NEWS RELEASE

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SAGE Therapeutics Presents Preliminary SAGE-547 Clinical Data at Epilepsy Pipeline Conference

Early Data from Phase 1/2 Clinical Trial Demonstrate Anti-Epileptic Activity of SAGE-547

Cambridge, Mass. – June 5, 2014 – SAGE Therapeutics (SAGE), a biopharmaceutical company developing novel medicines to treat life-threatening, rare central nervous system (CNS) disorders, today announced preliminary data from its ongoing open-label Phase 1/2 clinical trial of SAGE-547, an allosteric modulator of $GABA_A$ receptors, in patients with super-refractory status epilepticus (SRSE). The preliminary data showed that the first three patients met both the primary endpoint, safety and tolerability, and the key secondary endpoint, efficacy, of being successfully weaned off their anesthetic agents while SAGE-547 was being administered. In particular, no drug-related serious adverse events were reported in these patients. These data were largely consistent with previously reported results of four patients with SRSE treated with SAGE-547 in emergency-use settings. Summary data were presented today at the Epilepsy Pipeline Conference in San Francisco.

"Status epilepticus is a life-threatening condition in which the brain is in a state of persistent seizure and has limited treatment options," said Stephen Kanes, M.D., Ph.D., chief medical officer of SAGE Therapeutics. "These preliminary data on the potential effectiveness of SAGE-547 are very encouraging, and we look forward to obtaining the full data from this study later this year."

SAGE-547 is an allosteric modulator of both synaptic and extra-synaptic $GABA_A$ receptors. While altering the level of synaptic $GABA_A$ receptor activity can be beneficial in stopping seizures, this approach has limitations for the treatment of status epilepticus (SE). As SE progresses in many patients, select synaptic $GABA_A$ receptors are down-regulated, or removed from the neuronal synaptic surface. As a result, drugs that target down-regulated receptors, such as benzodiazepines (BDZs), often are not effective in stopping SE. In pre-clinical studies, SAGE-547 has demonstrated activity in seizures that are resistant to BDZs, which may be due to its activity at extra-synaptic $GABA_A$ receptors.

Preliminary Data Summary

The Phase 1/2 clinical trial is an open-label study designed to evaluate the safety, tolerability, and efficacy of SAGE-547 in at least 10 adult patients diagnosed with SRSE and is currently enrolling patients at five centers across the U.S. The preliminary findings from this ongoing trial are as of April 21 and summarize the treatment of the first three patients dosed with SAGE-547 in the trial. While data collection in these patients is ongoing, all three patients met a key efficacy endpoint of being successfully weaned off their anesthetic agents while SAGE-547 was being administered. One patient was weaned off SAGE-547 without recurrence of SE and subsequently discharged to a rehabilitation facility. The other two patients experienced

recurrence of SE upon withdrawal of SAGE-547, providing preliminary evidence of the pharmacologic effect of SAGE-547.

Emergency-Use Data Summary
The second data set presented summarizes the treatment of four patients with SAGE-547 by independent centers under emergency use. Each patient suffered from SRSE that arose from a presumed different underlying etiology, the patients were of varying ages (2 to 28 years of age), and all patients had been placed in a long-duration medically induced coma. In each case, SAGE-547 was administered with a target steady state exposure similar to that being used in the ongoing Phase 1/2 clinical trial. Each of the four patients treated with SAGE-547 achieved resolution of SRSE either during the course of or soon after SAGE-547 treatment.

About SAGE-547
SAGE-547 is an allosteric modulator of both synaptic and extra-synaptic $GABA_A$ receptors. $GABA_A$ receptors are widely regarded as validated drug targets for a variety of CNS disorders, with decades of research and multiple approved drugs targeting these receptor systems. SAGE-547, developed by SAGE Therapeutics using its proprietary chemistry platform, is an intravenous agent in Phase 1/2 clinical development as an adjunctive therapy, a therapy combined with current therapeutic approaches, for the treatment of SRSE.

About Status Epilepticus
SE is a life-threatening seizure condition that occurs in approximately 150,000 people each year in the U.S., of which 30,000 SE patients die.[1] We estimate that there are 35,000 patients with SE in the U.S. that are hospitalized in the intensive care unit (ICU) each year. An SE patient is first treated with BDZs, and if no response, is then treated with other, second-line, anti-seizure drugs. If the seizure persists after the second-line therapy, the patient is diagnosed as having refractory SE (RSE), admitted to the ICU and placed into a medically induced coma. Currently, there are no therapies that have been specifically approved for RSE; however, physicians typically use anesthetic agents to induce the coma and stop the seizure immediately. After a period of 24 hours, an attempt is made to wean the patient from the anesthetic agents to evaluate whether or not the seizure condition has resolved. Unfortunately, not all patients respond to weaning attempts, in which case the patient must be maintained in the medically induced coma. At this point, the patient is diagnosed as having SRSE. Currently, there are no therapies specifically approved for SRSE.

About SAGE Therapeutics
SAGE Therapeutics is a biopharmaceutical company committed to developing and commercializing novel medicines to treat life-threatening, rare CNS disorders. SAGE's lead program, SAGE-547, is in clinical development for SRSE and is the first of several compounds the company is developing in its portfolio of potential seizure medicines. SAGE's proprietary chemistry platform has generated multiple new compounds that target $GABA_A$ and NMDA receptors, which are broadly accepted as impacting many psychiatric and neurological disorders. SAGE Therapeutics is a private company launched in 2010 by an experienced team of R&D leaders, CNS experts and investors. For more information, please visit www.sagerx.com.

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[1] DeLorenzo, Robert J., Pellock, John M., Towne, Alan R., Boggs, Jane G. Epidemiology of Status Epilepticus. *J Clin Neuro* 1995; 12(4): 316-325.

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