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EISAI AND PURDUE PHARMA TO PRESENT LATEST PHASE I CLINICAL DATA ON LEMBOREXANT AT 32ND ANNUAL SLEEP MEETING

Tokyo, Japan and Stamford, Conn., U.S. – May 23, 2018 – Eisai Co., Ltd. (CEO: Haruo Naito, "Eisai") and Purdue Pharma L.P. (President and CEO: Craig Landau, "Purdue Pharma") today announced they will present the latest data from two key Phase I clinical studies (Study 108 and Study 106) of investigational sleep/wake regulation agent lemborexant, including a comparison versus zolpidem tartrate extended release (zolpidem ER) and placebo on middle of the night awakening and next-morning effects, in poster presentations at the 32nd Annual Meeting of the Associated Professional Sleep Societies (SLEEP 2018) from June 2 to 6 in Baltimore, Maryland in the United States.

Of note, Eisai and Purdue Pharma will present data on a Phase I safety study (Study 108) that assessed the ability to awaken to an auditory stimulus and maintain postural stability (a predictor of risk for falls[1]) and perform on tests of memory and attention in the middle of the night and the next morning. The study demonstrated that postural stability was statistically significantly worse for zolpidem ER 6.25 mg compared with both lemborexant 5 mg and 10 mg in healthy volunteers age 55 and older, and the primary endpoint was achieved. In this study, headache was the only adverse event (AE) observed in two or more people taking lemborexant.

Another Phase I study (Study 106), which evaluated residual next-morning effects via an on-road driving test, also achieved its primary objective, demonstrating no significant difference in next-morning driving performance versus placebo. This study was conducted versus placebo, with zopiclone included as a positive control, to evaluate potential next-morning impairment by measuring healthy adult and elderly participants' driving performance. In this study, the most common AEs observed in the lemborexant arms were somnolence, headache, and dry mouth.

"It is important that a treatment for sleep/wake regulation allows a patient to not only sleep well, but also wake well. Sleeping well includes the ability to fall asleep and stay asleep through the night, and waking well includes the ability to wake in the middle of the night, if needed, or the next day without impairment," said Russell Rosenberg, PhD, D.ABSM, a Principal Investigator in lemborexant studies and former Chairman of the Board of the National Sleep Foundation. "These studies provide important information about how lemborexant affects the ability to awaken after sleep."

"Our aspiration toward sleep/wake regulation is to improve the ability to fall and stay asleep, and address risks related to impairment due to residual effects from many current sleep agents," said Lynn Kramer, MD, Chief Clinical Officer and Chief Medical Officer, Neurology Business Group, Eisai. "These Phase I data

provide important, clinically relevant information and strengthen our confidence in our investigational sleep/wake regulation agent, lemborexant, as we continue to work with Purdue Pharma to bring this investigational agent to patients living with sleep/wake disorders."

"Since 2015, Purdue Pharma and Eisai have been working collaboratively on the development of lemborexant, and we look forward to sharing our data with the scientific community at the premier world forum for clinical sleep medicine," said Marcelo Bigal, MD, PhD, Chief Medical Officer, Purdue Pharma.

Lemborexant appears to impact an underlying reason for a patient's inability to sleep well. Lemborexant acts on the orexin neurotransmitter system and is believed to regulate sleep and wake by dampening excessive arousal or wakefulness without impeding the ability to awaken to external stimuli.

The following data will be presented by Eisai and Purdue Pharma at SLEEP 2018:

Product, Poster No.	Presentation title and scheduled presentation date
Lemborexant Poster No: 097 Poster Session: P27	Auditory Awakening Threshold to Evaluate Ability to Awaken After Administration of Lemborexant Versus Zolpidem (Study 108) Poster Presentation: June 5 (Tuesday) 17:00 – 19:00
Lemborexant Poster No: 099 Poster Session: P27	Results from an On-Road Driving Performance Study in Non-elderly and Elderly Healthy Subjects with Dual Orexin Receptor Antagonist Lemborexant (Study 106) Poster Presentation: June 5 (Tuesday) 17:00 – 19:00

Discovered by Eisai, lemborexant is a sleep/wake regulation agent being jointly developed by Eisai and Purdue.

<Notes to editors>

1. About lemborexant

Lemborexant (development code: E2006), a dual orexin receptor antagonist, is Eisai's in-house discovered and developed small molecule compound that inhibits orexin neurotransmission by binding competitively to the two subtypes of orexin receptors (orexin receptor 1 and 2). In individuals with sleep disorders, it is possible that the orexin system that regulates sleep and wakefulness is not functioning normally. During normal periods of sleep, orexin system activity is suppressed, suggesting it is possible to purposefully counteract inappropriate wakefulness and facilitate the initiation and maintenance of sleep by interfering with orexin neurotransmission. Therefore, Eisai and Purdue have been developing lemborexant as a treatment for multiple sleep disorders.

From the topline results of a Phase III clinical study (SUNRISE 1/Study 304) of lemborexant for insomnia disorder, the primary and major secondary endpoints were achieved, and together with the results from an ongoing Phase III clinical study (Study 303), Eisai and Purdue aim to submit applications seeking regulatory approval within fiscal 2018.

In addition, a Phase II clinical study of lemborexant in patients with irregular sleep-wake rhythm disorder (ISWRD) and mild to moderate Alzheimer's dementia is underway.

2. About Sleep Disorders

Population studies show that sleep disorders affect many more people worldwide than previously thought. Insomnia disorder is characterized by difficulty falling sleep, staying asleep or both, despite an adequate opportunity to sleep, that can lead to daytime consequences such as fatigue, difficulty concentrating and irritability.[2,3] Insomnia disorder is the most common sleep disorder, with persistent insomnia symptoms experienced by approximately 10 percent of the adult population.[2]

Sleeping well is essential for good health, including brain health. Poor sleep is associated with a wide range of health consequences including an increased risk of hypertension, accidental injury, diabetes, obesity, depression, heart attack, stroke and dementia [4], as well as adverse effects on mood and behavior.[3]

Experimental studies in animals and humans provide evidence of associations between sleep and inflammatory markers[2], and the association between sleep and mortality, as well as many diseases and disease risk factors; studies suggest an optimal sleep duration between seven and eight hours.[5] Women are 1.4 times more likely than men to suffer from insomnia.[6]

Older adults also have higher prevalence of insomnia; aging is often accompanied by changes in sleep patterns, including disrupted sleep, frequent waking and early waking, that can lead to less sleep time.[7]

3. About Study 108

Study 108 was a randomized, double-blind, four period crossover study to evaluate the effect of lemborexant on postural stability, auditory awakening threshold, and cognitive performance in 56 healthy volunteers 55 years and older. Participants were administered a single dose of placebo, lemborexant 5 mg, lemborexant 10 mg, or zolpidem ER 6.25 mg. The primary endpoint was change from time-matched baseline in postural stability for lemborexant compared to zolpidem ER at approximately four hours post-dose.

4. About Study 106

Study 106 was a randomized, double-blind, placebo- and active-controlled, four period, crossover study to evaluate the effect of lemborexant in 48 healthy adult and elderly volunteers to evaluate on-road driving performance. Participants were treated at bedtime with two out of three dose levels of lemborexant (2.5, 5 or 10 mg) and placebo for eight consecutive days, and zopiclone 7.5 mg as an active control on days one and eight only, with placebo given for the six days in between. The primary endpoint was to evaluate change of standard deviation of lateral position (SDLP) during an on-road driving test on the mornings following the first and last dose of drug in each treatment period.

5. About Eisai Co., Ltd.

Eisai Co., Ltd. is a leading global research and development-based pharmaceutical company headquartered in Japan. We define our corporate mission as "giving first thought to patients and their families and to increasing the benefits health care provides," which we call our *human health care* (*hhc*) philosophy. With approximately 10,000 employees working across our global network of R&D facilities, manufacturing sites and marketing subsidiaries, we strive to realize our *hhc* philosophy by delivering innovative products in various therapeutic areas with high unmet medical needs, including Neurology and Oncology.

Furthermore, we invest and participate in several partnership-based initiatives to improve access to medicines in developing and emerging countries.

For more information about Eisai Co., Ltd., please visit www.eisai.com.

6. About Purdue Pharma L.P.

Purdue Pharma L.P. is a privately held pharmaceutical company headquartered in Stamford, Conn. Purdue Pharma is part of a network of independent associated companies dedicated to providing patients and providers with innovative medicines. The company’s leadership and employees are committed to serving healthcare professionals, patients and caregivers by providing quality products and educational resources that make a positive impact on healthcare — and on lives.

For more information, please visit www.purduepharma.com.

[1] Zhou J, et al. The complexity of standing postural sway associates with future falls in community-dwelling older adults: The MOBILIZE Boston Study. *Sci Rep.* 7: 2924 DOI:10.1038/s41598-017-03422-4.

[2] Ferrie JE et al. Sleep epidemiology—a rapidly growing field. *International Journal of Epidemiology*, Volume 40, Issue 6, 1 December 2011, 1431–1437, https://academic.oup.com/ije/article/40/6/1431/804651.

[3] Institute of Medicine. Sleep disorders and sleep deprivation: An unmet public health problem. Washington, DC: National Academies Press. 2006.

[4] Pase MP, Himali JJ, Grima NA, et al. Sleep architecture and the risk of incident dementia in the community. *Neurology*, 2017; 89(12):1244-1250.

[5] Trenell MI et al. Sleep and metabolic control: waking to a problem? *Clin Exp Pharmacol Physiol* 2007, 34, 1-9.

[6] Zhang B, Wing, YK. Sex Differences in Insomnia: A Meta-Analysis. *Sleep*. 2006; 29(1):85-93. https://pdfs.semanticscholar.org/b131/d0d61bf7345964e29d6596469ee70948228a.pdf.

[7] Rybarczyk B, Lund HG, Garroway AM, et al. Cognitive behavioral therapy for insomnia in older adults: background, evidence, and overview of treatment protocol. *Clin Gerontol*. 2013;36(1):70-93.