2012,
http://www.womenaustralia.info/leaders/sti/pdfs/19_Carey.pdf

Biography
Elizabeth H. Blackburn, 2009,
https://www.nobelprize.org/prizes/medicine/2009/blackburn/biographical/

Interview
Interview with Elizabeth Blackburn PhD, 16 June 2000,
https://achievement.org/achiever/elizabeth-blackburn/#interview

Book
Elizabeth Blackburn and the Story of Telomeres: Deciphering the ends of DNA, Brady, Catherine, 2007

Archival resources

Library of Congress, Washington DC
Elizabeth H. Blackburn papers

National Portrait Gallery
Portrait of Elizabeth Blackburn by Hugh Hamilton

National Library of Australia, Oral History Collection
Elizabeth Blackburn interviewed by Peter Pockley [sound recording]

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