



## **Prana's PBT2 Clinical Trials Cited as Most Advanced in Addressing Neurodegeneration from the Metal Equilibrium Perspective**

**Melbourne – September 20, 2012; Prana Biotechnology (NASDAQ:PRAN; ASX:PBT)** today reported that it had been cited in an interview in The Life Sciences Report with George Zavoico, Ph.D., senior equity analyst and managing director with MLV & Co., as the only drug company to address in clinical trials the control of transition metal levels in neuronal synapses, a key event in age-related dysfunction of the brain. The Report citing Prana is titled, "Seven Innovative Biotechs That Could Soar By Year-End".\*

In the published interview, Dr. Zavoico spoke about an emerging hypothesis addressing the formation of beta amyloid plaques, and how another neuronal protein, tau, is hyperphosphorylated, enabling it to form neurofibrillary tangles. These are recognized by experts in the field as key events in age-related brain dysfunction and cognitive loss. The basis for what has been called the "Metals Dyshomeostasis Hypothesis" is the abnormal distribution and loss in the control of transition metal levels in neuronal synapses. Dr. Zavoico said, "Metals like zinc, copper and iron have a number of important biologic functions, most notably in the function of numerous enzymes and receptors. Zinc, in particular, binds to beta amyloid, leading to its aggregation and, ultimately, plaque formation".

Moreover, studies have shown that abnormal distribution of transition metals driven partly by beta amyloid plaque formation affects the function of tau, an intracellular protein essential for normal neuronal function. Tau becomes hyperphosphorylated and forms neurofibrillary tangles, which is thought to cause neuronal cell death.

Prana is evaluating the potential clinical benefit of PBT2 in two Phase II trials in two different neurodegenerative diseases. In Alzheimer's disease, the IMAGINE trial, a double-blind placebo controlled trial enrolling 40 patients with prodromal or mild Alzheimer's disease, being treated for 12 months will test cognition and use brain imaging to measure the effects of PBT2 on beta-amyloid deposits in the brain and effects on increasing brain activity.

In the interview, Dr. Zavoico added: "In preclinical studies, Prana's lead drug candidate, PBT2, has been shown to redistribute zinc and other transition metals, preventing beta amyloid aggregation and even inducing its disaggregation. Sequestration of zinc in beta amyloid plaques reduces zinc levels inside the neuron, which can lead to its [tau protein's] hyperphosphorylation. The metals hypothesis appears to unify the pathology underlying both amyloid plaque and neurofibrillary tangle formation, which makes this approach so compelling, in my mind".

Notably, Huntington's disease is also characterized by misfolding and aggregation of proteins, but of Huntingtin protein, not beta amyloid. Like Alzheimer's, studies indicate that the pathology underlying Huntington's disease is also due to abnormal distribution of certain transition metals. The Reach2HD trial, enrolling 100 patients with early to mid-stage Huntington's disease, being treated for 6 months, aims to demonstrate safety, motor and behavioural benefits and the same cognitive benefits for Huntington's patients that it has already demonstrated in Alzheimer's patients treated with PBT2. Results of Prana's clinical trials are expected in the second half of next year.

Prana's CEO, Geoffrey Kempler, commented that "it is very encouraging that the strength of our science and the clinical potential of PBT2 is being recognized by industry experts and analysts, particularly at a time when so many competing drug candidates to treat Alzheimer's have failed to meet their clinical endpoints. As some researchers are losing hope that Alzheimer's can even be treated, we remain very confident in the potential of PBT2 to help patients".

\*The Life Sciences Report, A Streetwise Report, September 13, 2012.

#### **About Prana Biotechnology Limited**

Prana Biotechnology was established to commercialize research into age-related neurodegenerative disorders. The Company was incorporated in 1997 and listed on the Australian Securities 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.

For further information please visit the Company's web site at [www.pranabio.com](http://www.pranabio.com).

#### **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 factors 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.*

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