

Ageing

Editorial Simon Baker, Bec Crew, Rebecca Dargie, David Payne
Analysis Aayush Kagathra, Bo Wu **Art & design** Tanner Maxwell, Madeline Hutchinson, Sou Nakamura, Wojtek Urbaneek **Production** Natalie Smith, Nick Bruni, Jason Rayment, Bob Edenbach, Paul Glaeser **Sales and Partner content** Amanda Rider, John Pickrell, Simon Pleasants, Sophie McClarty, Jiahui Zhang, Sabrina Zhi, Jolie Wu, Sou Nakamura, Chika Takeda, Grace Sun, Nicole Yu, Sabrina Ma, Chisato Yamamoto, Soon Kim, Helen Hill, Yoshiko Sugita, Takeaki Ishihama, Brooke Pharaoh, Samantha Lubey, Sara Morbey
Publishing Katia Dallafior, Richard Hughes.

Nature Index 2025 Ageing, a supplement to *Nature*, is produced by Nature Portfolio, the flagship science portfolio of Springer Nature. This publication is based on data from the Nature Index, a Nature Portfolio database, with a website maintained and made freely available at natureindex.com.

Nature editorial offices
 The Campus, 4 Crinan Street,
 London N1 9XW, UK
 Tel: +44 (0)20 7833 4000
 Fax: +44 (0)20 7843 4596/7

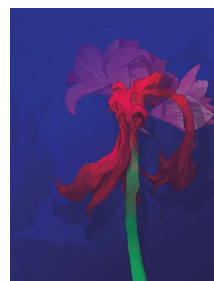
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The twentieth century saw incredible gains in global life expectancy: in 1900, the average person lived to 32 years, a figure that had more than doubled by 2000. This trend seems to have stalled in the most developed parts of the world. In Europe, for instance, life expectancy increased by almost three years from 2000 to 2010, but grew half as much in the following decade, and that was before the COVID-19 pandemic prompted a global dip in longevity. Those harbouring hopes of humans finding new ways to improve lifespan can take solace in the fact that research in this area – through the relatively young interdisciplinary field of geroscience – is booming. By focusing on understanding the biological mechanisms underlying ageing, researchers are zeroing in on a number of treatments that hold the promise of slowing down the process, therefore reducing the risk of disease. Whether the end goal here is a longer life, or a longer period in which people remain healthy, is a key question. Some researchers believe that geroscience has become so central to reducing the global burden of a host of diseases, from cancer to dementia, that ageing itself should be classed as a disease. This might essentially be a semantic argument, but proponents argue that making this shift could make it easier for researchers to gain traction and funding. This presents ethical dilemmas around how society views older people, and whether it could ultimately lead to a deepening ageism. Although scientists seek to answer these big questions, it is the breakthroughs in treating the conditions that blight life in the later years that are likely to have more immediate impacts. We highlight three researchers working on solutions, from blood tests that can identify Alzheimer's disease early to better ways to repair the heart after cardiac stress.

Simon Baker
 Chief editor, Nature Index

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On the cover
 Illustration of an old flower with its younger form in the background.
 Credit: Simon Prades

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