Alzheimer's Disease Research

ALZHEIMER'S SCIENCE NEWS

WINTER 2026

UNLOCKING A NEW GENETIC KEY TO ALZHEIMER'S

Alzheimer's research is entering a bold new era, one that looks beyond the well-known amyloid and tau proteins to uncover surprising genetic causes of brain inflammation.

Joe Herdy, PhD, a 2025 Alzheimer's Disease Research grant recipient at the Salk Institute, is exploring how "jumping genes" known as LINE-1 may fuel inflammation in the brain. These viral-like bits of DNA can reactivate later in life, triggering immune responses that damage brain cells—much like an infection that comes from within.

He is testing whether blocking LINE-1 activity could help protect neurons and slow Alzheimer's progression. His findings could reveal entirely new therapeutic targets, including drugs designed to calm brain inflammation before it leads to cognitive decline.

"It's an exciting opportunity to uncover a missing link between aging, inflammation, and neurodegeneration," says Dr. Herdy.

With your support, Dr. Herdy is using advanced techniques such as single-cell sequencing and spatial transcriptomics to map exactly how LINE-1 disrupts brain health.

This research could pave the way for new treatments that stop Alzheimer's before memory loss begins, offering life-changing hope for millions of families worldwide.

Researchers investigate how genes may trigger brain inflammation.

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Alzheimer's Disease Research, a BrightFocus Foundation® Program
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PRESIDENT'S CORNER

Every day, researchers are uncovering new ways to fight Alzheimer's, and these exciting discoveries are only possible because of you.

In this issue, you'll read about groundbreaking strides being made to fight Alzheimer's. One article reveals how GLP-1, a weight-loss and diabetes drug, could impact Alzheimer's development. Another explores how blood flow changes could damage the brain over time.

Thank you for being an essential part of this mission. Your partnership fuels discoveries that bring us closer to a future free from Alzheimer's disease.

Stacy Pagos Haller

FDA APPROVES FIRST AT-HOME ALZHEIMER'S TREATMENT

For the first time, people living with early-stage Alzheimer's can receive treatment from the comfort of home.

The U.S. Food and Drug Administration (FDA) has approved a new at-home injectable version of Leqembi, a treatment that targets and removes harmful amyloid plaques from the brain.

Leqembi was first approved in 2023 as an intravenous (IV) infusion given at hospitals or clinics. Now, after an initial infusion phase, patients can switch to weekly at-home injections using a simple autoinjector that delivers the dose in about 15 seconds.

This new option will make Alzheimer's care more accessible and less stressful for patients and caregivers, reducing travel and time spent at infusion centers.

"Today's approval is an important step toward making Alzheimer's treatments more accessible and manageable," says Stacy Pagos Haller, President and CEO of BrightFocus Foundation.

As new therapies for Alzheimer's disease become available, navigating the options can be overwhelming. Our new infographic summarizes all FDA-approved Alzheimer's therapies. View or download it on our website at brightfocus.org/infographic.

The new Leqembi autoinjector offers an easier at-home option for people in the early stages of Alzheimer's.

RESEARCHER SPOTLIGHT: Daniel Bos, MD, PhD

Changes in blood flow to the brain may play a key role in the development of different forms of dementia, including Alzheimer's disease. With your support, Daniel Bos, MD, PhD, and his team are studying how blood flow in the neck's carotid arteries might contribute to memory loss and brain decline.

They are using advanced computer simulations and imaging to understand how the mechanics of blood flow, the pressure and force inside arteries, could damage blood vessels and reduce brain oxygen levels over time.

Daniel Bos, MD, PhD

What makes his project unique is its multidisciplinary approach: experts in neurology, engineering, and medical imaging are working together to study a large group of people and uncover how vascular and brain health are connected.

Their findings could help doctors detect dementia risk much earlier, giving patients a better chance to protect their brain health before symptoms begin.

Thanks to your support, innovative studies like this are bringing us closer to understanding and ultimately preventing Alzheimer's disease.

NEW FINDINGS ON GLP-1 DRUGS AND ALZHEIMER'S

A new class of medicines called GLP-1 drugs—originally developed for diabetes and weight loss—is being studied for its potential to help slow or prevent Alzheimer's. These drugs not only balance blood sugar, but may also protect brain cells, reduce inflammation, and clear toxic proteins that damage memory and thinking.

A recent clinical trial showed that semaglutide, a type of GLP-1, did not significantly slow disease progression in people with early-stage Alzheimer's. However, treatment did improve some Alzheimer's disease-related biomarkers, such as different forms of tau protein and markers of brain inflammation and nerve cell damage. Research continues into other GLP-1 drugs to assess their potential impact on Alzheimer's disease.

GLP-1 drugs still show promise for addressing mid- and late-life modifiable risk factors to prevent or delay the onset of Alzheimer's disease. These include helping to maintain target blood sugar levels and a healthy metabolism, said Sharyn Rossi, PhD, BrightFocus Foundation's senior director of neuroscience programs.

New drugs may help protect brain cells.

Zoom In on Dementia & Alzheimer's

Sign up for our FREE monthly live conversation series with renowned research scientists and clinicians to keep you informed about the latest findings—from treatments and genetics to risk reduction, supplements, and clinical trials! You can also ask questions during a live Q&A. All episodes are recorded and available to watch on demand.

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

EARN INCOME FOR LIFE WHILE FIGHTING ALZHEIMER'S

Would you like to earn a guaranteed income for life while helping find a cure for Alzheimer's? If yes, then consider setting up a charitable gift annuity with Alzheimer's Disease Research.

A charitable gift annuity offers many benefits. Here's how it works:

- You transfer cash to Alzheimer's Disease Research.
- In exchange, we promise to make fixed payments to you for life. The payments can be quite high, depending on your age, and a portion of each payment may be tax-free.
- You will receive a charitable income tax deduction for the gift portion of the annuity.
- You also have the satisfaction of knowing you're supporting our mind-saving work.

To learn more about how a charitable gift annuity can offer you a reliable income stream and potential tax benefits, please contact us at **301-556-9362** or **plannedgiving@brightfocus.org**.

You can receive fixed income for life while also advancing Alzheimer's research.

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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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