

ASX ANNOUNCEMENT
27 January 2010

BNC105 US Renal Cancer Trial Initiated

- **First three US trial sites now open for enrolment**
- **Up to 12 clinical trial sites planned, with an anticipated 152 patients to be enrolled**
- **Initial data from study anticipated by end 2010**

27 January 2010; Adelaide, Australia: Bionomics Limited (ASX: BNO) today announced that a clinical trial of BNC105 in patients with renal cell carcinoma has been initiated in three clinical sites in the US.

The trial, which is being conducted by the Hoosier Oncology Group, is now open to enrolment at the Baylor Sammons Cancer Centre, Dallas, Texas; Indiana University Melvin and Bren Simon Cancer Centre, Indianapolis; and the Cancer Treatment and Research Centre, University of Texas, San Antonio, Texas.

Up to 12 sites are anticipated to become involved in the trial across the US and a total of 152 patients are anticipated to be enrolled in the trial.

The trial will determine whether BNC105 is effective in the treatment of progressive metastatic renal cell carcinoma, either in combination with or following Afinitor® (also known as Everolimus) treatment in patients who have disease progression following treatment with tyrosine kinase inhibitors such as Sutent® or Nexavar®.

Trial Principal Investigator Dr Thomas E Hutson of the Baylor Sammons Cancer Centre/Texas Oncology commented "The mechanism of action of BNC105 provides an innovative approach to the treatment of solid tumours, including metastatic renal carcinoma, by attacking established tumour vasculature. It is particularly exciting to be conducting a trial which has the potential of creating a new paradigm for the treatment of renal cancer".

Renal cancer accounts for 2-3% of human malignancies and accounts for over 85% of kidney cancers. Every year, approximately 200,000 cases are diagnosed worldwide, with 55,000 people diagnosed in the USA. The five year survival rate for patients with metastatic disease is less than 2%. Kidney cancer is asymptomatic, and in 40% of cases is diagnosed at an advanced stage.

Dr Deborah Rathjen, Bionomics' CEO & Managing Director commented "We are pleased to be working with such an experienced clinical consortium as the Hoosier Oncology Group to conduct this trial across multiple sites throughout the US. Metastatic renal cancer has a poor prognosis and there exists a real need for new therapies despite relatively recent advances in treatment. It is encouraging that a renal cancer patient enrolled in the Phase I study of BNC105 conducted in Australia under an IND application to the US FDA showed clinical benefit".

Dr Rathjen further commented "In addition to the potential clinical benefits of BNC105, we believe that renal cell cancer offers a strong market opportunity for BNC105 if successfully developed. Worldwide sales of Sutent® were US\$847 million in 2008, whilst reported sales of Nexavar® in 2008 were US\$677.8 million. Sales projections for Afinitor®, which gained marketing approval in the US and Europe in 2009 for the treatment of renal cancer, exceed US\$500 million."

Further details of the trial are shown below in the clinical appendix and can also be found at www.clinicaltrials.gov which provides details of all approved clinical trials being conducted in the US.

FOR FURTHER INFORMATION PLEASE CONTACT:

Bionomics Limited

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Clinical Appendix

Study Title: BNC105P in combination with Afinitor® (Everolimus)/following Everolimus for progressive metastatic clear cell renal cell carcinoma

Study Design: This is a trial to evaluate the combination of BNC105 and Everolimus for the therapy of progressive clear cell RCC following prior treatment with Tyrosine Kinase Inhibitor(s) (Arm A). Additionally, patients progressing on Everolimus alone will be offered BNC105, which will provide an opportunity to evaluate the activity of monotherapy with BNC105 (Arm B). Patients will be randomized 1:1 to either Arm A or Arm B of the study. A total of 152 patients are expected to be enrolled in the trial.

Patients administered BNC105 will be treated in repeating 21-day cycles, each cycle consisting of two doses administered one week apart (i.e., on Days 1 and 8). Everolimus is orally administered as a 10 mg tablet once a day. The trial will open in up to 12 U.S. trial sites and will be conducted by the Hoosier Oncology Group. The trial is being run under a U.S. FDA Investigational New Drug application.

Study Summary: The purpose of this study is to determine whether BNC105P in combination with/following Everolimus is effective in the treatment of progressive metastatic renal cell carcinoma following prior tyrosine kinase inhibitors.

Endpoints:

PRIMARY

- Improvement in 6-month Progression Free Survival (PFS) with the addition of BNC105 to Everolimus.

SECONDARY

To determine:

- Response rate with combination therapy compared to everolimus alone.
- PFS with BNC105 alone in patients progressing on everolimus.
- The adverse events of the Everolimus and BNC105 when administered as a combination or sequential regimen.
- Overall survival.

EXPLORATORY

- To determine the correlation of PFS with biomarkers.

About Bionomics Limited

Bionomics (ASX: BNO) 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 based on BNC210 which exhibits strong anxiolytic activity without side effects in preclinical models. 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.

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About the Hoosier Oncology Group

The Hoosier Oncology Group, which is headquartered in Indianapolis, consists of a working association of over 400 dedicated community and research centre physicians and clinical research practitioners across the United States. It has successfully leveraged this network to conduct cancer clinical trials since its creation in 1984.

About BNC105

BNC105 is a Vascular Disruption Agent (VDA) that acts to rapidly shut down the blood supply within a tumour. It thereby "starves" the tumour of the oxygen and nutrients it needs to survive. VDAs have significant clinical potential in the treatment of cancer, as they may potentially be applied across a very wide variety of cancer types, including colon, lung and breast cancers. The market potential for VDAs has been estimated at approximately US\$5 billion annually (ASInsights, 2003).

Factors Affecting Future Performance

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ASX ANNOUNCEMENT
2 February 2010

Positive New BNC210 Data

- **New data shows that BNC210 enhances nerve cell growth in culture neurons, further supporting its potential for antidepressant activity**
- **Supports data demonstrating the antidepressant activity of BNC210 with no evidence of physical dependence in animal models**

2 February 2010; Adelaide, Australia: Bionomics Limited (ASX: BNO) today announced that BNC210 Project Leader Dr Sue O'Connor will give a poster presentation at the Australian Neuroscience Society Annual Conference (ANS 2010) at 12pm today at the Sydney Convention Centre.

The title of the poster presentation is "The anxiolytic compound BNC210 exhibits an antidepressant effect without symptoms of physical dependence".

The data presented expands the evidence of antidepressant activity of BNC210, a novel compound which also displays potent activity in several models of anxiety. Antidepressants have been shown to increase the formation and development of nerve cells in various regions of the brain and to also induce nerve growth in culture. Studies of the effects of BNC210 on nerve cells in culture have shown that it too enhances their growth, consistent with antidepressant activity.

Depression is a common mental disorder that presents with depressed mood, loss of interest or pleasure, feelings of guilt or low self esteem, disturbed sleep or appetite, low energy and poor concentration. Each year an estimated 6% of adult Australians are affected by a depressive illness. According to the World Health Organisation, depression affects an estimated 121 million people worldwide.

The global antidepressant market reached sales of almost US\$11 billion in 2008, with drugs such as Cymbalta [US\$2.7B], Effexor, which is also used for the treatment of generalized anxiety disorder [US\$3.9B], and Lexapro [US\$2.29B] being the primary drug treatments.

The presented data also indicates that BNC210 treatment is not associated with physical dependence, supporting previous research that showed that BNC210 does not cause abuse liability or development of tolerance.

Abrupt cessation of current antidepressant medication may produce symptoms of withdrawal, such as changes in body weight, food intake or body temperature. Such changes signify physical dependence to the drug. These changes were not associated with BNC210 treatment of rats over 14 days and subsequent cessation of treatment when monitored over an 18 day period.

Dr Sue O'Connor commented "The new results provide further support for the evaluation of BNC210 in humans for the treatment of anxiety and provide strong evidence for the potential utility of BNC210 in the treatment of depression".

Further details of the reported studies are shown in the data appendix below and a full copy of the poster is available from www.bionomics.com.au

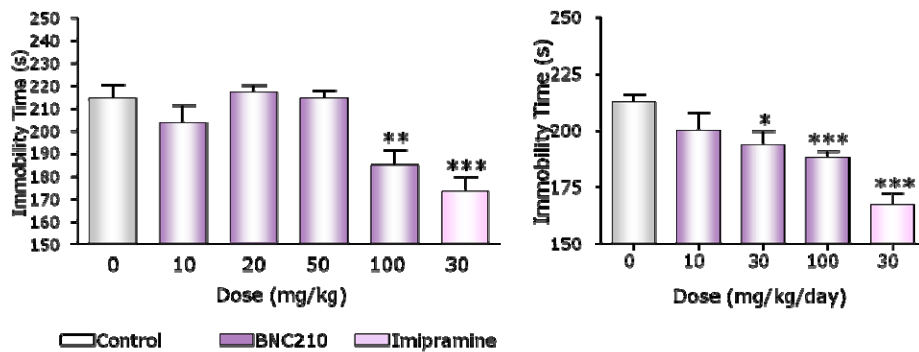
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Data Appendix

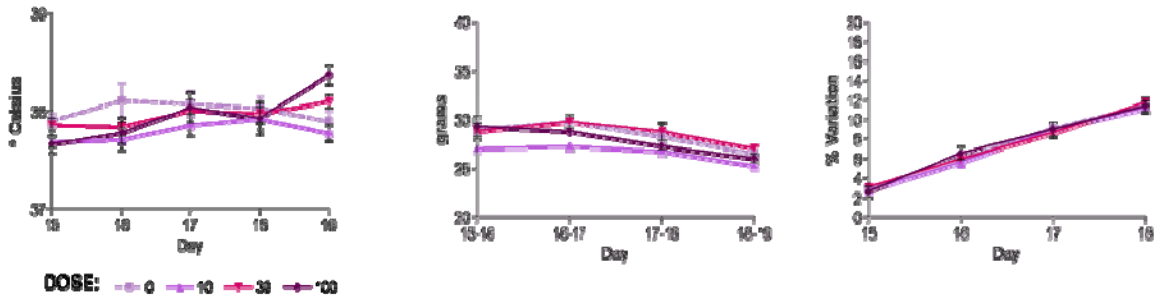
**BNC210 EXHIBITS ANTIDEPRESSANT ACTIVITY
IN THE RAT FORCED SWIM TEST**



ACUTE DOSING: BNC210 was administered to rats at 0, 10, 20, 50 and 100 mg/kg 1 hour prior to exposure to the FST. Significantly reduced immobility time compared to the vehicle treated rats was observed for the 100 mg/kg dose. The lower doses of BNC210 were not active.

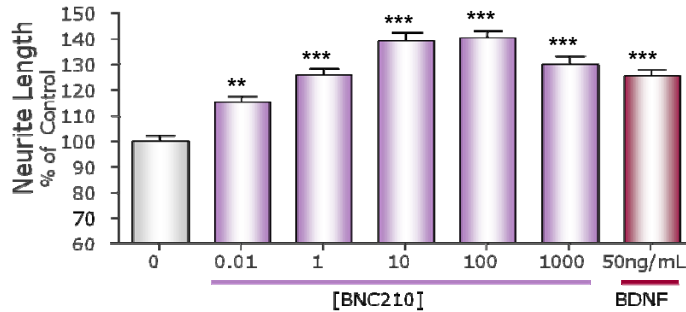
14-DAY REPEAT DOSING: BNC210 was administered to rats at 0, 10, 30 and 100 mg/kg/day for 14 days. Exposure to the FST occurred 1 hour after dosing on day 14. Chronic administration produced augmentation of the antidepressant effect of BNC210 which was demonstrated by a significant reduction in immobility time in rats treated with both 30 and 100 mg/kg/day. *p ≤ 0.05; **p ≤ 0.01; ***p ≤ 0.001; Significantly different to vehicle control; Unpaired T-test.
n=10 rats

BNC210 DOES NOT PRODUCE SIGNS OF WITHDRAWAL FOLLOWING A 14-DAY DOSING PERIOD

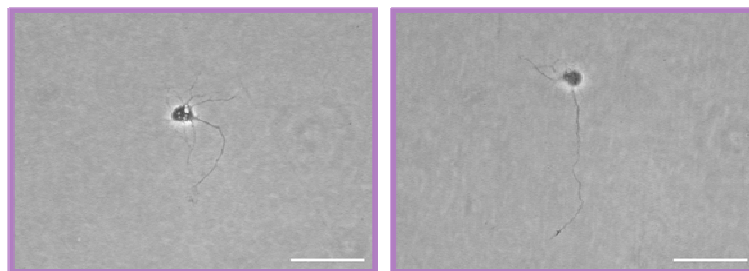


Rats treated chronically with opioids, benzodiazepines or SSRIs display adverse physical effects after non-predicted withdrawal of the drugs. We assessed the potential consequences of abrupt cessation of dosing with BNC210 following 14 days of treatment at 0, 10, 30 and 100 mg/kg/day. Withdrawal of BNC210 treatment: did not produce significant changes in body temperature, weight gain or food consumption compared to the no-drug treatment group during the post-treatment period (5 days). These findings indicate that repeat dosing with BNC210 does not cause the development of physical dependence to the drug and is consistent with its suitability for chronic use. n=10 rats

BNC210 IS A POTENT ENHANCER OF NEURITE OUTGROWTH IN PRIMARY CORTICAL NEURONS



All concentrations tested had a significant effect. The magnitude of response with 1 nM of BNC210 was similar to that produced by BDNF (50 ng/mL), while concentrations in the range of 10 to 1000 nM were more effective than BDNF. The concentrations at which BNC210 exerts its effects in this system correlate with its *in vivo* potency and measured brain concentrations. ANOVA followed by Tukeys Multiple Comparison Test** p≤0.01; *** p≤0.001 significantly different to vehicle control; n~180 cells



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