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## ANTICANCER AGENT HALAVEN® DEMONSTRATES STATISTICALLY SIGNIFICANT EXTENSION IN PROGRESSION FREE SURVIVAL COMPARED TO VINORELBINE IN PHASE III CLINICAL STUDY OF PATIENTS WITH BREAST CANCER IN CHINA

Eisai Co., Ltd. (Headquarters: Tokyo, CEO: Haruo Naito, "Eisai") announced today that in a Phase III clinical study (Study 304) of its in-house developed anticancer agent eribulin mesylate ("eribulin", product name: Halaven<sup>®</sup>) in patients with locally recurrent or metastatic breast cancer in China, eribulin demonstrated a statistically significant extension in the study's primary endpoint of progression free survival (PFS) over the comparator treatment vinorelbine.

Conducted in China, Study 304 was a multicenter, open-label, randomized parallel group Phase III clinical study to evaluate the efficacy and safety of eribulin and vinorelbine in 530 female subjects with locally recurrent or metastatic breast cancer, previously treated with at least two and a maximum of five prior chemotherapy regimens, including an anthracycline and a taxane. In this study, the primary objective was to assess PFS in both treatment groups. In addition, the most common adverse events observed in the eribulin group were neutropenia, anaemia, pyrexia, and fatigue/asthenia, which was consistent with the known side-effect profile of eribulin. Detailed results of the study have been submitted for presentation at an upcoming academic conference.

Based on the results of this study, Eisai intends to submit a New Drug Application to the China Food and Drug Administration during the first half of fiscal 2016.

The number of women diagnosed with breast cancer in China has been increasing in recent years, with an estimated 272,400 new cases of invasive breast cancer and 70,700 related deaths in 2015. Breast cancer is now the most frequently diagnosed cancer in Chinese women.

Halaven is a halichondrin class microtubule dynamics inhibitor with a distinct binding profile. Recent non-clinical studies showed that Halaven is associated with increased vascular perfusion and permeability in tumor cores.<sup>3</sup> Halaven promotes the epithelial state and decreases the capacity of breast cancer cells to migrate.<sup>4</sup> First approved in the United States for use in the treatment of breast cancer in November 2010, Halaven is currently approved in approximately 60 countries worldwide, including Japan and countries in Europe, the Americas and Asia.

Eisai remains committed to providing further clinical evidence for Halaven aimed at maximizing value of the drug as it seeks to contribute further to addressing the diverse needs of, and increasing the benefits provided to, patients with cancer, their families, and healthcare providers.

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## [Notes to editors]

## 1. About Halaven (eribulin mesylate)

Halaven is the first in the halichondrin class of microtubule dynamics inhibitors with a novel mechanism of action. Structurally Halaven is a simplified and synthetically produced version of halichondrin B, a natural product isolated from the marine sponge *Halichondria okadai*. Halaven is believed to work by inhibiting the growth phase of microtubule dynamics which prevents cell division. In addition, recent non-clinical studies showed that Halaven is associated with increased vascular perfusion and permeability in tumor cores.<sup>3</sup> Halaven promotes the epithelial state and decreases the capacity of breast cancer cells to migrate.<sup>4</sup>

Halaven was first approved as a treatment in the United States in November 2010 for patients with metastatic breast cancer who have received at least two chemotherapeutic regimens for the treatment of metastatic disease. Prior therapy should have included an anthracycline and a taxane in either the adjuvant or metastatic setting. Halaven is currently approved for use in the treatment of breast cancer in approximately 60 countries worldwide, including Japan and countries in Europe, the Americas and Asia. In Japan, Halaven has been approved to treat inoperable or recurrent breast cancer and was launched in the country in July 2011. Halaven has also been approved in countries in Europe and Asia indicated as a treatment for patients with locally advanced or metastatic breast cancer who have progressed after at least one chemotherapeutic regimen for advanced disease. Prior therapy should have included an anthracycline and a taxane in either the adjuvant or metastatic setting, unless patients were not suitable for these treatments.

Regarding soft tissue sarcoma, Halaven was approved in the United States for the treatment of patients with unresectable or metastatic liposarcoma who have received a prior anthracycline-containing regimen in January 2016, approved in Japan for the treatment of soft tissue sarcoma in February 2016, and approved in the EU for the treatment of adult patients with unresectable liposarcomas who have received prior anthracycline containing therapy (unless unsuitable) for advanced or metastatic disease in May 2016. Applications seeking approval for use in the treatment of soft tissue sarcoma are currently under review throughout the world including Switzerland, Russia, Australia, Brazil, Malaysia, and the Philippines. Furthermore, Halaven has been designated as an orphan drug for soft-tissue sarcoma in the United States and Japan.

## 2. About Study 304

Conducted in China, Study 304 was a multicenter, open-label, randomized, parallel group Phase III clinical study to evaluate the efficacy and safety of eribulin and vinorelbine in 530 female subjects with locally recurrent or metastatic breast cancer, previously treated with at least two and a maximum of five prior chemotherapy regimens, including an anthracycline and a taxane. Patients received either eribulin (1.4 mg/m² administered intravenously on Day 1 and Day 8) or vinorelbine (25 mg/m² administered intravenously on Day 1, Day 8 and Day 15) every 21 days until disease progression.

From the results for the study, eribulin demonstrated a statistically significant extension in the study's primary endpoint of progression-free survival (PFS) over the comparator treatment vinorelbine. The study's secondary endpoints were overall survival (OS) and objective response rate (ORR).

The most common adverse events observed in the eribulin arm were neutropenia, anaemia, pyrexia, and fatigue/asthenia, which was consistent with the known side-effect profile of eribulin.

<sup>&</sup>lt;sup>1</sup> Lei F et al. Breast cancer in China. *The Lancet Oncology*, 2014; 15(7), e279-e289

<sup>&</sup>lt;sup>2</sup> Chen W et al. Cancer Statistics in China, 2015. CA CANCER J CLIN, 2016; 66, 115-132

<sup>&</sup>lt;sup>3</sup> Funahashi Y et al. Eribulin mesylate reduces tumor microenvironment abnormality by vascular remodeling in preclinical human breast cancer models. *Cancer Sci.*, 2014; 105, 1334-1342

<sup>&</sup>lt;sup>4</sup> Yoshida T et al. Eribulin mesilate suppresses experimental metastasis of breast cancer cells by reversing phenotype from epithelial-mesenchymal transition (EMT) to mesenchymal-epithelial transition (MET) states. *Br J Cancer*, 2014; 110, 1497-1505