



Neuren (NEU) - ASX Announcement

30 January 2017

## Neuren completes Phase 2 trial in pediatric Rett syndrome

**Melbourne, Australia, 30 January 2017:** Neuren Pharmaceuticals (ASX: NEU) today announced that the last subject has completed its Phase 2 clinical trial of trofinetide in pediatric Rett syndrome. Neuren remains on schedule to receive top-line results from the trial in the second half of March 2017 and soon thereafter intends to engage potential commercial partners regarding the remaining development and commercialization of trofinetide in the major markets.

Neuren Executive Chairman Richard Treagus commented: "We are grateful for the strong support of the Rett syndrome community, which has helped us to complete the expanded pediatric trial on schedule. We look forward to receiving the results and engaging with clinical experts and potential commercial partners to determine the optimum path to market for trofinetide in Rett syndrome."

The randomized, double-blind, placebo-controlled Phase 2 clinical trial for girls aged 5 to 15 years with Rett syndrome has been conducted at 12 sites in the United States, led by clinicians experienced in the diagnosis and treatment of Rett syndrome. Neuren received grant funding from Rettsyndrome.org, which contributed towards the cost of the trial.

The trial comprised a demanding schedule of visits and procedures during 11 weeks from screening to follow-up. 82 subjects commenced the trial and only one subject withdrew prior to completion. 62 subjects were randomized into one of four treatment groups: 50mg/kg, 100mg/kg, 200mg/kg, or placebo. A further 20 subjects were randomized into one of two treatment groups: 200mg/kg, or placebo.

The primary endpoint for the trial in this younger population is the safety and tolerability of trofinetide compared with placebo. In addition, a number of outcome measures have been included in the study design in order to provide meaningful insights into the efficacy of trofinetide in younger subjects. The efficacy analysis will prioritize 5 syndrome-specific measures, the first 3 of which were used in Neuren's prior Phase 2 trial in subjects aged 16 to 45 years with Rett syndrome:

- The *Motor Behavior Assessment*, in which the clinician rates the subject's current level of function.
- The *Caregiver Top 3 Concerns* visual analog scale, in which the subject's caregiver assesses the severity of concerns identified for each subject on an individual basis.
- The *Clinical Global Impression of Improvement (CGI-I)*, in which the clinician rates how much the subject's overall illness has improved or worsened, relative to baseline.
- The *Domain Specific Concerns Visual Analog Scale*, in which the clinician assesses the severity of concerns identified for each subject on an individual basis.
- The *Rett Syndrome Behavior Questionnaire*, a rating scale in which the subject's caregiver rates the frequency of symptoms.



The analysis will examine the mean changes for each treatment group, as well as the proportion of subjects in each treatment group that showed improvements. The clinical importance of the observed changes will be evaluated.

Results from two non-clinical chronic toxicity studies of trofinetide will be required prior to initiating extended dosing in a Phase 3 trial and submitting New Drug Applications. The first toxicity study is nearing completion and the second toxicity study is scheduled to commence in mid-2017, concluding in the first half of 2018. Plans are well advanced that would enable manufacturing to commence in the second half of 2017 in preparation for supplying a pivotal Phase 3 trial in Rett syndrome.

**For more information, please contact:**

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**About trofinetide**

Trofinetide is a synthetic analogue of a naturally occurring neurotrophic peptide derived from IGF-1, a growth factor produced by brain cells. In animal models, trofinetide exhibits a wide range of important effects including inhibiting neuroinflammation, normalizing the role of microglia, correcting deficits in synaptic function and regulating oxidative stress response. Trofinetide is being developed both in intravenous and oral formulations for a range of acute and chronic conditions. The most advanced program is for Rett syndrome, supported by Rettsyndrome.org. Both the Rett syndrome and Fragile X syndrome programs have been granted Fast Track designation by the US Food and Drug Administration (FDA) and have orphan drug designation in both the United States and the European Union. Following marketing authorization, orphan drug designation provides a market exclusivity period of 7 years in the United States and 10 years in the European Union.

**About Neuren**

Neuren Pharmaceuticals Limited (Neuren) is a biopharmaceutical company developing new therapies for neurodevelopmental disorders, neurodegenerative diseases and acute brain injury. Neuren presently has a clinical stage molecule, trofinetide in Phase 2 clinical trials as well as NNZ-2591 in pre-clinical development.

*Forward-looking Statements*

*This ASX-announcement contains forward-looking statements that are subject to risks and uncertainties. Such statements involve known and unknown risks and important factors that may cause the actual results, performance or achievements of Neuren to be materially different from the statements in this announcement.*