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PROMISING RESULTS FOR CORTICAL DYNAMICS

BioPharmica Limited's investee company Cortical Dynamics is pleased to announce that they have finished analysing a comprehensive data set obtained from clinical researchers in Europe.

The analysis of this European data set using the BAR methodology unambiguously indicates that the effects of remifentanil and propofol on brain electrical activity can be differentiated. The detailed results of this analysis are in the process of being prepared for publication.

The data has been provided by Professor Michel Struys from the Department of Anaesthesia, Ghent University Hospital in Belgium and Professor Tarmo Lipping from the Tampere University in Finland as part of their original study involving the behaviour of brain electrical activity during propofol induced sedation (Ferenets R, Vanluchene A, Lipping T, Heyse B and Struys MMRF. Behaviour of entropy/complexity measures of the electroencephalogram during propofol-induced sedation. *Anesthesiology* 2007 106:696-706.).

This is the third detailed analysis of clinical anaesthetic trial data involving the use of the BAR analysis method. In this trial brain activity and patient state data was recorded from 45 patients while they underwent target controlled propofol (marketed as Diprivan) anaesthesia in the presence of differing levels of the synthetic opioid remifentanil (marketed as Ultiva). It was hypothesised that the BAR analysis method would be able to differentiate the effects of remifentanil (a potent analgesic) and propofol (a potent hypnotic) on the patterns of brain electrical activity recorded.

These results underscore the significant potential of the BAR methodology to separately monitor hypnotic and analgesic state using brain electrical activity recorded during surgery. Currently there is no known depth of anaesthesia monitoring approach that is able to achieve this. Objectively monitoring hypnotic and analgesic state will lead to improved anaesthetic and surgical outcomes, by reducing recovery times and minimising drug costs.

The Cortical Dynamics team is developing a unique depth of anaesthesia monitoring system for use during major surgery. The core technology is based on real time analysis of the patients electroencephalogram (EEG) using a proprietary algorithm based on a mathematically and physiologically detailed understanding of the brain's rhythmic electrical activity. The theory has been developed by Professor David Liley, who heads the scientific team at Cortical Dynamics at Swinburne University of Technology.

These results are a significant step in the commercialisation of the project.

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