



**Neuren (NEU) - ASX Announcement**

**18 June 2018**

## **Chairman's Address at 2018 Annual Meeting of Shareholders**

Before I begin, I am required to advise you that this Address contains some forward-looking statements that are subject to risks, which may cause the actual outcomes to differ from the outcomes anticipated in this Address.

### **Overview**

Neuren Pharmaceuticals is in the business of developing novel drug therapies for a range of neurodevelopmental and neurodegenerative conditions. In many respects we are undertaking groundbreaking work and I wish to take this opportunity to commend the Neuren team and our many advisers and collaborators on the very significant progress that has been made during 2017 and indeed during the first half of 2018.

I will start by outlining Neuren's key achievements over the last 12 months and in so doing convey the message that our company is in a strong position, with greatly enhanced prospects of completing the remaining steps in the development of trofinetide and ultimately making a new treatment option available to patients around the world to address a major unmet need.

### **Lanstead Funding**

This time last year we announced our funding arrangement with Lanstead Capital. I am pleased to report that to date this funding structure has proven to be highly beneficial to Neuren, delivering significant incremental funding through the Sharing Agreement. The average monthly settlement amount received in the first 5 months of this calendar year was just under \$0.9 million and there are 9 monthly instalments still to be received. I will shortly provide more detail on our cash position, but suffice to say, the capital raising and this funding arrangement that we executed 12 months ago has enabled Neuren to remain firmly on track with our key development activities in preparation for Phase 3.

### **End of Phase 2 Meeting**

Following the positive results of the Rett Phase 2 clinical study, we were granted an End of Phase 2 meeting with the US Food and Drug Administration Division of Neurology Products in October last year. It was an extremely productive meeting in which we reached clear agreement on the key elements of our proposed Phase 3 program. Notably, the use of RSBQ as a primary endpoint along with CGI-I as a co-primary in one Phase 3 trial, as well as testing only one active dose group utilising an optimised dosing regimen and limiting the size of the safety database of 12 months exposures that is required for a New Drug Application in this rare condition. This understanding with the FDA was necessary in order for us to fully scope the Phase 3 study size, timelines and associated costs. These parameters have been central to both our own planning as well as our more recent partnering discussions.



### **Preparation for Phase 3**

In preparation for the Phase 3 trial, which will involve a longer duration of treatment than the Phase 2, there is a standard requirement to generate additional data from non-clinical studies in two species. We previously completed one of the studies and the second is currently in progress. The second study, which will conclude in Q4 2018 has two components and I am pleased to report that both components are on schedule, with no unexpected findings to date.

Manufacturing is a key element of the preparation for Phase 3. A Phase 3 trial has to be conducted using the commercial (“to-be-marketed”) product, which means that changes to the Phase 2 product supply arrangements and a significant investment have been required for manufacturing of both the drug substance and the finished drug product liquid formulation and packaging.

To this end our team has been conducting extensive work with a selected FDA-approved global manufacturer of pharmaceutical peptides.

Manufacturing of the final scale-up batches of drug substance is currently in progress, which will then be followed immediately by the first batch at commercial scale to supply the Phase 3 trial. A campaign of commercial scale batches in the first half of 2019 will then complete the Phase 3 supply requirement. In parallel with the current drug substance manufacturing, the commercial finished product is undergoing stability testing and the development and validation of various quality testing requirements is also ongoing.

Simultaneously with the drug supply activities and the non-clinical studies we have been undertaking detailed feasibility assessments of clinical sites in the US with a view to finalising study site selection and subject enrolment plans. Given we have completed two Rett syndrome clinical studies in the US, and we have an established base of clinical expertise and Rett patients to call upon, we do not envisage any difficulties with overall Phase 3 subject recruitment.

Among all of these preparatory activities, the supply of sufficient drug substance is the critical path factor that determines when the trial can commence. This includes a risk-based judgement about the amount of supply that should be available before the trial starts. The precise time of commencement in 2019 will also be influenced to some extent by the outcome of our current partnering negotiations.

### **Enhanced Commercial Protections**

In the last year we have significantly enhanced our trofinetide patent portfolio, with new patents extending to 2032, granted in the US, Europe and Japan covering trofinetide in Rett syndrome, Fragile X syndrome and other autism spectrum disorders. The combination of these issued patents along with the exclusivity periods under the Orphan drug designations already granted in the US and Europe give us lengthy and valuable commercial protections for trofinetide.



### **Partnering and Exclusivity Period**

We have for some time recognised that in order for us to successfully make trofinetide available to patients around the world we would require access to significant additional funding and broader organizational resourcing. Given the substantial progress we have made over the last year and the strong position we have reached in respect of our clinical data, the FDA End of Phase 2 Meeting and commercial protections, we have actively engaged in a range of discussions with potential partners and providers of capital. I am pleased to advise that we have received very positive feedback on the overall quality and meaningfulness of the clinical data generated in the Neuren Phase 2 studies and on our Phase 3 plans. We expect this view to be further corroborated when the Phase 2 pediatric study is accepted in coming months for publication in a peer-reviewed journal.

Our deliberations in respect of partnering have and will continue to be guided by our views on what option or options are most likely to provide the best outcomes for patients and shareholders alike. There are quite understandably many different facets to these discussions, and of course the US as a key market and the Orphan drug indications for trofinetide more specifically are at the centre of these considerations.

Building on some of our initial discussions we have chosen to enter into a 3 month exclusivity period with a US pharmaceutical company, the terms of which were announced on 21 May 2018. This particular arrangement provides Neuren and our US counterparty the opportunity to conclude detailed negotiations with the intention of finalizing a partnership arrangement for trofinetide. We will of course continue to inform shareholders of any material developments in this regard.

### **Financial position and capital structure**

Neuren's cash reserves as at 31 May 2017 were A\$10.8 million, including US\$4 million (A\$5.3 million) received under the terms of the Exclusivity Deed for the issue of 1.33 million Neuren shares. The issue price of \$4.00 paid by the US counterparty represented a premium of approximately 33% over the 10-day volume weighted average share price. Neuren will continue to invest in the Phase 3 preparatory activities at the same time we are working to finalize the partnership arrangement with the US pharmaceutical company.

In November 2017 Neuren's ordinary shares were consolidated in order to remove an impediment to investment from some international investors. The total number of shares now on issue is approximately 103 million, including 2.5 million loan funded shares that remain subject to vesting conditions.

### **Concluding remarks**

In conclusion, I am pleased to report that Neuren has made significant progress across a number of important areas during the last 12 months. Trofinetide in Rett syndrome represents a very unique and viable Phase 3 ready program.



We will not overlook the potential of our other programs, including Fragile X, FXTAS, TBI and our second patented compound NNZ-2591, however the priority in the near term is to conclude the current partnering arrangements, which we expect will provide the capability and the resources to accelerate our Orphan drug programs.

Before concluding, I wish to thank Trevor Scott and Larry Glass my two fellow Directors, who are always highly engaged, supportive, questioning and readily available. That said, we are now a small Board and we believe it an appropriate time to add additional independent Directors to the Board. We have commenced a formal selection process and I anticipate the Board will be making the appropriate appointment(s) in the very near future.

Finally, I extend my gratitude to the Neuren team. As a small, yet highly capable and committed team, they consistently deliver exceptional work of a very high quality. In particular, a special mention and thanks to Jon Pilcher who has worked so diligently with me on Neuren's key activities these last 12 months.

Thank you.

### **About Neuren and trofinetide**

Neuren Pharmaceuticals Limited (Neuren) is a biopharmaceutical company developing new therapies for brain injury, neurodevelopmental and neurodegenerative disorders. Neuren has completed Phase 2 development of trofinetide for Rett syndrome and has completed a Phase 2 clinical trial in Fragile X syndrome. The programs for trofinetide in Rett syndrome and Fragile X syndrome have each been granted Fast Track designation by the US Food and Drug Administration and Orphan Drug designation in both the United States and the European Union. 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.

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### *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.*