



Welcome to our newsletter that summarizes some of our current research by investigators at the ADRC.

## Identification of a novel potential therapeutic agent for Alzheimer's disease

Amyloid beta plaques accumulated in a mouse hippocampus.

In the amyloid hypothesis of Alzheimer's disease (AD), abnormally cleaved amyloid protein aggregates into oligomers that cause damage and eventually cell death. Exactly how that damage occurs and how to prevent it are topics of intense investigation. Attempts to clear amyloid plaques or oligomers themselves have met with limited success thus far. Stephen Strittmatter, MD, PhD, director of the Yale Alzheimer's Disease Research Center, and colleagues previously demonstrated that binding of oligomeric amyloid to cellular prion protein is one way the destructive process is initiated. This offered the possibility of a novel therapeutic strategy to limit or avoid the damage. To do so, Dr Strittmatter and colleagues sought to identify molecules that might disrupt this process and limit subsequent damage. They screened thousands of potential compounds before identifying an old antibiotic that was effective after decomposing to a polymer. That polymer was then dissolved and given to mice bred to have Alzheimer's-like pathology, resulting in synapse repair and improved memory. The next phase of investigation will involve determining potential toxicities of this encouraging new orally-administered therapeutic agent, in anticipation of eventual larger scale trials.

Gunther, EC, ..., Strittmatter, SM. Rescue of Transgenic Alzheimer's Pathophysiology by Polymeric Cellular Prion Protein Antagonists. *Cell Reports* 2019; 26:145-158. Lauren, J, ..., Strittmatter, SM. Cellular prion protein mediates impairment of synaptic plasticity by amyloid-beta oligomers. *Nature* 2009; 457:1128-1132.

This is walk season again in Connecticut and around the nation as the Alzheimer's Association holds its annual **Walk to End Alzheimer's**. This event is not only the premier fund raising event for the Association, but is intended to raise awareness of Alzheimer's disease in the general population. Funds from the Walk support the mission of the Alzheimer's Association "to eliminate Alzheimer's disease through the advancement of research; to provide and enhance care and support for all affected; and to reduce the risk of dementia through the promotion of brain health." The programs and services of the Connecticut Chapter in the care and support of individuals and families include a 24/7 Helpline, care consultations, family support groups, groups for individuals with early stage dementia, Safe Return wanderer's bracelet, grants for respite care, and Trial match to link individuals with research opportunities.

### **The Walk schedule is:**

September 22 Enfield Town Green, Enfield

September 22 Western CT State University Westside Campus, Danbury

**September 29 Lighthouse Point Park, New Haven**

**October 13 Calf Pasture Beach, Norwalk**

**October 13 Pratt & Whitney Stadium at Rentschler Field, East Hartford.**

So put on your sneakers, choose a walk close to you, register, raise money, and walk. You can participate as a walker, volunteer, or raise money as a "virtual walker" if you are unable to attend the event. Yale ADRC will have tables at the Walks in Norwalk, New Haven, and East Hartford so stop by and chat with us. Click on the link below for more information or to register.

<https://www.alz.org/walk>

---

Thank your your interest in the Yale ADRC. For more information on our studies or to participate in studies please call or visit our website.

**203-764-8100**

**<http://medicine.yale.edu/adrc/>**

Alzheimers Disease Research Center

[Website](#) [Cores](#) [Education](#) [Faculty](#) [Publications](#) [Events & Seminars](#)



Yale School of  
Medicine 333 Cedar  
Street New Haven CT  
06510

**CONTACT US**

