**P3-011 INNOVATIVE ALZHEIMER’S DRUGS OFFER HOPE FOR ALZHEIMER’S PATIENTS AND FAMILIES: AN ANALYSIS OF THE PHASE 2 AND PHASE 3 ALZHEIMER’S DRUG PIPELINE**

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**Background:** The purpose of the RA2 Alzheimer’s drug pipeline report is to deliver a comprehensive look at Alzheimer’s drugs in late stage (Phase 2 and Phase 3) clinical trials and to provide a realistic estimate of when these drugs could potentially reach the market in the next five to 10 years. **Methods:** This analysis was constructed through extensive research and interviews, including interviews with company executives about publicly available information, SEC filings, company reports, presentations at medical conferences and media coverage. Additionally, academic research experts and select ResearchersAgainstAlzheimer’s (RA2) members provided input and review of the analysis. However, the responsibility for the content of this report belongs solely to UsAgainstAlzheimer’s, the convener of RA2, and not to any other organization or individual. When complete information pertaining to compound development milestones was not available, the research team estimated the timing of milestones based on our experience in pharmaceutical drug development. **Results:** RA2’s most recent pipeline analysis found that of the 23 drugs in Phase 3 clinical trials, 19 drugs could reach the market in the next five years. This information is subject to change given the nature of clinical trials and drug development, and we expect to update our pipeline analysis with the most up to date information ahead of the AAIC conference this summer. **Conclusions:** Given the number of Alzheimer’s drugs in clinical trials – and the diversity of approaches in development to combat the disease – there are a number of areas in which the healthcare system must improve if patients are to benefit from these new treatments, including: (1) Enhancing the training and numbers of front-line physicians, including in primary care, to diagnose and treat Alzheimer’s; (2) Improving the accuracy of diagnosis, (3) Improving communication between patients and physicians, (4) Treating Alzheimer’s like the fatal disease that it is, rather than as routine clinical care, (5) Addressing payment and reimbursement.

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**P3-010 LEVETIRACETAM ALTERS OSCILLATORY CONNECTIVITY IN ALZHEIMER’S DISEASE**

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**Background:** Seizures occur at a higher frequency in Alzheimer’s disease, but clinically overt events are infrequent. Subclinical epileptiform discharges may still contribute to the pathophysiology. **Methods:** In this pilot study (n = 7), we administered low dose levetiracetam (2.5mg/kg), higher-dose levetiracetam (7.5mg/kg), and placebo in a double-blind, within subject, repeated measure design. We measured EEG power and EEG coherence before and after drug administration, as well as cognitive performance after drug administration. **Results:** We found significant increases in EEG coherence in the high beta band (24-30hz), a band where reduced coherence is seen in AD; as well as decreased coherence in the delta band (1-4hz), a band where there is abnormally enhanced coherence in AD. We did not see any significant cognitive changes after a single dose of drug. **Conclusions:** The pattern of decreased coherence in the lower frequency bands and increased coherence in the higher frequency bands suggests a beneficial effect of LEV for patients with AD. Larger longitudinal studies and studies with healthy age-matched controls are needed to determine whether longer term administration is associated with a beneficial clinical effect.