Neuren (NEU) - ASX Announcement **26 February 2020**

Neuren ends 2019 with 5 Orphan Drug programs and Rett syndrome in Phase 3 funded by US partner

Highlights:

- **Valuable Orphan Drug pipeline established with 2 drugs to treat 5 debilitating neurodevelopmental disorders which have no approved therapies**
- **Rett syndrome Phase 3 trial commenced and enrolling, executed and funded by US partner ACADIA, with results expected in 2021**
- **Results of Neuren's Phase 2 study in pediatric Rett syndrome published in *Neurology®***
- **Preparations advancing for clinical trials in Phelan-McDermid, Angelman and Pitt Hopkins syndromes in H2 2020 - 3 Orphan Drug designations received from FDA following positive results in animal models**
- **Patent portfolio strengthened further in key markets of US, Europe and Japan**
- **Cash at 31 December 2019 – $13.8 million (2018: $23.6 million)**
- **3 large value drivers in 2020/21:**
    - **Realise share of trofinetide value in US through ACADIA's Phase 3 results and New Drug Application**
    - **Advance commercial strategy for trofinetide ex-North America using US data for registration**
    - **Demonstrate clinical benefit of NNZ-2591 in 3 valuable indications**

Melbourne, Australia, 26 February 2020: Neuren Pharmaceuticals (ASX: NEU) today reported financial results and business progress for 2019. Neuren ended the year with 5 Orphan Drug programs and the trofinetide lead program for Rett syndrome in Phase 3. The Phase 3 trial is being executed and fully funded by Neuren's partner for trofinetide in North America, ACADIA Pharmaceuticals.

ACADIA commenced the Phase 3 program in October 2019. The program involves treatment of approximately 180 females aged 5 to 20 with trofinetide or placebo for 12 weeks to evaluate efficacy and safety (the "LAVENDER" study), following which patients are eligible to continue treatment with trofinetide for 40 weeks to provide longer-term safety data (the "LILAC" study). Results from the LAVENDER study are expected in 2021. Positive results potentially will enable a New Drug Application, which should be eligible for "Priority Review" by the FDA in an abbreviated period of 6 months. ACADIA has also established "LILAC-2" under which eligible patients who complete LAVENDER and LILAC will be able to continue to receive trofinetide during the period before marketing approval.

In March 2019 the results of Neuren's Phase 2 study of trofinetide in pediatric Rett syndrome were published in Neurology®, the highly regarded peer-reviewed medical journal of the American Academy

of Neurology. The publication was also the basis for an editorial in the journal titled "Turning the tide on targeted treatments for neurodevelopmental disorders".

In February and May 2019, Neuren announced positive results for NNZ-2591 in separate mouse models of Phelan-McDermid syndrome, Angelman syndrome and Pitt Hopkins syndrome. These are three debilitating neurodevelopmental disorders with no approved drug therapy which share an underlying impairment in the connections and signaling between brain cells. The aim of treatment with NNZ-2591 is to restore normal functional connectivity and signaling.

In October 2019, Neuren received three Orphan Drug designations from the FDA for NNZ-2591 in each of Phelan-McDermid, Angelman and Pitt Hopkins syndromes. Orphan Drug designation is a special status that the FDA may grant to a drug to treat a rare disease or condition. Orphan Drug designation qualifies the sponsor of the drug for incentives including 7 years of marketing exclusivity, plus 6 additional months if approved for pediatric use, as well as waiver of the prescription drug user fee for a marketing application.

Neuren is continuing the manufacturing development and non-clinical studies required before submitting an Investigational New Drug (IND) Application for NNZ-2591 in the United States. Neuren aims to commence clinical trials in the second half of 2020. The NNZ-2591 program is benefiting from the extensive experience gained by Neuren during the development of trofinetide for Rett syndrome and Fragile X syndrome.

During the year, Neuren's patent portfolio for trofinetide and NNZ-2591 was enhanced further by the grant of new patents in the key markets of the United States, Europe and Japan. Additional patent applications are under examination.

Assisted by Torreya, a global investment bank specialising in life sciences, Neuren is conducting a process to evaluate proposals for potential corporate transactions, engaging with third parties in the US, Europe and Japan.

In summary, there are 3 large value drivers for the Neuren business in 2020/21; firstly the opportunity to realise Neuren's share of trofinetide value in the US through ACADIA's Phase 3 results and New Drug Application, secondly advancing the commercial strategy for trofinetide ex-North America, with free access to use the US data for registration, and thirdly demonstrating the clinical benefit of NNZ-2591 in 3 valuable indications. These elements were comprehensively described in the reports and valuations[1] published in November 2019 by Bell Potter and MST Access, the analysts that currently cover Neuren.

Summary of financials

	2019	2018
	$m	$m
Revenue from ACADIA agreement	-	13.5
R&D Tax Incentive	0.5	0.4
Interest income	0.4	0.3
Foreign exchange gain	0.1	1.0
Total income	**1.0**	**15.2**
Research & Development	(9.9)	(6.1)
Corporate & Administration	(1.7)	(2.1)
Loss in fair value of Lanstead settlements	(0.2)	(3.9)
(Loss) / Profit after tax	**(10.8)**	**3.1**
Cash flow from operations	(11.7)	6.4
Cash flow from financing	1.9	11.7
Effect of exchange rates on cash balances	0.1	0.7
Cash at 31 December	**13.8**	**23.6**

The loss after tax for 2019 was $10.8 million compared with profit after tax of $3.1 million in 2018, mainly due to revenue of $13.5 million received in 2018 under the licence agreement with ACADIA. In addition, foreign exchange gains decreased by $0.8 million and research and development costs increased by $3.8 million, resulting from higher expenditure on manufacturing scale-up and non-clinical toxicity studies. These were offset by a decrease in the loss of $0.3 million (2018: $3.9 million) on the fair value of the remaining settlements from Lanstead Capital under the Sharing Agreement that was entered into as part of the capital raising in July 2017. Prudent control of expenditure continues to be an important principle in the Group's operations and financing.

The Sharing Agreement with Lanstead Capital concluded in June 2019 with the final settlement received in July 2019. The aggregate amount received from Lanstead Capital throughout the course of the arrangement was $12.2 million. This delivered to Neuren additional cash funding of $2.2 million, with no additional shares issued to Lanstead Capital.

Cash reserves at 31 December 2019 were $13.8 million (2018: $23.6 million). Net cash used in operating activities was $11.7 million, compared with cash inflow of $6.4 million in 2018. Financing provided cash of $1.9 million, received from the Lanstead Capital settlements, compared with $11.7 million in 2018 from the issue of shares in May 2018 under the exclusivity deed with ACADIA and the settlements from Lanstead Capital.

About Neuren

Neuren is developing new therapies for neurodevelopmental disorders with high unmet need, utilizing synthetic analogs of neurotrophic peptides that occur naturally in the brain. Neuren's lead drug candidate trofinetide is currently in a Phase 3 clinical trial for Rett syndrome and has completed a Phase 2 clinical trial in Fragile X syndrome. The programs in Rett syndrome and Fragile X syndrome have each received Fast Track designation by the US Food and Drug Administration and Orphan Drug designation in both the United States and the European Union. Neuren has granted an exclusive license to ACADIA Pharmaceuticals Inc. for the development and commercialization of trofinetide in North America, whilst retaining all rights outside North America. Neuren is advancing the development of its second drug candidate NNZ-2591 for Phelan-McDermid syndrome, Angelman syndrome and Pitt Hopkins syndrome, each of which has Orphan Drug designation in the United States.

Contact:
Jon Pilcher, CFO & Company Secretary: jpilcher@neurenpharma.com; +61 438 422 271

ASX Listing Rules information
This announcement was authorized to be given to the ASX by the board of directors of Neuren Pharmaceuticals Limited, Suite 201, 697 Burke Road, Camberwell, VIC 3124

Forward-looking Statements
This 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.

[1]*Disclaimer: Neuren does not endorse, confirm, or express a view as to the accuracy of the analyst valuations.*