ABN 53 075 582 740

ASX ANNOUNCEMENT
23 June 2011

PHASE I BNC105 CLINICAL TRIAL PUBLISHED

- Publication in prestigious international cancer journal
- Trial identified dose for current Phase II trials and confirmed both safety profile and mechanism of action
- Publication includes new assay developed to measure BNC105 action in cancer patients

23 June 2011; Adelaide, Australia: Bionomics Limited (ASX:BNO; ADR:BMCY) has announced the publication of the Phase I clinical trial data in the peer-reviewed, international journal *Clinical Cancer Research*, a journal of the American Association for Cancer Research.

The Phase I trial evaluated BNC105 in patients with a range of advanced solid tumours for whom standard therapy had failed or did not exist. The aims of the trial were to identify a dose of BNC105 to be used in follow-up Phase II clinical trials and to obtain evidence of anti-tumour activity consistent with the disruption of tumour blood vessels and inhibition of tubulin polymerization, which result from the action of BNC105.

The trial, which was conducted in Australia under an Investigational New Drug (IND) application from the US Food and Drug Administration, successfully achieved its aims.

A dose of 16mg/m^2 was identified as the recommended dose for further evaluation of BNC105 in Phase II clinical trials. Importantly, a favourable safety profile of BNC105 was observed at this dose level.

Dynamic Contrast Enhanced-MRI was used to assess tumour blood flow following exposure to the drug and a novel tubulin polymerization detection assay was developed which assessed the level of tubulin polymer in peripheral blood mononuclear cells (PBMC) isolated from trial subjects.

The reduction in both tumour blood flow and tubulin polymerization observed following treatment of cancer patients with BNC105 is consistent with the mechanism of action of BNC105. BNC105 is a dual action tumour Vascular Disrupting Agent (VDA) and cancer cytotoxic. It causes tumour blood vessels to collapse and kills cancer cells directly by binding to tubulin.

The observation of tubulin polymerization changes at 16mg/m^2, suggests that BNC105 attains blood exposure levels that are high enough to disrupt its intended molecular target. This is consistent with the very high level of specificity for tumour blood vessels shown by BNC105 in preclinical studies.

Dr Danny Rischin Head of the Department of Medical Oncology at the Peter MacCallum Cancer Centre, lead author on the publication and Principal Investigator of the clinical trial commented “It was a pleasure to lead the first clinical trial of an innovative Australian anti-cancer agent. BNC105 had a favourable toxicity profile at the recommended dose. In this trial we were able to demonstrate for the first time that levels of tubulin polymerization in cells isolated from cancer patients correlated with the dose of a VDA, using an assay developed by Bionomics. The trial results support the ongoing development of BNC105”.

Dr Gabriel Kremmidiotis Bionomics’ VP Research and Development commented “It is very pleasing to have this clinical trial published in such a prestigious journal. *Clinical Cancer Research* is ranked in the top 10% of oncology journals”.

“The journal focuses on publication of innovative clinical studies and places particular emphasis on clinical trials evaluating new treatments, accompanied by research on biomarkers such as in this case tubulin polymerization” he added.

Phase II and I/II studies are currently underway in mesothelioma and renal cancer patients, respectively. Updates on these studies will be provided in Q3 2011.

To view a copy of the abstract please copy the following into your web brower:
clincancerres.aacrjournals.org/content/early/2011/06/18/1078-0432.CCR-11-0937.abstract

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About Bionomics Limited

Bionomics (ASX: BNO) is a leading international biotechnology company which discovers and develops innovative therapeutics for cancer and diseases of the central nervous system. Bionomics has small molecule product development programs in the areas of cancer, anxiety, epilepsy and multiple sclerosis. BNC105, which is undergoing clinical development for the treatment of cancer, is based upon the identification of a novel compound that potently and selectively restricts blood flow within tumours. A clinical program is also underway for the treatment of anxiety disorders and depression based on BNC210 which has recently completed Phase Ib clinical trials. Both compounds offer blockbuster potential if successfully developed.

Bionomics' discovery and development activities are driven by its three technology platforms: Angene®, a drug discovery platform which incorporates a variety of genomics tools to identify and validate novel angiogenesis targets (involved in the formation of new blood vessels). MultiCore® is Bionomics' proprietary, diversity orientated chemistry platform for the discovery of small molecule drugs. ionX® is a set of novel technologies for the identification of drugs targeting ion channels for diseases of the central nervous system. These platforms underpin Bionomics’ established business strategy and Bionomics is committed to securing partners for its key compounds.

For more information about Bionomics, visit www.bionomics.com.au

Factors Affecting Future Performance

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statements. There are a number of important factors that could cause actual results or events to differ materially from those indicated by these forward-looking statements, including risks related to the clinical evaluation of either BNC105 or BNC210, our available funds or existing funding arrangements, a downturn in our customers' markets, our failure to introduce new products or technologies in a timely manner, regulatory changes, risks related to our international operations, our inability to integrate acquired businesses and technologies into our existing business and to our competitive advantages, as well as other factors. Subject to the requirements of any applicable legislation or the listing rules of any stock exchange on which our securities are quoted, we disclaim any intention or obligation to update any forward-looking statements as a result of developments occurring after the date of this press release.