

ALZHEIMER'S SCIENCE NEWS

SPRING 2026



WHY SOME BRAINS STAY SHARP WITH AGE

Why does memory decline differ so much between people of the same age—even within the same family? Research points to cognitive reserve, the brain's ability to resist or adapt to age-related changes and disease.

Today, Alzheimer's disease can be detected through biological markers years before any symptoms appear. And yet some people whose brains are showing signs of these changes experience little negative impact on their daily lives. Cognitive reserve helps explain why.

Cognitive reserve is shaped by both biology and life experience. Education, physical activity, good nutrition, medical care, social connection, and lifelong learning all strengthen the brain's internal networks, helping it work more efficiently and recover from stress or injury.

An Alzheimer's Disease Research-funded study led by Henne Holstege, PhD, highlights this resilience. Her 100-Plus Study follows centenarians who remain mentally sharp—even when their brains show signs of aging or amyloid buildup. These findings show that memory decline is not inevitable.



Your support powers research revealing how resilience in the brain can help protect memory over time.

In fact, studies suggest up to 45 percent of dementia cases could be delayed or prevented by addressing modifiable risk factors like inactivity, social isolation, and untreated health conditions.

Your generosity fuels this research, turning knowledge into hope for families everywhere.

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PRESIDENT'S CORNER

I'm excited about the progress being made against Alzheimer's. Your generosity fuels critical discoveries that bring hope to people with this mind-stealing disease, as well as those who love them.

Thanks to your support, scientists are advancing Alzheimer's research on multiple fronts: developing a blood test for earlier detection, uncovering how the brain's immune system drives neurodegeneration, and exploring how restoring the brain's ability to make new cells could protect memory and slow disease—bringing hope to millions of families.

Thank you for supporting research and helping to provide mind-saving information to the public. Together, we will stop this disease!

Stacy Pagos Haller

A SIMPLE BLOOD TEST COULD CHANGE ALZHEIMER'S DETECTION

Thanks to early funding from Alzheimer's Disease Research, scientists have identified a promising new class of blood-based biomarkers that could detect Alzheimer's earlier than ever before.

At the Clinical Trials on Alzheimer's Disease (CTAD) conference, researchers shared data on circular RNAs (circRNAs), stable, brain-derived molecules found in blood. These biomarkers offer a clearer picture of the biological changes happening in Alzheimer's, often before symptoms appear.

More accurate, accessible tests mean physicians could identify the disease sooner, opening the door to earlier care and more effective treatment options. Alzheimer's Disease Research grantees, including Laura Ibañez, PhD, helped advance this work, which is now being developed into clinical lab tests by Circular Genomics.

Early detection is critical to changing the course of Alzheimer's. Your generosity made this progress possible, helping turn innovative science into real-world tools that could improve diagnosis, treatment, and hope for families facing this disease.



**Thanks to your support, more accurate
Alzheimer's diagnoses are within reach.**

RESEARCHER SPOTLIGHT: Laura Fumagalli, PhD

Laura Fumagalli, PhD, at the Flanders Institute for Biotechnology, is advancing a powerful new way to understand how the brain's immune system contributes to frontotemporal dementia (FTD). Her research focuses on microglia—the brain's resident immune cells—and how a mutation in the C9orf72 gene, the most common genetic cause of FTD and ALS, may cause these cells to malfunction and drive neurodegeneration.

Dr. Fumagalli's work explores how this mutation alters microglial behavior and disrupts the delicate balance of the brain's



Laura Fumagalli,
PhD

immune response. Using patient-derived cells and an innovative model that re-creates a brain-like environment, she applies advanced single-cell technologies to capture how individual immune cells change and interact during disease progression.

By uncovering how altered microglial activity fuels damage in the brain, this research could reveal new biomarkers and therapeutic targets for FTD. Your support is helping illuminate the critical role of brain immunity in neurodegenerative disease—opening new pathways toward earlier diagnosis and more effective treatments.

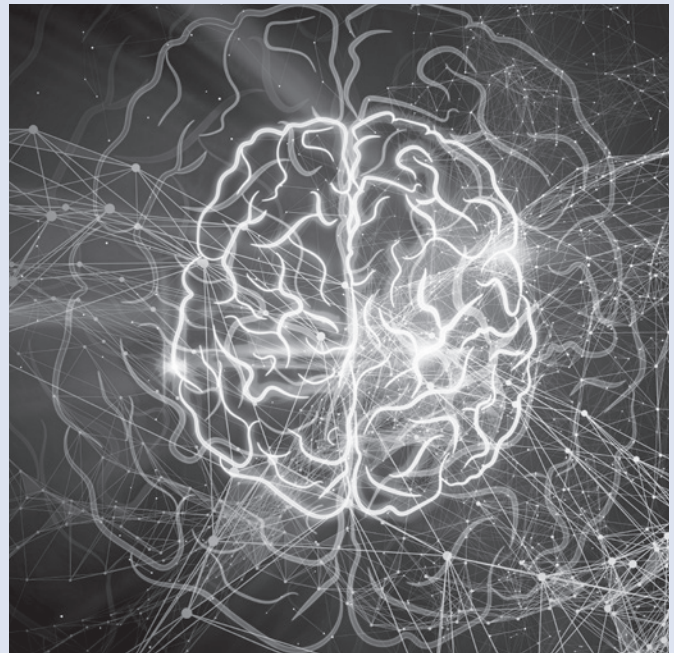
UNLOCKING THE BRAIN'S POWER TO RENEW ITSELF

The human brain may develop new cells in its memory center well into adulthood—but in Alzheimer's disease, this powerful process can break down. Alzheimer's Disease Research-funded scientist María Llorens-Martín, PhD, is working to understand why and how restoring it could transform lives.

Her research focuses on the hippocampus, a brain region essential for learning and memory. Using samples and advanced tools like genetic analysis, imaging, and artificial intelligence, Dr. Llorens-Martín is searching for early warning signs of Alzheimer's and new genetic risk factors, often years before symptoms appear.

This work could lead to earlier diagnosis, guide preventive care, and reveal entirely new drug targets. By identifying which brain cells are most vulnerable, her research opens the door to therapies that may protect memory and slow disease progression.

Your support makes this possible. By funding innovative scientists like Dr. Llorens-Martín, you are helping drive discoveries that bring hope to millions of families facing Alzheimer's.



María Llorens-Martín, PhD, is uncovering how the brain's ability to make new cells could change Alzheimer's care.

Zoom In on Dementia & Alzheimer's

Sign up for our FREE monthly virtual discussion series with experts to stay informed about the latest findings—from treatments and genetics to risk reduction, supplements, and more! You can also ask questions during a live Q&A. All sessions are recorded and available to watch on demand.

To register and catch up on previous episodes, visit:
brightfocus.org/ADRzoom

HELP FIGHT ALZHEIMER'S THROUGH A WILL OR BEQUEST

Would you like to help defeat Alzheimer's while benefiting from estate tax savings? If so, consider supporting Alzheimer's Disease Research through a will or bequest.

It's one of the easiest gifts to make. With the help of an advisor, you can include language in your will or trust that specifies that a gift be made to our organization as a part of your estate plan.

A bequest can be made in several ways. You can:

- Gift a specific dollar amount or asset
- Gift a percentage of your estate
- Gift the balance or residue of your estate
- Designate certain assets, such as appreciated securities

With our partner, FreeWill, you can easily create a will online. Visit FreeWill.com/BrightFocus to get started on your will today.

If you have any questions, please contact us at **301-556-9362**.



Leave a lasting legacy to be
remembered through a will or bequest.



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Please share this newsletter with someone you know who might be interested in learning about some of the latest advancements in research to diagnose, prevent, treat, and cure Alzheimer's disease.

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