

Trial to test prevention of Alzheimer's has begun

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More than a century ago, Alois Alzheimer, a Bavarian physician, first identified the neurodegenerative brain condition that came to be known as Alzheimer's disease. Finding ways to diagnose and treat this disease has frustrated scientists and clinicians ever since.

Now the long and hard-fought campaign against Alzheimer's has reached a potentially significant milestone: the launch of the first clinical trials to test whether giving new drug treatments before [dementia](#) can prevent Alzheimer's.

Brent Whitney, 34, who has an inherited form of Alzheimer's but does not yet have symptoms of the disease, hopes to participate in the study. The lives of his grandmother and 10 of her 13 siblings were cut short by the Alzheimer's [gene mutation](#), and the mutation continues to affect succeeding generations of the family.

"The start of this trial is a very exciting moment in Alzheimer's disease research, and it gives me renewed hope for a future without Alzheimer's," Whitney said. "I hope my grandchildren someday learn of this condition in history books, like I learned about [polio](#)."

The trial is testing two new drug treatments and is led by principal investigator Randall Bateman, MD, the Charles F. and Joanne Knight Distinguished Professor in Neurology at Washington University School of Medicine in St. Louis and director of the Dominantly Inherited Alzheimer Network Trials Unit (DIAN-TU).

"We believe that the diverse portfolio of drugs and approaches of the DIAN-TU trial will accelerate the discovery of an effective treatment for Alzheimer's," Bateman said. "This trial is possible because of the outstanding support of multiple stakeholders, including patients and family members, pharma partners, the Alzheimer's Association, the National Institutes of Health, [academic researchers](#) and highly dedicated trial operations groups."

The new trial is funded by a unique mix of private and [public resources](#), including:

- A grant from the National Institutes of Health (NIH) for fiscal year 2013 in the amount of \$1.5 million, awarded on Sept. 18, with the total amount of as much as \$6 million over the four years of the project;
- The largest Alzheimer's Association grant given to date, nearly \$4.2 million;
- Donation of the treatments used in the [trials](#) from the drugs' manufacturers, Roche and Eli Lilly and Company, which also provided major financial support for the trial;
- Donation of a new agent for imaging brain plaques, Amyvid, by Avid Radiopharmaceuticals, Inc., a wholly owned subsidiary of Lilly; and
- Donation by CogState of a computerized set of cognitive skills tests to help assess cognitive function in participants.

John C. Morris, MD, is director of the Charles F. and Joanne Knight Alzheimer's Disease Research Center and principal investigator of the Dominantly Inherited Alzheimer Network, which laid much of the scientific groundwork that made a DIAN-TU trial of preventive treatments possible.

"Trying to prevent Alzheimer's symptoms from occurring is a new

strategy, but much of what we've learned in recent years about Alzheimer's and the brain has suggested that prevention has a significantly better chance of succeeding than treatment after cognitive impairment," said Morris, the Harvey A. and Dorismae Hacker Friedman Distinguished Professor of Neurology. "We are most appreciative of the support we have received to test this new approach."

For more information on the trial, see <http://www.DIANXR.org>.

One of the treatments under study in the new trial is gantenerumab, an antibody made by Roche that binds to all forms of aggregated amyloid beta and helps remove them from the brain.

Another treatment that will be evaluated is a monoclonal antibody known as solanezumab that binds to soluble monomeric forms of amyloid-beta after they are produced, allowing them to be cleared before they clump together to form beta-amyloid plaques.

David M. Holtzman, MD, the Andrew B. and Gretchen P. Jones Professor and head of neurology, is listed on the patent related to the antibody that is co-owned by Washington University in St. Louis and Lilly. Washington University has licensed its patent rights to Lilly. The financial interests of the university and Holtzman in this patent are managed in accordance with applicable conflict-of-interest policies and regulations.

Provided by Washington University School of Medicine

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