

## **Enabling healthy aging: Leopoldina discussion paper recommends paradigm shift in research and medicine**

**Aging is the biggest risk factor for developing diseases like cancer, dementia, and cardiovascular disease. However, as the biology of aging is becoming better understood, early approaches to geroprotection - interventions that aim to slow aging and reduce age-related disease risks - are beginning to emerge, with the potential to help people stay healthier for longer. The discussion paper published by the German National Academy of Sciences Leopoldina therefore calls for a paradigm shift in research and medicine with a stronger focus on aging itself. This approach is also supported by the Leibniz Research Alliance “Resilient Aging” (LRA-RA) and the Leibniz Institute on Aging - Fritz Lipmann Institute (FLI) in Jena.**

**Jena.** The recently published discussion paper “Health-Extending Medicine in an Aging Society: Prospects for Medical Research and Practice (2025)” by the National Academy of Sciences Leopoldina calls for a paradigm shift in research and medical care. In the future, the focus of research and medicine should not only be on treating age-related diseases and combating the symptoms of aging, but also on aging itself. The paper offers a novel perspective on preventive and geroprotective strategies for extending healthy life expectancy and promoting resilience in old age; a strategic milestone in German aging research.

### **Promoting resilient aging**

The Leibniz Research Alliance on Resilient Aging (LRA-RA, <https://resilient-ageing.de/>), an interdisciplinary research network of the Leibniz Association, also contributed to the drafting of this pioneering discussion paper. The LRA-RA, represented by the two spokespersons of the association, Prof. Helen Morrison (Leibniz Institute on Aging – Fritz Lipmann Institute, FLI, Jena) and Prof. Oliver Tüscher (Leibniz Institute for Resilience Research LIR, Mainz, & University Medicine Halle (Saale) of the Martin Luther University Halle-Wittenberg (MLU) & German Center for Mental Health (DZPG), Halle (Saale)), brings together expertise in biology, medicine, psychology, social sciences, and economics from 14 participating Leibniz institutes and has started pursuing a more comprehensive approach.

The primary focus is on the individual biological aging process in connection with lifestyle, nutrition, education, and other socioeconomic and sociopolitical factors. The purpose is to find out what protective mechanisms enable people to better adapt to the stress and challenges of aging. Adaptive plasticity—the ability of the body and mindset to adapt to changing conditions—plays a central role in this.

With five interdisciplinary research areas and two research perspectives (resilient trajectories and adaptive plasticity), the LRA-RA is contributing to a better understanding of adaptive processes in old age—and, on this basis, to the further development of prevention, care, and social participation.

## Basic research in an interdisciplinary context

“Placing the biological aspects of aging in a larger interdisciplinary context and showing how we can develop evidence-based but also socially compatible strategies for healthy aging is enormously important to us as researchers,” emphasizes Prof. Morrison, spokesperson for the LRA-RA and group leader at the FLI in Jena. The long-term goal is to develop evidence-based strategies that contribute to strengthening resilience in old age. In line with the WHO/UN Decade of Healthy Aging (2021–2030), the research network is thus highlighting its central role in shaping innovative, collaborative, and policy-relevant aging research—and positioning the Leibniz Association at the forefront of this field of research.

“In preparing the discussion paper, I focused primarily on integrating biological perspectives into broader, interdisciplinary frameworks to ensure that our recommendations are consistent with both scientific findings and societal needs,” emphasizes Prof. Morrison. “My involvement in this reflects the FLI’s core mission: to understand the mechanisms of aging and translate these findings into strategies for promoting healthy aging. In doing so, we play an important role in linking our research work—whether at the institute or within the research network—to high-level national research policy discussions to ensure that the voices of researchers are represented and heard and considered when critical issues arise in national research planning,” Prof. Morrison continues.

## Aging research at the FLI

The shift to preventive and geroprotective strategies in aging research will further strengthen the position of the Leibniz Institute on Aging - Fritz Lipmann Institute in Jena as a leading institute in aging research. The FLI was the first research institute in Germany to dedicate itself to biomedical aging research in 2004. Approximately 350 employees from 40 countries are investigating the molecular basis of aging to understand how and why age-related changes occur, aiming to use this knowledge to promote health and quality of life in old age.

“This paper marks an important step toward aligning Germany with the global shift toward geroscience—the understanding that targeting the biology of aging can help prevent multiple diseases at once. At the FLI, we fully support this focus and are ready to contribute our expertise to help turn the vision of health-extending medicine into reality,” says Prof. Dario Riccardo Valenzano, Scientific Director of FLI, emphasizing the importance of the Leopoldina’s recently published discussion paper.

### For more information:

The discussion paper “Health-Extending Medicine in an Aging Society: Prospects for Medical Research and Practice (2025)” is published on the Leopoldina website:

<https://www.leopoldina.org/en/>

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## Photo



The discussion paper published by the German National Academy of Sciences Leopoldina calls for a paradigm shift in research and medicine with a stronger focus on aging itself. (Photo: © MarekPhotoDesign.com – stock.adobe.com)

## Background

The **Leibniz Institute on Aging – Fritz Lipmann Institute (FLI)** – upon its inauguration in 2004 – was the first German research organization dedicated to research on the process of aging. Around 350 employees from around 40 nations explore the molecular mechanisms underlying aging processes and age-associated diseases. For more information, please visit: [www.leibniz-fli.de](http://www.leibniz-fli.de).

The **Leibniz Research Alliance “Resilient Ageing” (LRA-RA)** brings together experts from medicine, life sciences, social sciences, and behavioral sciences to explore new ways to promote healthy and active aging. The network includes 14 Leibniz Institutes. More information at: [www.resilient-ageing.de](http://www.resilient-ageing.de)

The **Leibniz Association** connects 96 independent research institutions that range in focus from natural, engineering, and environmental sciences to economics, spatial, and social sciences and the humanities. Leibniz Institutes address issues of social, economic, and ecological relevance.

They conduct basic and applied research, including in the interdisciplinary Leibniz Research Alliances, maintain scientific infrastructure, and provide research-based services. The Leibniz Association identifies focus areas for knowledge transfer, particularly with the Leibniz research museums. It advises and informs policymakers, science, industry, and the general public.

Leibniz institutions collaborate intensively with universities – including in the form of Leibniz ScienceCampi – as well as with industry and other partners at home and abroad. They are subject to a transparent, independent evaluation procedure. Because of their importance for the country as a whole, the Leibniz Association Institutes are funded jointly by Germany’s central and regional governments. The Leibniz Institutes employ around 21,400 people, including 12,170 researchers. The financial volume amounts to 2 billion euros. For more information: [www.leibniz-gemeinschaft.de/en/](http://www.leibniz-gemeinschaft.de/en/).