Prana Biotechnology announces preliminary results of Phase 2 IMAGINE trial of PBT2 in Alzheimer's disease

MELBOURNE, 31st March, 2014: Prana Biotechnology (ASX:PBT/NASDAQ:PRAN) has today released the top line results of the 12-month Phase II Imaging trial in Alzheimer's Disease ("IMAGINE" Trial), based on draft results.

Prana's PBT2 did not meet its primary endpoint of a statistically significant reduction in the levels of beta-amyloid plaques in the brains of prodromal/mild Alzheimer's disease patients, as measured using PiB-PET Standardized Uptake Value Ratio (SUVR). Whilst there was a reduction in the overall levels of the PiB PET signal in patients treated with PBT2, the results were confounded by an atypical reduction of levels of the PiB PET signal in the placebo group as well.

Commenting on the result, Geoffrey Kempler, CEO of Prana Biotechnology said: "This is the first time that Prana has looked at PiB-PET in a study with PBT2 to measure its effect on insoluble amyloid plaques. In our previous Alzheimer's study (EURO)[1], we looked at levels of unaggregated soluble Abeta peptides in spinal fluid, and they were significantly reduced with PBT2 treatment. So in the IMAGINE trial we looked for an impact on the insoluble plaques as well, but did not see it differ significantly from the placebo."

"It is possible the result may point to PBT2 targeting soluble species of Abeta including toxic oligomers rather than plaques. Abeta oligomers are not visible in the PiB-PET scans which can only detect amyloid plaques. Alternatively, what we are seeing is simply the result of an inconclusive imaging readout in a small sample size with 42 participants (15 on Placebo, 27 on PBT2)".

No improvement was observed on the secondary endpoints of brain metabolic activity, cognition and function; however there was a trend towards preserving hippocampal brain volume in the PBT2 group. Specifically, there was less atrophy in those patients treated with PBT2 relative to placebo, 2.6% and 4.0%, respectively. This is consistent with published measures of atrophy in AD patients versus healthy controls[2] of 4.7% and 1.4%, respectively. The company is tracking measures of brain volume and cognition in the current 12 month extension study that will be completed at the end of the year. Further analysis of the results is ongoing.

Importantly, PBT2 was shown to be safe and very well tolerated over the 52 weeks. The adverse event profile was equivalent between placebo and treated groups. Forty of the 42 enrolled participants (95%) completed the 52 week treatment period.

Mr Kempler concluded: "Whilst not meeting all of our hopes, this result does not deter us from the future development of PBT2, a safe and well tolerated drug candidate for Alzheimer's disease. Our scientists and those from other institutes have developed a strong body of evidence for the efficacy

of PBT2 in Alzheimer's disease. The suggestion of beneficial effect of PBT2 on brain volumes first seen in the Reach2HD Huntington disease trial and now in this Alzheimer's disease IMAGINE trial is intriguing. We are consulting with experts in the field to further assess these results and to consider how best to progress PBT2 in Alzheimer's disease. Indeed, the IMAGINE Extension trial is continuing, and data from this trial is likely to inform the next steps for an AD program."

Prana is proceeding with its plans toward a confirmatory study for Huntington disease. Based on Prana's previous discussion with the US Food and Drug Administration, the data on safety and tolerability of PBT2 in Alzheimer's disease will support the future clinical development and, ultimately, a New Drug Application in Huntington disease.

Prana has a cash position of AU$25.4 million as at 31 March 2014.

1. Lannfelt *et al.* Lancet Neurology (2008) vol. 7, pp. 779-86; Lannfelt *et al.* Lancet Neurology (2009) vol. 8, pp. 981.
2. Barnes *et al.* Neurobiology of Aging (2009) 1711-1723

Investor conference call

Prana is hosting an investor conference call at **11.00pm Australian Eastern Daylight Savings time** on Monday 31st March (8.00am USA EDT; 5.00am USA PDT, and 1.00pm UK BST).

The conference call will be recorded and available from 1am Australian EDST, Tuesday 1 April, at http://www.openbriefing.com/OB/1378.aspx

Conference ID: 693727

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Toll: +61 2 9007 3187 (can be used if dialing from an international location)
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About Prana Biotechnology Limited

Prana Biotechnology was established to commercialise research into Alzheimer's disease and other major age-related neurodegenerative disorders. The Company was incorporated in 1997 and listed on the Australian Stock Exchange in March 2000 and listed on NASDAQ in September 2002. Researchers at prominent international institutions including The University of Melbourne, The Mental Health Research Institute (Melbourne) and Massachusetts General Hospital, a teaching hospital of Harvard Medical School, contributed to the discovery of Prana's technology.

About IMAGINE Phase II Clinical Trial for Alzheimer's Disease

A randomized placebo-controlled clinical study involving 42 patients (males and females over 44 years) with prodromal or mild Alzheimer's disease. Patients were randomized (ratio of 2:1) into either an active treatment group receiving 250mg PBT2 or placebo group over 52 weeks. The primary objective was to evaluate brain amyloid levels by PiB PET imaging. The secondary objective was to evaluate the effect of PBT2 on safety and tolerability, brain metabolic activity, brain volumes and cognition, and functional abilities.

Forward Looking Statements

This press release contains "forward-looking statements" within the meaning of section 27A of the Securities Act of 1933 and section 21E of the Securities Exchange Act of 1934. The Company has tried to identify such forward-looking statements by use of such words as "expects," "intends," "hopes," "anticipates," "believes," "could," "may," "evidences" and "estimates," and other similar expressions, but these words are not the exclusive means of identifying such statements. Such statements include, but are not limited to any statements relating to the Company's drug development program, including, but not limited to the initiation, progress and outcomes of clinical trials of the Company's drug development program, including, but not limited to, PBT2, and any other statements that are not historical facts. Such statements involve risks and uncertainties, including, but not limited to, those risks and uncertainties relating to the difficulties or delays in financing, development, testing, regulatory approval, production and marketing of the Company's drug components,

including, but not limited to, PBT2, the ability of the Company to procure additional future sources of financing, unexpected adverse side effects or inadequate therapeutic efficacy of the Company's drug compounds, including, but not limited to, PBT2, that could slow or prevent products coming to market, the uncertainty of patent protection for the Company's intellectual property or trade secrets, including, but not limited to, the intellectual property relating to PBT2, and other risks detailed from time to time in the filings the Company makes with Securities and Exchange Commission including its annual reports on Form 20-F and its reports on Form 6-K. Such statements are based on management's current expectations, but actual results may differ materially due to various factions including those risks and uncertainties mentioned or referred to in this press release. Accordingly, you should not rely on those forward-looking statements as a prediction of actual future results.