Introduction Solriamfetol (formerly JZP-110), a dopamine and norepinephrine reuptake inhibitor, has been approved in the United States to improve wakefulness in adults with excessive daytime sleepiness (EDS) associated with narcolepsy (75–150 mg) or obstructive sleep apnoea (OSA; 37.5–150 mg). A Marketing Authorisation Application for these indications is under review with the European Medicines Agency. This study evaluated the long-term safety and efficacy of solriamfetol.

Methods Participants with EDS associated with narcolepsy or OSA who completed prior solriamfetol studies initiated open-label treatment with a 2-week titration phase followed by a maintenance phase of ≥50 weeks. A 2-week, placebo-controlled, randomised withdrawal (RW) phase was conducted after 6 months. Change from beginning to end of the RW phase in Epworth Sleepiness Scale (ESS) was the primary endpoint; Patient and Clinician Global Impression of Change (PGI-C and CGI-C, respectively) were secondary endpoints.

Results Safety population comprised 643 participants (226 narcolepsy; 417 OSA); 280 participants (141 placebo; 139 solriamfetol) comprised the RW modified intent-to-treat population. A total of 458 participants (71%) completed the study. Maintenance of efficacy in this 1-year study was demonstrated on the ESS, PGI-C, and CGI-C. Least squares mean change from the beginning to the end of the RW phase in ESS score was 5.3 versus 1.6 in participants randomised to placebo or solriamfetol, respectively (P<0.0001). Greater percentages of participants randomised to placebo versus solriamfetol in the RW phase reported as worse on PGI-C and CGI-C (both P<0.0001). The most frequent adverse events (AEs; ≥5%) were headache, nausea, nasopharyngitis, insomnia, dry mouth, anxiety, decreased appetite, and upper respiratory tract infection; 27 (4.2%) participants had ≥1 serious AE.

Discussion These results demonstrate the long-term efficacy of solriamfetol for EDS in participants with narcolepsy or OSA. Safety profile following long-term administration was consistent with prior solriamfetol studies.

Support Jazz Pharmaceuticals.
did not deviate significantly from an exponential distribution (D(14)=0.733, p=0.657) (figure 2 left).

There is a sharp increase in the likelihood of transitioning from sleep to wakefulness when recordings increase from 93 to 96 minutes, when the estimated percentage of subjects maintaining sleep falls from 75 to 50%. Nevertheless, 25% of subjects will still be asleep at 121 minutes (figure 2 right).

Discussion In pre-term infants, the durations of awakenings are exponentially distributed, as in neonatal animals.¹ The likelihood of awakening does not increase linearly with recording duration, but is gated after approximately 100 minutes, demonstrating cyclicity. Future work will build on these preliminary data to model how demographic and environmental variables (e.g. necessary painful procedures) influence the neonatal sleep-wake cycle.

REFERENCE

Abstract P006 Figure 2