

# PBT2's 'mechanism of action' presented in a Plenary Lecture at International Conference on Alzheimer's Disease (ICAD) on July 21 in Paris

Positions PBT2 as a leading therapeutic strategy targeting the underlying causes of neurodegenerative disease

**MELBOURNE, Australia – July 21, 2011 – Prana Biotechnology Limited (NASDAQ: PRAN / ASX: PBT)**, announced that Professor Ashley Bush, Prana's Co-Founding Scientist, will give a Plenary Lecture on July 21<sup>st</sup> entitled, "Tau and Presenilin: The Metal Ion Regulatory Proteins of Alzheimer's Disease." The talk draws on 20 years of medical research into the role of metals in neurodegenerative diseases.

Geoffrey Kempler, Prana's Executive Chairman, said, "This is the first time that the importance of metals in neurodegenerative diseases has been given such a prestigious platform and focus at ICAD. Changes in the metal status in the neuron may in fact be the trigger that sets off Alzheimer's Disease (AD). Professor Bush's Plenary Lecture highlights a very promising and different approach to treating AD which distinguishes Prana's PBT2 from other drugs in development. PBT2 prevents Abeta from becoming toxic to synapses, promotes neuronal transmission and *directly restores neurons critical to cognition*. Alongside the rapid improvement in cognition in the Phase II clinical trial of PBT2 for Alzheimer's Disease, this Plenary Lecture endorses our approach as a competitive and leading therapeutic strategy to treat neurodegenerative disease".

"In my opinion, PBT2 directly addresses the pathological mechanism of the amyloid beta protein and, thus, has the greatest chance to stop the progress of this devastating disease" said Professor Rudolph E.Tanzi, Joseph P. and Rose F. Kennedy Professor of Neurology, Harvard Medical School, and Co-Founding Scientist at Prana

"It is important for the greater Alzheimer's community to recognize the fact that, beta-amyloid is associated with metal imbalances in the brains of Alzheimer's patients. In addition to blocking the aggregation of Abeta and dissolving Abeta deposits and oligomers, PBT2 also redistributes metals that were previously trapped in the brain by Abeta deposits. In this way, PBT2 uniquely addresses a pathogenic mechanism of Abeta deposition involving the sequestration of metals like zinc and copper, which are essential for neural health", explained Professor Tanzi.

# The Plenary Lecture

Focusing on the function of APP, the precursor protein that gives rise to Abeta (the target protein in AD) in ensuring that iron is able to move out of neurons, Professor Bush described how both the disease and age-related changes to the pathways responsible for the trafficking of brain metals (copper, zinc, iron) give rise to the various pathological features seen in AD.

Each feature of AD pathology - amyloid plaques, neurodegeneration, tau accumulation and phosphorylation, the presence of metals in plaques, and the cognitive impairment experienced by patients - can be explained by alterations to the pathways that are responsible for the trafficking of metals in the brain.

Drawing on extensive studies in transgenic animal models, *in vitro* cell based studies and human brain tissue, Professor Bush showed how the major proteins, which are strongly implicated in the disease pathways in AD – APP, Abeta, tau and presenilin –are responsive to the uptake and turnover of neuronal zinc, copper and iron. PBT2 influences the interaction of metals with these key disease proteins.

Professor Bush's Plenary Lecture will soon be available on Prana's website.

# **About Prana Biotechnology Limited**

Prana Biotechnology was established to commercialise research into 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, and descriptions of the peer-reviewed journals, please visit the Company's web site at 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 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.

### Contacts:

Prana Biotechnology Limited +61 3 9349 4906