



15th March 2012

ASX Market Announcements
Australian Securities Exchange Limited
10th Floor, 20 Bond Street
SYDNEY NSW 2000

Cortical Dynamics Ltd – Cortical Dynamics Commences Enrolment for Clinical Trials

Please find attached an operational update from BPH Energy (**ASX: BPH**) investee company Cortical Dynamics Ltd.

Yours sincerely,

A handwritten signature in blue ink, appearing to read "D Ambrosini", is written over a light blue circular stamp.

Deborah Ambrosini
Director and Company Secretary



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Cortical Dynamics Commences Enrolment for Clinical Trials

Cortical Dynamics Ltd ("**Cortical**"), an investee company of BPH Energy Limited (ASX: BPH), is pleased to announce that the first patient has been recruited in its clinical trial at St Vincent's hospital in Melbourne. The TGA acknowledged notification of the trial in December following ethics approval which was received on 8th November 2011.

It is expected that a total of 20 patients undergoing cardiopulmonary bypass surgery will be enrolled in the trial. The primary objective of the trial is the validation of the BAR monitor in an operating room setting where the presence of multiple artifacts are known to complicate the EEG assessment of anaesthetic action. Further information regarding the trial has been attached at Appendix 1.

The principle investigator in the trial will be Dr Desmond McGlade, Senior Staff Anaesthetist, from the Department of Anaesthesia at St Vincent's. Cortical has worked closely with Dr Desmond Mcglade and his team to develop protocols and reporting procedures.

Cortical's Chairman, David Breeze said, "We are pleased to announce the commencement of the validation trials, which is a significant moment for Cortical Dynamics. The validation of the BAR monitor within the operating room is an important step in Cortical's clinical development program".

This will be the second trial of the BAR monitor, following a study conducted at Swinburne University last year. This earlier study concluded that all the signal gathering and analysing components of the BAR monitor were functioning correctly, providing the necessary verification for the BAR system to be used in St Vincent's clinical trial.

About the BAR Monitor

The BAR monitoring system measures a patient's brain electrical activity, the electroencephalogram (EEG), in order to indicate how deeply anaesthetised a patient is during an operation via an adhesive sensor applied to the forehead. The BAR monitor is designed to assist anaesthetists and intensive care staff in ensuring patients do not wake

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up un-expectedly, as well as reducing the incidence of side effects associated with the anaesthetic.

The BAR monitor improves on currently used EEG monitors by utilising advances in understanding of how the brain's electrical activity is produced, and how it is affected by anaesthetic and sedative drugs. The BAR's unique physiological approach is aimed at independently monitoring the hypnotic and analgesic states associated with anaesthesia, a feature no known existing EEG based depth-of-anaesthesia monitor is able to achieve. Objective monitoring of hypnotic and analgesic state will lead to improved anaesthetic and surgical outcomes, by reducing recovery times and minimising drug costs.

About Cortical Dynamics

Cortical Dynamics is a medical technology company that was established in 2004 to commercialise intellectual property relating to brain function monitoring developed by Professor David Liley and his scientific team at Melbourne's Swinburne University of Technology.

Cortical Dynamics, has applied for admission to the Official List of the Australian Securities Exchange and the offer closing date has been extended to 5:00pm (AWST) on Monday 30th April 2012.

Yours Sincerely,

A handwritten signature in black ink that reads "D. Breeze". The signature is stylized and includes a long horizontal flourish extending to the left.

David Breeze
Chairman

Cortical Dynamics Ltd

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Appendix 1

Name of Trial:	Validation of the Brain Anaesthesia Response (BAR) Monitoring System during Anaesthesia for Cardiac Surgery: a Double-Blinded, Randomised, Controlled Trial using Two Different Doses of Fentanyl
Primary Endpoint:	The Brain Anaesthesia Response (BAR) monitor system is designed to non-invasively monitor brain function in response to anaesthetic and sedative agents. The system consists of a terminal, a data acquisition module (DAM) and a disposable electrical sensor array. Electroencephalography (EEG) signals are collected using the sensor which is applied to the patients' forehead. The signals are processed to calculate two BAR indices, Cortical State (CS) and Cortical Input (CI). The displayed indices are designed to assist the anaesthetist to estimate the levels of consciousness and analgesia of a patient during general anaesthesia. This study is designed to detect varying levels of anaesthetic agents in an operating room environment where the presence of multiple sources of artifacts is known to complicate the EEG assessment of anaesthetic action.
Subject Inclusion Criteria:	Males and Females Aged 18 to 75 years Undergoing elective first-time coronary bypass graft surgery using cardiopulmonary bypass American Society of Anesthesiologists Class III or IV
Blinding Status:	Blinded
Treatment Method:	Fentanyl moderate dose 24mcg/kg IV on induction. Fentanyl low dose 12mcg/kg IV on induction.
Target Sample Size:	20
Trial Location:	St Vincent's Hospital, Melbourne.