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ASX ANNOUNCEMENT

16 October 2009

LATEST BNC210 DATA TO BE PRESENTED IN US

New data supports our preclinical research conclusions on the superiority of BNC 210

- **The anxiolytic activity of BNC210 has now been demonstrated in a model of stress-induced anxiety**
- **BNC210 is active in a rat model of depression**
- **Discontinuation of BNC210 treatment does not produce any symptoms of physical dependence**

Adelaide, Australia : Bionomics Limited (ASX: BNO) will present new data at the 2009 Society for Neuroscience Annual Meeting in Chicago, Illinois, demonstrating that the Company's anti-anxiety drug, BNC210, is effective in models of stress-induced anxiety and depression.

The data reported demonstrates that BNC210 reduced anxiety levels of stressed rats to pre-stress or baseline levels. This expansion of the anxiolytic profile of BNC210 confirms the potent activity of BNC210 and further supports its potential in the treatment of both acute and chronic anxiety disorders. Anxiety is a common debilitating condition that is estimated to affect up to 40 million people in the US alone, with a worldwide market value of up to US\$15 billion.

In making this announcement CEO and Managing Director of Bionomics, Dr Deborah Rathjen stated "this new data reinforces the superiority of BNC 210, as identified by our pre-clinical research, over blockbuster anxiety drugs many of which have major drawbacks or side-effects".

Compound Class/Attribute	No Sedation	No Addiction	No Memory Impairment	Fast Acting	No Drug-Drug Interaction*
BNC210	✓	✓	✓	✓	✓
Valium	✗	✗	✗	✓	✓
Prozac	✓	✓	✓	✗	✗

*As determined by effects on liver enzymes

One of the unwanted side effects seen with many drugs acting on the central nervous system, including those used to treat anxiety, is addiction and dependence. Evaluations performed with

BNC210 in rodents demonstrate no sign of dependency following interruption of treatment in rats dosed repeatedly with BNC210 for a period of 14 days.

In addition, BNC210 has shown antidepressant activity in a rat model of depression following both acute treatment and daily dosing for 14 days. Repeat dosing with BNC210 resulted in increased potency. This effect is also seen with marketed anti-depressants, where repeat dosing produces enhanced therapeutic benefit.

“We are delighted to have the opportunity to present these latest findings on our anxiety agent BNC210 at such a high calibre scientific meeting. BNC210 continues to perform well in preclinical testing and we are excited by its potential to help patients with anxiety and depression” said Dr Rathjen.

Dr Rathjen further commented “The work being presented by Dr Sue O’Connor, BNC210 Project Leader, and Dr Emile Andriambelason, Head of Research at Neurofit, at this significant conference is very encouraging and is supportive of the BNC210 clinical trial which is taking place in Adelaide. The BNC210 project is a key part of our drug discovery strategy.”

The 2009 meeting of the Society for Neuroscience is being held in Chicago, Illinois on 17 – 21 October. It is the world’s largest annual gathering of neuroscientists, psychiatrists, neurologists and psychologists and the aim of the meeting is to advance the understanding of the brain and the nervous system and to facilitate the development of improved disease treatments and cures.

Some of the data referred to in this announcement is shown in the Appendix (see below). The full poster presented at Neuroscience can be viewed on Bionomics’ website at www.bionomics.com.au

FOR FURTHER INFORMATION PLEASE CONTACT:

Bionomics Limited

Dr Deborah Rathjen

CEO & Managing Director

+618 8354 6101 / 0418 160 425

drathjen@bionomics.com.au

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. Bionomics’ most advanced program, BNC105 for the treatment of cancer, is based upon the identification of a novel compound that potently and selectively restricts blood flow within tumours. Bionomics’ discovery and development activities are driven by its three technology platforms: Angene®, the company’s angiogenesis target and drug discovery platform, incorporates a variety of genomics tools to identify and validate novel angiogenesis targets. 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.

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

Clinical Appendix

BNC210 REDUCES ANXIETY IN PRE-STRESSED RATS

Rats were exposed to a stressor before being assessed in the Elevated Plus maze. Exposure to 90 seconds of swim stress significantly reduced the number of 'entries into' and 'time spent' on the open arms of the elevated plus maze. This marked effect is indicative of increased levels of anxiety-related behaviour in the rats. Single doses of BNC210 at 1, 10 and 100 mg/kg reversed the swim stress-induced reduction in 'entries into' and 'time spent' on the open arms. The BNC210 activity was dose dependent with the 100 mg/kg dose producing the largest benefit (Figure 1A and 1B).

PRE-STRESSED CONDITIONS

Figure 1A: Time on the Open Arms

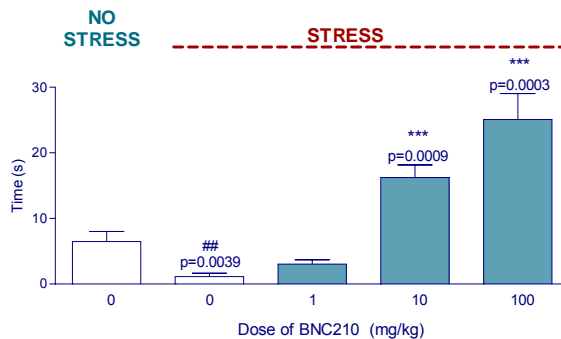
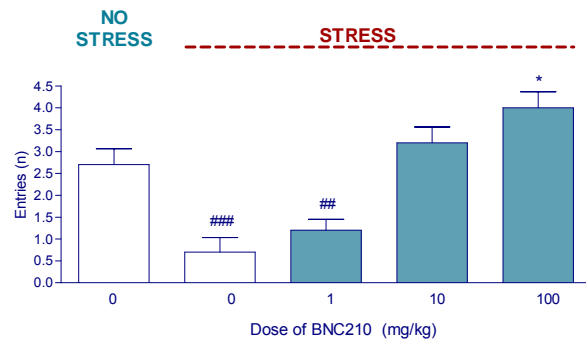


Figure 1B: Entries into the Open Arms



* p<0.05; ** p<0.01; *** p<0.001; Significantly increased compared to unstressed control;

p<0.01; ### p<0.001; Significantly reduced compared to unstressed control. Unpaired T-test

BNC210 EXHIBITS ANTIDEPRESSANT ACTIVITY IN THE RAT FORCED SWIM TEST

The potential activity of BNC210 as an antidepressant was evaluated in the forced swim test. BNC210 was administered to rats at 10, 20, 30 and 100 mg/kg 1 hour prior to exposure to the forced swim test. Significantly reduced immobility time compared to the vehicle treated rats was observed for the 100 mg/kg dose (Figure 2A). The lower doses of BNC210 were not active. Chronic administration of BNC210 for 14 days at 10, 30 and 100 mg/kg/day resulted in a half log increase in potency with the dose of 30 mg/kg also causing a significant reduction in immobility time (Figure 2B). The antidepressant effects of BNC210 in the acute rat FST are augmented following chronic administration for 14 days which is in accord with clinically active antidepressants.

RAT FORCED SWIM TEST

Figure 2A: Acute Dosing

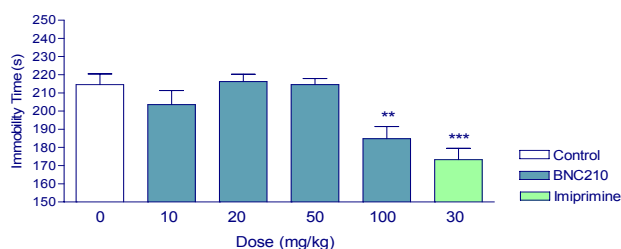
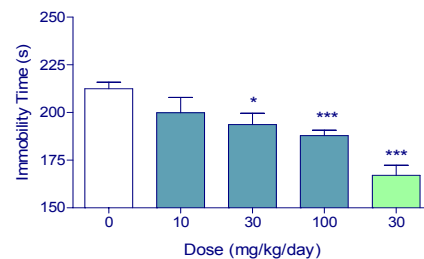


Figure 2B: 14-day Dosing



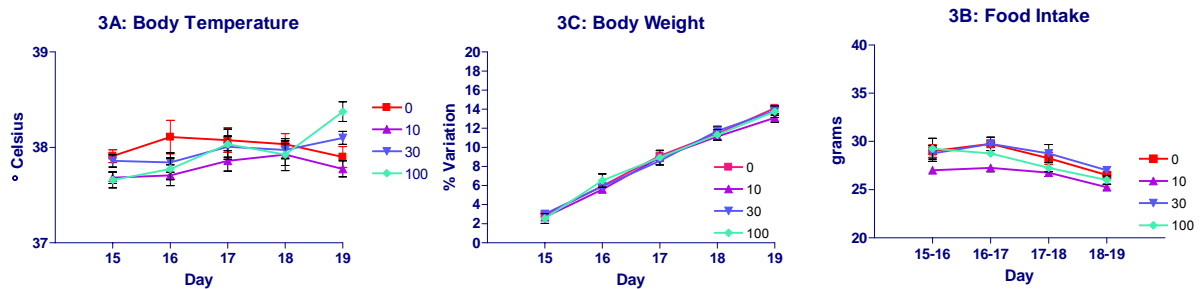
* p<0.05; ** p<0.01; *** p<0.001; Significantly different to vehicle control; Unpaired T-test

Clinical Appendix cont.

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-precipitated 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 changes in rat body temperature, weight gain or food consumption (Figure 3A, 3B and 3C) for the duration of 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.

NON-PRECIPITATED WITHDRAWAL



Factors Affecting Future Performance

This announcement contains "forward-looking" statements within the meaning of the United States' Private Securities Litigation Reform Act of 1995. Any statements contained in this press release that relate to prospective events or developments are deemed to be forward-looking statements. Words such as "believes," "anticipates," "plans," "expects," "projects," "forecasts," "will" and similar expressions are intended to identify forward-looking 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 BNC105 and 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.