Mitsubishi Tanabe Pharma America to Present Data on RADICAVA® (Edaravone) At 28th International Symposium on ALS/MND in Boston

JERSEY CITY, N.J., December 5, 2017 – Mitsubishi Tanabe Pharma America, Inc. today announced it will present four abstracts, one of which is an oral presentation, on RADICAVA® (edaravone) in amyotrophic lateral sclerosis (ALS) at the 28th International Symposium on ALS/MND in Boston (December 8-10).

During the oral presentation, *Towards More Efficient Clinical Trial Designs in ALS: Lessons from the Edaravone Development Program*, data will be shared from the edaravone development program. The presentation will highlight the importance of strategically selective clinical trial design to increase efficiency and speed, which could lead to more rapid identification of promising treatments for ALS than has been possible in the past.

"In a pooled, post-hoc exploration of individuals who met the inclusion criteria for MCI186-19 in the overall edaravone development program, advantages versus placebo may be evident as early as the first cycle (28 days) of therapy," said Joseph M. Palumbo, M.D., Vice President, Head of Medical Science and Translational Research, Mitsubishi Tanabe Pharma Development America, Inc. "We also hope to clearly show the results seen among the cohort of individuals with steady linear progression in the edaravone development program are generalizable to the larger population of those diagnosed with ALS."

RADICAVA's pivotal clinical study was designed to assess a treatment effect within a six-month period by using the ALSFRS-R, a validated questionnaire-based scale whose primary measure focuses on ability to function in activities of daily living.[1,2] This functional scale has been used in clinical trials, as well as in clinical practice, because of its ease of use and its correlation with both objective measures of disease status and levels of disability. In order to show a difference that was both clinically and statistically meaningful within the required six-month time frame, the study inclusion criteria favored enrollment of a patient population with a relatively high level of function and a relatively rapid rate of progression. If patients with limited function had been entered into the trial, it would have been difficult to evaluate change in function.

An open discussion on the Phase 3 MCI186-19 study results will follow the oral presentation. Additional post-hoc study results on RADICAVA, including safety and efficacy data, will also be highlighted during poster presentations at the Symposium.

Abstracts to be presented include:

Oral Presentation	**Lead Author**
Friday, December 8; 5:10 PM – 5:45 PM ET	
Abstract C26: Towards More Efficient Clinical Trial Designs in ALS: Lessons from the Edaravone Development Program	Joseph M. Palumbo, M.D., Mitsubishi Tanabe Pharma Development America, Inc.

Poster Presentations	Lead Author
Saturday, December 9; 6:20 – 6:40 PM ET	
Abstract CTL-15: Edaravone in ALS: An Assessment of Safety, Tolerability, and Treatment Persistence	Jean Hubble, M.D., Mitsubishi Tanabe Pharma America, Inc.
Saturday, December 9; 6:20 – 6:40 PM ET	
Abstract CLT-14: Onset of Detectable Effect of Edaravone: a Post Hoc Analysis	Koji Takei, Mitsubishi Tanabe Pharma Development America, Inc.
Saturday, December 9; 6:20 – 6:40 PM ET	
Abstract CLT-13: Edaravone in ALS: the effect of potential drug-drug interactions via p450	Yoshinobu Nakamaru, Ph.D., Mitsubishi Tanabe Pharma Corporation

About ALS

An estimated 5,000-6,000 Americans are diagnosed each year with ALS, a typically fatal and incurable disease that affects the nerve cells in the brain and the spinal cord.[3,4,5] The majority of ALS patients die within two to five years of receiving a diagnosis, but progression of the disease can vary significantly.[6] Initial symptoms can be subtle at first and it can take up to 12 to 14 months to be accurately diagnosed with ALS.[7,8]

About RADICAVA® (Edaravone)

The U.S. Food and Drug Administration (FDA) approved RADICAVA® (edaravone) on May 5, as a treatment for amyotrophic lateral sclerosis (ALS).[9] In clinical trials, people given RADICAVA experienced a 33 percent slower rate of decline in the loss of physical function, compared to placebo as measured by the ALS Functional Rating Scale-Revised (ALSFRS-R), a validated rating instrument for monitoring the progression of disability in people with ALS.[1,2,9]

RADICAVA is administered in 28-day cycles by intravenous infusion. It takes 60 minutes to receive each 60 mg dose. For the initial cycle, the treatment is infused daily for 14 consecutive days, followed by a two-week drug-free period. All cycles thereafter are infused daily for 10 days within a 14-day period, followed by a two-week drug-free period.[9]

Edaravone was discovered and developed for ALS by Mitsubishi Tanabe Pharma Corporation (MTPC) and commercialized in the U.S. by Mitsubishi Tanabe Pharma America. MTPC group companies began researching ALS in 2001 through an iterative clinical platform over a 13-year period. In 2015, edaravone was approved for use as a treatment for ALS in Japan and South Korea.

IMPORTANT SAFETY INFORMATION

Before you receive RADICAVA, tell your healthcare provider about all of your medical conditions, including if you:

- have asthma.
- are allergic to other medicines.

- are pregnant or plan to become pregnant. It is not known if RADICAVA will harm your unborn baby.
- are breastfeeding or plan to breastfeed. It is not known if RADICAVA passes into your breast milk. You and your healthcare provider should decide if you will receive RADICAVA or breastfeed.

Tell your healthcare provider about all the medicines you take, including prescription and over-the-counter medicines, vitamins, and herbal supplements.

What are the possible side effects of RADICAVA?

- RADICAVA may cause serious side effects including hypersensitivity (allergic) reactions and sulfite allergic reactions.

- Hypersensitivity reactions have happened in people receiving RADICAVA and can happen after your infusion is finished.

- RADICAVA contains sodium bisulfite, a sulfite that may cause a type of allergic reaction that can be serious and life-threatening. Sodium bisulfite can also cause less severe asthma episodes in certain people. Sulfite sensitivity can happen more often in people who have asthma than in people who do not have asthma.

- Tell your healthcare provider right away or go to the nearest emergency room if you have any of the following symptoms: hives; swelling of the lips, tongue, or face; fainting; breathing problems; wheezing; trouble swallowing; dizziness; itching; or an asthma attack (in people with asthma).

- Your healthcare provider will monitor you during treatment to watch for signs and symptoms of all the serious side effects.

The most common side effects of RADICAVA include bruising (contusion), problems walking (gait disturbance), and headache.

These are not all the possible side effects of RADICAVA. Call your healthcare provider for medical advice about side effects. You may report side effects to Mitsubishi Tanabe Pharma America, Inc. at 1-888-292-0058 or FDA at 1-800-FDA-1088 or www.fda.gov/medwatch.

For more information, including full Prescribing Information and Patient Information, please visit **www.RADICAVA.com**.

About Mitsubishi Tanabe Pharma America, Inc.
Based in Jersey City, N.J., Mitsubishi Tanabe Pharma America (MTPA) is a wholly-owned subsidiary of Mitsubishi Tanabe Pharma Corporation's (MTPC) 100 percent owned U.S. holding company, Mitsubishi Tanabe Pharma Holdings America, Inc. MTPA is dedicated to delivering innovative products that

address the unmet medical needs of patients in the U.S. It was established by MTPC to commercialize approved pharmaceutical products in the U.S. with plans to expand its product line through collaborations with partners. For more information, please visit www.mt-pharma-america.com or follow us on Twitter at https://twitter.com/MTPharmaUS.

Overview of Mitsubishi Tanabe Pharma Corporation

Mitsubishi Tanabe Pharma, which was founded in 1678, has its headquarters in Doshomachi, Osaka, which is the birthplace of Japan's pharmaceutical industry. With business centered on ethical pharmaceuticals, Mitsubishi Tanabe Pharma is a well-established company and has the longest history of any listed company in Japan.[10] In accordance with the corporate philosophy of "contributing to the healthier lives of people around the world through the creation of pharmaceuticals," the Company formulated the key concept of Open Up the Future under the Medium-Term Management Plan 2016-2020. Through the discovery of drugs that address unmet medical needs, centered on its priority disease areas — autoimmune diseases, diabetes and kidney diseases, central nervous system diseases, and vaccines — Mitsubishi Tanabe Pharma will strive to contribute to the health of patients around the world. MTPC is the parent company of MTPA and the license holder of RADICAVA. For more information, go to http://www.mt-pharma.co.jp/.

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1 Simon, N. G., Turner, M. R., Vucic, S., Al-Chalabi, A., Shefner, J., Lomen-Hoerth, C., & Kiernan, M. C. (2014). Quantifying Disease Progression in Amyotrophic Lateral Sclerosis. *Annals of Neurology*, 76(5), 643–657.

2 The Writing Group on behalf of the Edaravone (MCI-186) ALS 19 Study Group (2017). Safety and efficacy of edaravone in well-defined patients with amyotrophic lateral sclerosis: a randomised, double-blind, placebo-controlled trial. *Lancet Neurology*. DOI: http://dx.doi.org/10.1016/S1474-4422(17)30115-1.

3 ALS Association. Quick Facts about ALS. http://www.alsa.org/news/media/quick-facts.html. Accessed April 12, 2017.

4 Marin B, Boumediene F, Logroscino G, et al. (2016). Variation in worldwide incidence of amyotrophic lateral sclerosis: a meta-analysis. *Int J Epidemiol*, 00:1-18.

5 National Institute of Neurological Disorders and Stroke. Amyotrophic Lateral Sclerosis (ALS) Information Page. https://www.ninds.nih.gov/disorders/all-disorders/amyotrophic-lateral-sclerosis-als-information-page. Accessed April 12, 2017.

6 Mehta P, Kaye W, Bryan L, et al. (2016). Prevalence of Amyotrophic Lateral Sclerosis — United States, 2012–2013. *MMWR Surveill Summ;* 65(No. SS-8):1–12

7 ALS Therapy Development Institute. What is ALS. http://www.als.net/what-is-als/. Accessed April 12, 2017.

8 Brooks BR. (2000). Risk factors in the early diagnosis of ALS: North American epidemiological studies. *Amyotrophic Lateral Sclerosis and Other Motor Neuron Disorders*, 1:sup1, S19-S26

9 RADICAVA® U.S. Prescribing Information. May 2017.

10 Research by TOKYO SHOKO RESEARCH, LTD.