

26G-ISMS35 **Antifungal Activities and Nonclinical Pharmacokinetics of APX001A/APX001 (E1210/E1211), a New Broad-Spectrum Antifungal, with a New Mode of Action**

○ Takaaki HORII¹

¹Global Health Research Section, hhc Data Creation Center, Eisai Co., Ltd.

APX001A (formerly known as E1210) inhibited the inositol acylation of fungus-specific glycosylphosphatidylinositol (GPI), which is catalyzed by Gwt1p, leading to the inhibition of GPI-anchored protein maturation. The compound not only inhibited fungal growth, but also suppressed the expression of some virulence factors of fungi. APX001A demonstrated potent, broad-spectrum antifungal activity against clinically important fungi, including *Candida* spp., *Aspergillus* spp., and other filamentous fungi. It showed no cross-resistance with azoles and echinocandins. APX001 (formerly known as E1211) is a water-soluble prodrug of APX001A, and efficiently converted to APX001A in animals, and in human S9 tissue fractions in vitro. APX001 was effective in murine models of candidiasis, aspergillosis, fusariosis, and scedosporiosis. Furthermore, APX001/ APX001A demonstrated synergy in combination with other antifungals in vitro and in vivo against *Candida* spp. and *Aspergillus* spp. Amplyx Pharmaceuticals was licensed E1211 and E1210 from Eisai in 2015, and renamed APX001 and APX001A, respectively. Amplyx is now advancing the evaluation of APX001 in Phase 1 program using both IV and oral formulations to address the need for hospital administration, as well as continued dosage after hospital discharge. Amplyx plans to initiate Phase 2 studies in 2017.