Neuren (NEU) – ASX announcement **10 November 2021**

Neuren presenting at Bell Potter Healthcare Conference

Melbourne, Australia: Neuren Pharmaceuticals (ASX: NEU) CEO Jon Pilcher will present at the Bell Potter 2021 Healthcare Conference on 10 November at 11.35 AEDT. The presentation materials are attached; the 20-minute presentation will be followed by a Q&A session. Neuren is approaching a potentially transformational milestone, with top-line results of the LAVENDER Phase 3 trial of trofinetide in Rett syndrome due before the end of 2021.

The conference is available to live-stream via Bell Potter Client Access.

About Neuren

Neuren is developing two new drug therapies to treat multiple serious neurological disorders that emerge in early childhood, none of which have any approved medicines.

The lead compound, trofinetide, has completed a Phase 3 clinical trial for Rett syndrome with top-line results expected in Q4 2021 and has also completed a Phase 2 clinical trial in Fragile X syndrome. Both programs have Fast Track designation from the US Food and Drug Administration (FDA). Neuren has granted an exclusive licence to Acadia Pharmaceuticals Inc. for the development and commercialisation of trofinetide in North America, while retaining all rights outside North America.

Neuren is preparing to initiate Phase 2 trials of its second drug candidate, NNZ-2591, for each of Phelan-McDermid syndrome, Angelman syndrome, Pitt Hopkins syndrome and Prader-Willi syndrome.

Recognising the urgent unmet need, all six programs have been granted "orphan drug" designation in the United States. Orphan drug designation provides incentives to encourage development of therapies for rare and serious diseases.

Contact:
Jon Pilcher, CEO: jpilcher@neurenpharma.com; +61 438 422 271

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.

ASX Listing Rules information

This announcement was authorized to be given to the ASX by the CEO of Neuren Pharmaceuticals Limited, Suite 201, 697 Burke Road, Camberwell, VIC 3124

neuren pharmaceuticals

6 PROGRAMS IN LATE-STAGE DEVELOPMENT, PHASE 3 TRIAL RESULTS IMMINENT

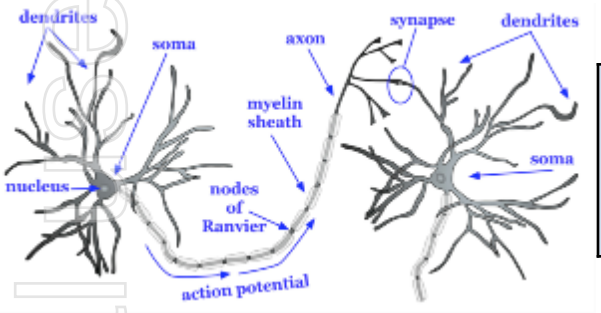
10 November 2021

FORWARD LOOKING STATEMENTS

This presentation contains forward looking statements that involve risks and uncertainties. Although we believe that the expectations reflected in the forward looking statements are reasonable at this time, Neuren can give no assurance that these expectations will prove to be correct. Actual results could differ materially from those anticipated. Reasons may include risks associated with drug development and manufacture, risks inherent in the regulatory processes, delays in clinical trials, risks associated with patent protection, future capital needs or other general risks or factors.

TREATING NEURODEVELOPMENTAL DISORDERS

Rett	Fragile X	Phelan-McDermid	Angelman	Pitt Hopkins	Prader-Willi
MECP2	*FMR1*	*SHANK3*	*UBE3A*	*TCF4*	*15q11-q13*



Impaired communication between neurons, abnormal formation/pruning of dendrites & chronic inflammation

Neuren's drugs target the critical role of IGF-1 in this upstream process, using analogs of peptides that can be taken orally as liquids

Severe impact on nearly every aspect of life		
walking and balance issues	anxiety and hyperactivity	seizures
speech impairment	intellectual disability	breathing irregularities
impaired hand use	sleep disturbance	gastrointestinal problems

LEADING PIPELINE IN NEURODEVELOPMENTAL DISORDERS

Compound	Indication	Preclinical	Phase 1	Phase 2	Phase 3	Commercial Partner
Trofinetide	Rett syndrome[1]				***Results expected Q4 2021***	ACADIA *(North America)*
	Fragile X syndrome[1]					ACADIA *(North America)*
NNZ-2591	Phelan-McDermid syndrome[2]			***Results expected H2 2022***		
	Angelman syndrome[2]			***Results expected H2 2022***		
	Pitt Hopkins syndrome[2]			***Results expected H2 2022***		
	Prader-Willi syndrome[3]			***Commence expected mid-2022***		

[1] Orphan Drug designation in US and EU, Fast Track designation in US

[2] Orphan Drug designation in US and EU [3] Orphan Drug designation in US

TRANSFORMING MILESTONES IMMINENT

- **Results before the end of 2021 for trofinetide Phase 3 trial in Rett syndrome**
  - Partnered with Acadia (NASDAQ:ACAD) for North America, Neuren has access to all US data for ex-North America registration
  - ACADIA funds development and commercialisation for North America
  - Neuren receives up to US$455m milestone payments, plus double digit % royalties, plus one third of RPD Priority Review Voucher value
  - Positive Phase 3 results also expected to enable Neuren to partner in Europe and Asia
- **Phase 2 trials for NNZ-2591 in 4 disorders**
  - **Large potential upside -** multiple indications and global rights retained
  - Potential markets for NNZ-2591 more than 5 times Rett syndrome

TROFINETIDE FOR RETT SYNDROME

RETT SYNDROME OPPORTUNITY

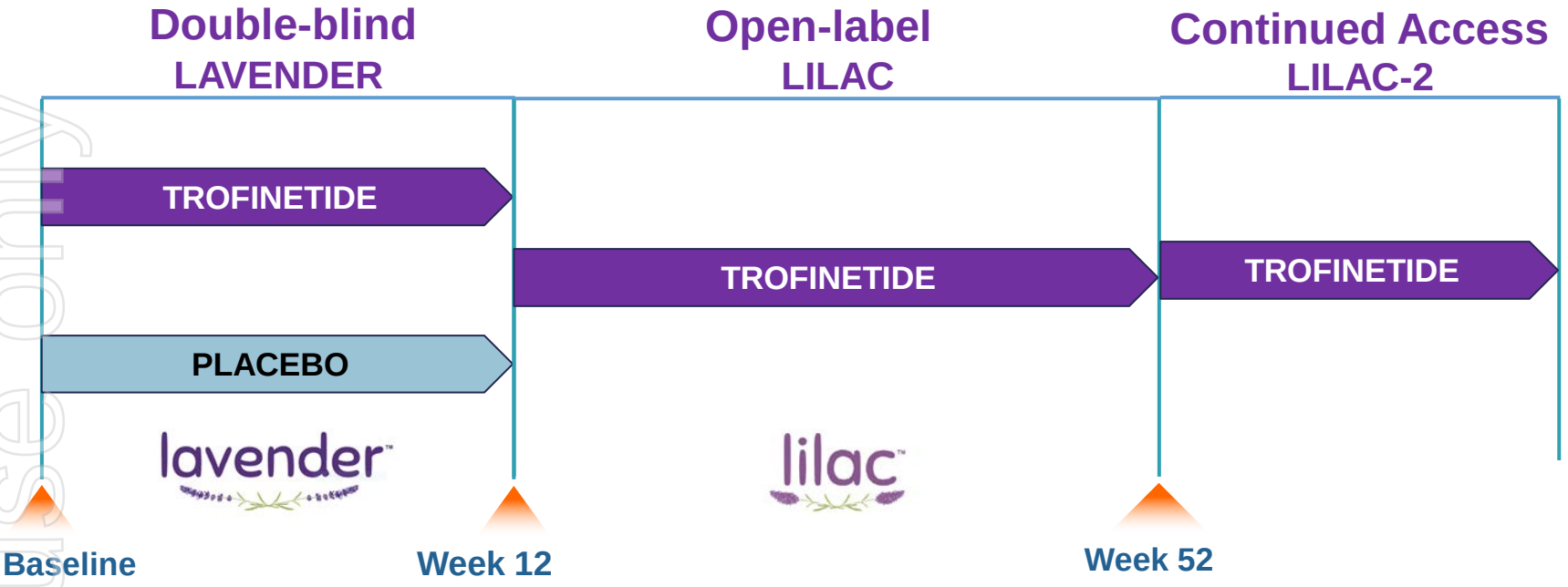
Estimates	US	Europe	Japan	China urban	Other Asia
Potential patients[1]	10,000	13,000	3,000	28,000	6,000
Patients currently identified	5,000	4,000	1,000	2,000	'00s

[1] Potential patient estimates derived by applying the mid-point of the published prevalence estimate range to the populations under 60 years

- Peak annual sales potential in US at least US$500m[2]
- Neuren potential revenue over 2022 and 2023 for Rett syndrome in the US alone of A$111 million[3] plus double-digit percentage royalties on net sales
- Diagnosis rates expected to increase with awareness and accelerate with availability of a treatment

[2] Acadia 2Q18 Earnings Call presentation and Jefferies Healthcare Conference 2 June 2021
[3] Assuming a New Drug Application (NDA) is approved by the FDA, the product is launched in the US, US$33m is received as one third share of the value of a Rare Pediatric Disease Priority Review Voucher if awarded upon approval of a NDA, and a USD/AUD exchange rate of 0.75

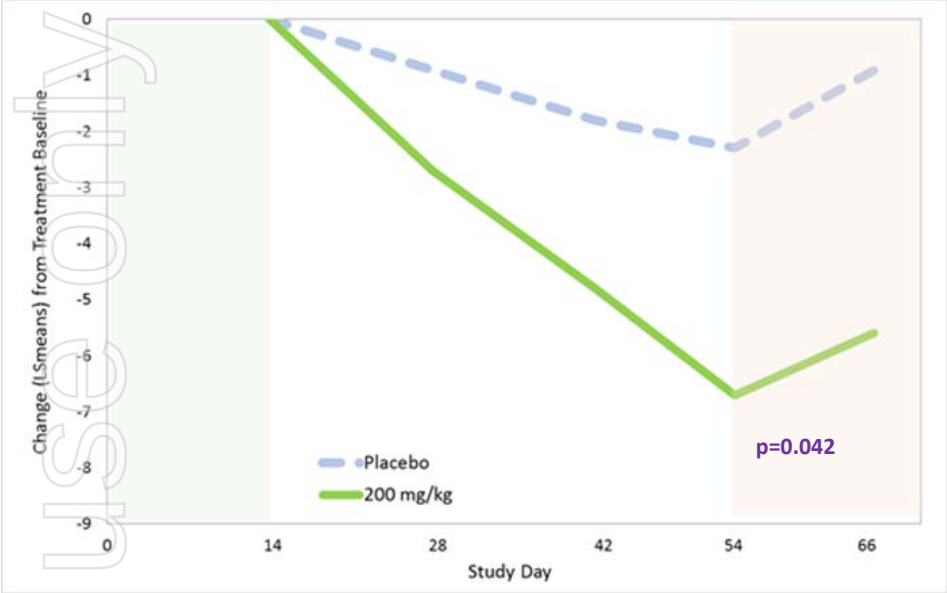
RETT SYNDROME PHASE 3 PROGRAM



- LAVENDER™ top-line results are imminent
  - ~180 females aged 5 to 20 years
  - RSBQ (caregiver) and CGI-I (physician) at 12 weeks are co-primary efficacy endpoints - both were positive in the Phase 2 trial
- Program includes DAFFODIL™ safety/PK trial in females aged 2 to 5 years
- Potential marketing approval in 2022 with Priority Review

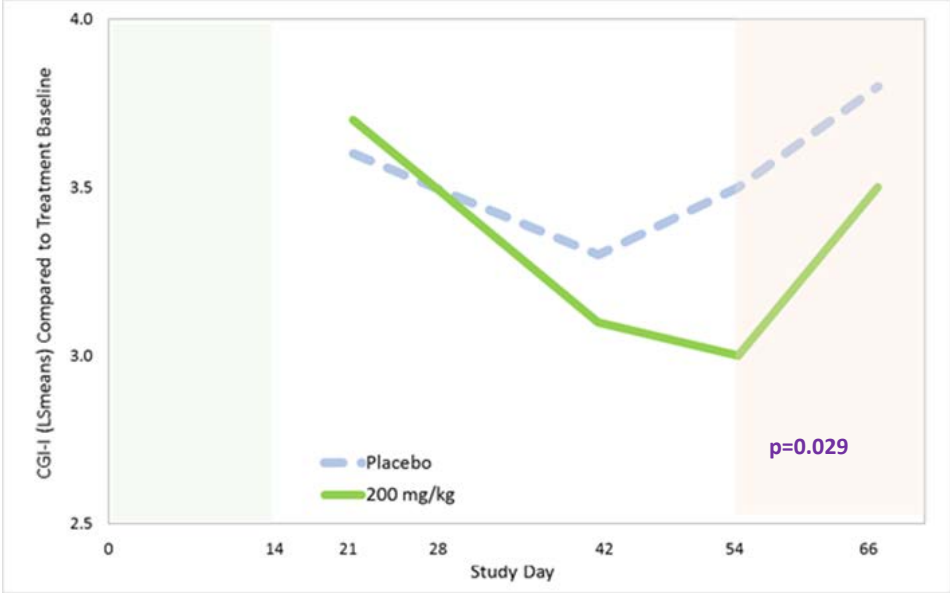
RETT SYNDROME PHASE 2 - RSBQ AND CGI-I

Clinical improvement measured by RSBQ



RSBQ is a caregiver rating, reflecting the severity of the syndrome. Mean improvements for trofinetide and placebo were, respectively, 16% and 6%

Clinical improvement measured by CGI-I



CGI-I is a clinician rating of how much the subject's overall illness has improved or worsened. 22% of subjects on trofinetide received a score of 2 ("much improved") compared with 4% of subjects on placebo

RSBQ and CGI-I measure overall syndrome rather than a particular symptom, reflecting heterogeneity of symptoms and disease-modifying action of trofinetide

Publication: https://n.neurology.org/content/early/2019/03/27/WNL.0000000000007316

MAXIMISING PROBABILITY OF SUCCESS

- The Phase 3 co-primary endpoints were both positive in the Phase 2 trial
- In the Phase 2 trial clinical improvement continued increasing through to end of treatment - the Phase 3 trial at 12 weeks is twice the duration of the Phase 2 trial
- The Phase 3 sample size at approx. 90 per group is more than 3 times the Phase 2 sample size – much greater statistical power to detect a difference between active and placebo
- The dosing regimen in the active group for the Phase 3 trial is optimised, informed by the PK-PD analyses of the Phase 2 subjects
- The age range for the Phase 3 trial is 5 to 20 years, compared with 5 to 15 years in the Phase 2 trial
- Both trials are US sites only, with most Phase 2 sites participating in Phase 3

NNZ-2591 FOR MULTIPLE NEURODEVELOPMENTAL DISORDERS

FIVE TIMES LARGER OPPORTUNITY FOR NNZ-2591

Disorder	Gene mutation	Published prevalence estimates	Potential patients		
			US[1]	Europe[1]	Asia[1, 2]
Phelan-McDermid	*SHANK3*	1/8,000 to 1/15,000 males and females	22,000	28,000	81,000
Angelman	*UBE3A*	1/12,000 to 1/24,000 males and females	14,000	18,000	52,000
Pitt Hopkins	*TCF4*	1/34,000 to 1/41,000 males and females	7,000	9,000	25,000
Prader-Willi	*15q11-q13*	1/10,000 to 1/30,000 males and females	13,000	16,000	47,000
			56,000	**71,000**	**205,000**

- **Current opportunity for NNZ-2591 is more than 5 times the Rett Syndrome opportunity[3]**
- **There are many other neurodevelopmental disorders potentially relevant for NNZ-2591 mechanism of action**

[1] Estimates derived by applying the mid-point of the prevalence estimate range to the populations under 60 years
[2] Asia comprises Japan, Korea, Taiwan, Israel and urban populations of China and Russia
[3] Based on number of addressable patients globally

IDEAL ATTRIBUTES LEADING INTO PHASE 2

- ✓ Novel mechanism of action
- ✓ Clear and consistent efficacy in mouse models of each syndrome
- ✓ Biochemical effects in the brain and optimum dose confirmed
- ✓ Demonstrated high oral bioavailability and blood-brain barrier penetration
- ✓ IND-enabling program of non-clinical toxicology and CMC studies completed
- ✓ Proprietary drug substance manufacturing process with exceptional purity and high yield, administered as patient-friendly liquid dose
- ✓ Safe and well tolerated in Phase 1 trial
- ✓ Phase 2 plans confirmed at pre-IND meetings with FDA
- ✓ Orphan designations from FDA and EMA

KEY FEATURES OF FIRST PHASE 2 TRIALS

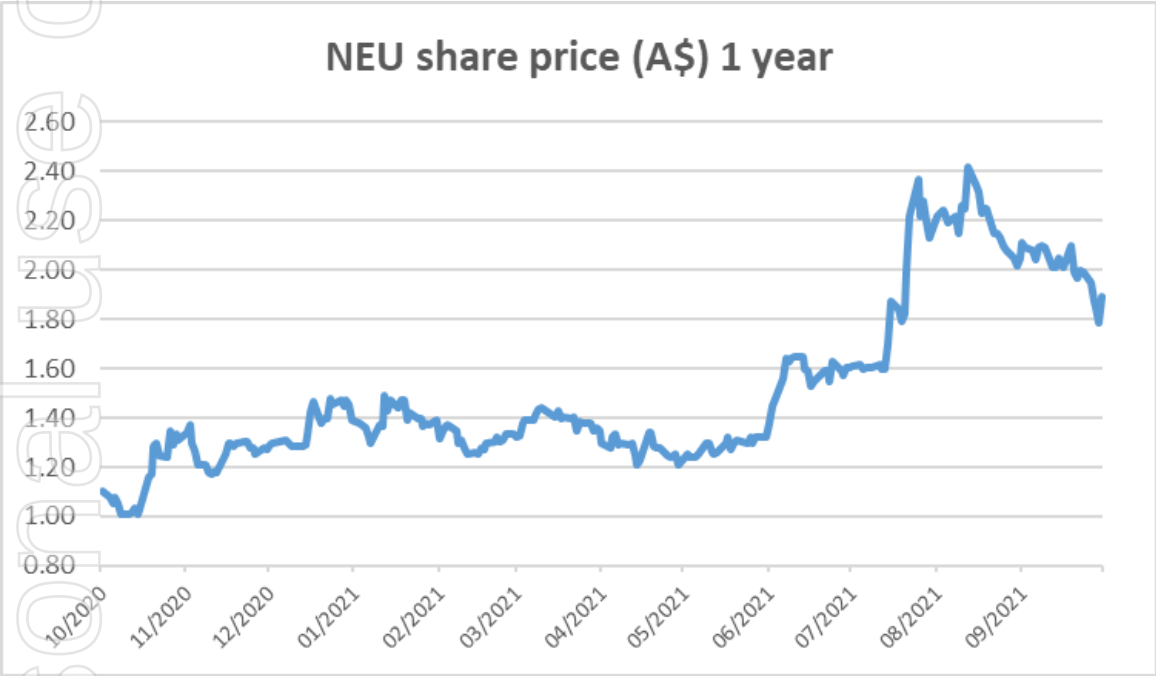
- Prioritising speed to data:
  - AS trial in Australia, PMS and PTHS trials in US
  - Up to 20 patients in each trial, all patients receive drug
- Maximising opportunity to demonstrate effects:
  - Pediatric patients
  - 13 weeks' treatment following well-characterised baseline period
- Confirm safety and PK in pediatric patients
- Assess treatment impact across multiple efficacy measures to select primary endpoint for registration trial
- Currently amending protocols to enhance safety monitoring following FDA review of IND applications

Overall aim – expedite data that enables subsequent trials to be designed as registration trials, commencing in 2023

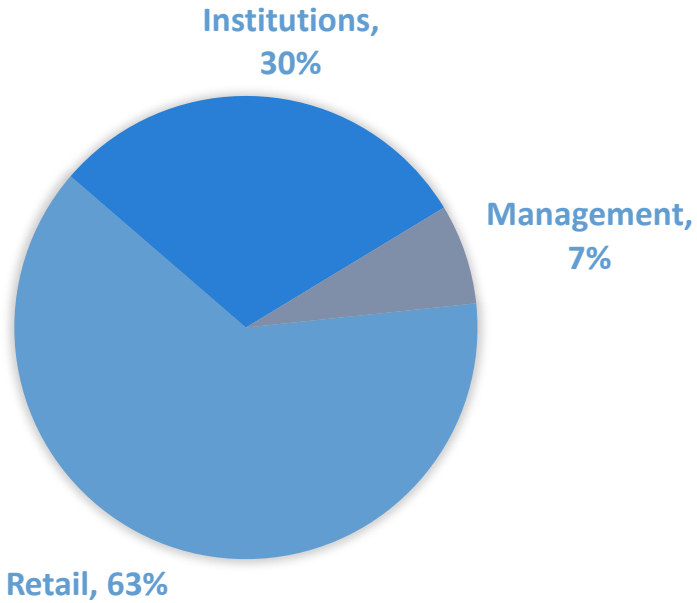
STOCK INFORMATION (ASX: NEU)

Current risk-adjusted valuation per share (MST Access) - A$3.93

52 week price range: A$1.00 - A$2.53



Current share register composition (126 million quoted shares – top 20 hold 50%)



A$35.0 million cash at 30 September 2021

THREE KEY DRIVERS TO TRANSFORM NEAR TERM VALUE

CONTACT

Jon Pilcher, CEO
jpilcher@neurenpharma.com
+61 438 422 271