Open Research Studies (continued)

Janssen AuTonomy Study:

The purpose of this study is to evaluate the safety and efficacy of a new investigational medication for people with **early Alzheimer's disease (AD)**. This is a phase 2 study of a **monoclonal antibody targeting tau**. The study drug is given by **intravenous (IV) infusion**. Tau is a protein that accumulates in the brains of people with AD. This study looks at whether removing tau will improve memory and thinking in individuals with AD.

This study will compare the investigational medicine with a placebo. The study is testing 2 doses of the investigational medicine so the chances of receiving placebo are 1 out of 3. If they are eligible, participants will receive the study drug **once every month for up to 4.5 years**. They will visit the study doctor or study team every 4 weeks. People who are eligible to take part will receive study-related medical care and the study drug at no cost.

For more information about these studies, please contact:

Memory Research Coordinator
617-667-0249 / alz@bidmc.harvard.edu

To learn more about our programs visit our websites:

Beth Israel Deaconess Medical Center
Division of Cognitive Neurology
cognitiveneurologyunit.com

The Berenson-Allen Center
for Noninvasive Brain Stimulation
tmslab.org

Beth Israel Lahey Health
Beth Israel Deaconess Medical Center

Division of Cognitive Neurology
330 Brookline Avenue
Boston, MA 02215

T: 617-667-0307
F: 617-975-5322

Beth Israel Deaconess Medical Center | HARVARD MEDICAL SCHOOL TEACHING HOSPITAL

The Division of Cognitive Neurology

Memory A2Z

Research Program

The AHeAD Study:

The main purpose of this study is to understand how brain excitability, or how the brain reacts to a stimuli, can predict long-term cognition in people with **mild cognitive impairment (MCI) or early Alzheimer's disease (AD)**. There is research that shows that people with memory problems can have brains that are more excitable than people without memory problems. It is thought that this increase in brain excitability could make memory problems worse. This study can be done independently or may be combined with the LeAD study investigating the use of levetiracetam to treat brain excitability. Dr. Stephanie Buss is conducting this study.

If you qualify for and take part in the study, you would undergo all study related visits and testing at no charge. The study requires approximately **5-6 in-person visits total and 2 phone visits**. You will be compensated for your time and transportation will be provided for any in-person visits.

Gamma Induction for Amyloid Clearance in Alzheimer's Disease

The purpose of this research study is to explore the effects of **transcranial alternating current stimulation (tACS)** on amyloid and tau, which build up in the brains of people with Alzheimer's disease. Amyloid and tau are proteins found naturally in your body but can build up and form plaques and tangles that have been associated with Alzheimer's disease.

The main goal of the study is to see if tACS, a form of noninvasive brain stimulation, can decrease the amount of amyloid and tau in the brain by applying the tACS at a frequency of naturally occurring waves in your brain called gamma oscillations.

If you are interested in joining this study, you will have some testing to see if you qualify, including memory and thinking tests and an amyloid Positron Emission Tomography (PET) scan, as well as a tau PET scan. If you participate in the study, you will undergo **2 or 4 weeks of daily or twice daily tACS sessions** lasting approximately 1 hour each followed by some repeat follow up testing.

The LeAD Study

The main purpose of this study is to see if a medication, **levetiracetam (LEV),** can improve cognition (thinking) in people with MCI and early AD. There is research that shows that people with memory problems can have brains that are more excitable than people without memory problems. It is thought that this increase in brain excitability could make memory problems worse. LEV is a medication that is commonly used to treat people with seizures. It is thought that LEV may also be used to decrease brain excitability in people with memory problems. The hope is that this would help to improve thinking in people with MCI and early AD.

If you qualify for and take part in the study, you would undergo all study related visits and testing at no charge. The study requires approximately **15 visits total.** You will be compensated for your time and for parking at the hospital.

The Gifted Study

The purpose of this study, conducted by Emiliano Santarnecchi, PhD, is to investigate the safety, tolerability and effectiveness of **6 weeks of non-invasive brain stimulation** in people with **Frontotemporal Dementia (FTD)**. People with FTD can have a decrease in how their brain uses glucose (sugar) for energy and functioning. This study will investigate whether transcranial alternating current stimulation (tACS) can affect brain activity to improve how your brain uses glucose (sugar).

The main goal of the study is to see if tACS, a form of noninvasive brain stimulation, is safe, effective and tolerable in the brain by applying the tACS at a frequency of naturally occurring waves in your brain called gamma oscillations, to see whether there is an increase or decrease in brain activity after tACS.

If you are interested in joining this study, you will have some testing to see if you qualify, including **memory and thinking tests**, a Fluorodeoxyglucose Positron Emission Tomography **(FDG-PET) scan**, as well as an **MRI**. If you participate in the study, you will undergo 6 weeks of daily tACS sessions lasting approximately 1 hour each followed by some repeat follow-up testing.

➔ *please turn over*