Significant Cognitive Improvement with Bryostatin for Advanced Alzheimer’s Patients in the Absence of Memantine

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ABSTRACT

Background: Bryostatin, preclinically shown to induce neuroprotection and prevent neuronal death, was evaluated in the Phase 2 clinical trial (NCT00027620) with two doses (5μg and 20μg) of the drug on a daily basis in AD patients. Additional sub-studies were conducted in a 1:1 treatment allocation (3 patients per arm) at 2μg and 10μg in order to achieve both acute and chronic treatment effects. Methods: In this sub-study, patients were randomized in a 1:1:1:1:1 treatment allocation to receive 2μg, 5μg, 10μg, or placebo, or the same doses with memantine 10mg QD. A total of 50 patients were included, 10 per group. The first treatment cycle lasted for four weeks, followed by an eight-week washout period, and this cycle was repeated twice for a total of four cycles. Results: Cognitive efficacy and safety data were collected at baseline and at each follow-up visit, and were analyzed with mixed effects models with Center and treatment as fixed factors. The analysis was performed on an intent-to-treat (mITT) basis. Safety: In the placebo and 2μg bryostatin treatment arms, there were no statistically significant differences in safety compared to baseline. No treatment-related adverse events were reported. In the 5μg and 10μg bryostatin treatment arms, one patient (2%) in each group experienced a treatment-related adverse event. Methods and Materials: Bryostatin, without memory, shows promise as a modifier of Alzheimer’s disease — to be confirmed by additional studies.

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REFERENCES

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