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BioPharmica touts new cancer target

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Newly listed Perth meditech BioPharmica (ASX:BPH) has taken the wraps off a new tumour-suppressor gene candidate that shows high promise as a therapeutic and diagnostic target for many cancers, as well as in AIDS and the brain disorder Huntington's disease.

Discovered by Prof Peter Klinken's cancer-research team at the Western Australian Institute of Medical Research, *HLS5* shows certain properties characteristic of tumour-suppressor genes, but BioPharmica MD Dr Sam Gallagher says it has a novel mode of action that increases its potential as a therapeutic target for multiple disorders.

BioPharmica has filed provisional patents in Australia, the US and Europe covering its use as a therapeutic and diagnostic target. Klinken's team identified the gene during research into leukaemia, and has since shown that it is involved in a number of key regulatory processes in human cells, and in immune-system regulation.

In these roles, *HLS5* influences individual susceptibility to diseases like AIDS and Huntington's, and the rate at which these diseases progress. Gallagher said the emerging picture of the gene's role "could hardly have worked out better" for the company, which is specialising in personalised medicine. Gallagher said the company has become increasingly excited by *HLS5*'s potential as new findings have emerged from the WAIMR's research.

Gallagher said BioPharmica has not been able to publish any research details during the provisional patenting process, but when the patents are issued, Klinken's group will publish a number of papers describing its mechanism, and its potential as a therapeutic target for a range of cancers, Huntington's and AIDS. She said WAIMR researchers have found *HLS5* reduces the formation of tumours in laboratory mice. A recent pilot study has shown that the gene is aberrant or deleted in the majority of tissue samples from patients with cancer -- consistent with it being a tumour suppressor.

Gallagher said international researchers were taking an increasing interest in Klinken's identification of the various cellular links and pathways involving *HLS5*, and once the patents were secure, BioPharmica would broaden its collaborations with Australian and international research groups.

Rather than restricting licensing and collaborations to the field of cancer, BioPharmica would actively seek potential opportunities in neurodegenerative and infectious diseases.

BioPharmica appoints Sam Gallagher as new boss Wednesday, November 30, 2005

BIOTECHNOLOGY commercialisation company BioPharmica Limited has appointed Dr Sam Gallagher as its new managing director.

BioPharmica said that as a former senior R&D scientist for Amersham Biosciences and GE Healthcare, Gallagher brought significant product development and international partnering

experience relating to large pharmaceutical and biotech companies to the BioPharmica board.

Gallagher was involved in the development and launch of multi-million-dollar biomedical products produced by Amersham Biosciences and GE Healthcare from conception to application, validation and sale.



BAR Monitor trial concludes

Friday, September 30, 2005

A TRIAL at Royal Melbourne Hospital involving BioPharmica's BAR Monitor has concluded after nearly 10 months and the testing of 68 patients.

The trial was intended to test the sensitivity of a new method in quantifying the effect that various levels of nitrous oxide have on measures of anaesthetic depth. **Results will not be released until a full review has been completed.**

The 68 patients (eight more than was originally planned) had consented to being involved in the study as part of their elective surgery. While being anaesthetised they had the electrical activity of their brain recorded from a set of electrodes placed on the forehead.

Data from these recordings was analysed using algorithms based on a biological understanding of the dynamics of human brain electrical activity – a method that has been incorporated into the Brain Anaesthesia Response (BAR) monitor being developed by Cortical Dynamics and BioPharmica.

Follow-up analysis and reporting of the Royal Melbourne Hospital trial data is being conducted, and further trials to extend the validation of the monitor are now being planned in a series of Australian hospitals. Discussions had also commenced with potential international collaborators, BioPharmica said.

Participants were randomly allocated to one of three groups in which they were anaesthetised with the common potent inhalational agent sevoflurane, carried in 0%, 33% or 66% nitrous oxide.

The BAR Monitor is designed to detect and record the electrical activity of the human brain in order to assist anaesthetists and intensive care staff to keep patients optimally sedated or anaesthetised. It is intended to ensure patients do not wake up unexpectedly during an operation, and minimizes associated side effects from post-operative recall of surgical procedures.

International patent coverage is pending regarding the use of the BAR system in a number of neuro-diagnostic settings that include detecting the early onset of degenerative diseases like Alzheimer's or Parkinson's, as well as being used in drug discovery and evaluations associated with these conditions.