Latest BNC210 Data Presented at Major International Conference

- New data on the mode of action of BNC210 to be presented:
  - Establishes molecular link between the neurotrophic properties of BNC210 and its anxiolytic activity.
  - Encouraging support for the clinical development of BNC210 which has been shown to have anti-anxiety and antidepressant effects and potent promotion of neurite outgrowth in primary neurons.

- Clinical data from the successful trial comparing BNC210 to Lorazepam also to be presented:
  - BNC210 had none of the key side effects of Lorazepam.
  - EEG data showed BNC210 brain activity indicates anxiolytic activity without sedation.
  - BNC210 did not produce feelings associated with drugs of abuse and had no adverse effect on mood.

1 September 2011; Adelaide, Australia: The Bionomics Limited (ASX: BNO) anti-anxiety compound BNC210 will be the subject of two poster presentations next week at the 24th annual European College of Neuropsychopharmacology (ECNP) conference in Paris.

The results to be presented at ECNP for the first time describe the molecular link between the neurotrophic effects of BNC210 and its anti-anxiety properties. The results of Bionomics' Phase Ib clinical trial will also be reported at ECNP. This trial compared BNC210 to Lorazepam, a Valium-type drug commonly used to treat anxiety disorders.

BNC210 has been shown to promote neurite outgrowth in primary neurons, an indicator of neurogenic activity and a classic hallmark of antidepressant activity. The effect of BNC210 on neurite outgrowth is more potent than BDNF, one of the body's endogenous neurotrophins (nerve growth factors).

BNC210 intracellular signalling occurs via phospholipase C (PLC) enzymes which are important molecules in the signal transduction pathways used by neurotrophins. The results show that inhibitors of PLC enzymes inhibit BNC210’s promotion of neurite outgrowth as well as its anxiolytic activity in a mouse model of anxiety.

The inhibitors do not inhibit the anxiolytic activity of Diazepam, indicating that the action of the PLC inhibitors is specific to BNC210 signalling and not a general ‘anti-anxiety’ effect.

Dr Deborah Rathjen, Bionomics' CEO & Managing Director commented “It is a very important step to have determined a common molecular link between the anti-anxiety and anti-depressant effects of BNC210. BNC210 shows antidepressant activity in animal models of depression and it also
potently promotes neurite outgrowth, an indication of neurogenic activity and classical hallmark of anti-depressants."

"Marketed anti-depressants usually take several weeks to exert their beneficial effects. An advantage of BNC210 is that it is faster-acting than marketed drugs such as Prozac," she added.

The Phase Ib clinical trial comparing BNC210 to Lorazepam, compared the effects of both drugs on measures of attention, memory, co-ordination, addiction and sedation. This trial also compared the effects of BNC210 and Lorazepam on the brain using electroencephalography (EEG).

An important finding was that EEG data showed for the first time BNC210-related changes in human brain activity indicative of efficacy. These changes were clearly differentiated from those observed following treatment of the subjects with Lorazepam, particularly in activity associated with sedation suggesting that the action of BNC210 occurs in the absence of sedation.

In addition, the trial results confirmed the lack of debilitating side-effects of BNC210 relative to Lorazepam. While Lorazepam adversely affected attention, co-ordination and memory, BNC210 showed no evidence of these side-effects. Lorazepam also induced sedation as measured by the Karolinska Sleepiness Scale and showed evidence of addiction where treatment with Lorazepam was associated with LSD and phenobarbital/alcohol groups on the Addiction Research Centre Inventory 49 (ARCI49) scoring system. Testing of the same subjects following administration of BNC210 showed no evidence of sedation or indicators of addiction.

Dr Deborah Rathjen commented "The results of the clinical trial provide first evidence of BNC210 anxiolytic activity and correlate well with Bionomics' extensive preclinical data and prior clinical trials which also demonstrated BNC210's broad therapeutic window."

“The data presented at ECNP further demonstrates the value of BNC210 as an innovative new generation treatment for anxiety and depression and the results confirm the drug’s potential. Anxiety is a common debilitating condition that affects 19 million patients in the US and anxiety drugs have an estimated world market of up to US$12 billion per annum. These drugs are not ideal and BNC210 represents a potential paradigm shift in the treatment of anxiety which stands out as free of the serious side-effects shown by other drugs,” she added.

Both poster presentations, which are to be given by Dr Sue O'Connor, BNC210 Project Leader and Senior Director, CNS Research, are available on Bionomics' website.

Details of the poster exhibits and their respective ECNP abstracts are shown below.

Sunday September 4th, 2011
Title: Pharmacodynamic Effects of Single Oral Doses of the Novel Anxiolytic Compound BNC210 in Healthy Male Volunteers.
Poster: P.4.a.005

Monday September 5th, 2011
Title: The phospholipase C inhibitors U73122, D609 and Edelfosine inhibit the activity of the novel anxiolytic and antidepressant compound BNC210.
Poster: P.2.h.001

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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

About ECNP

The ECNP Congress is the largest annual meeting on neuropsychopharmacology and mental disorders in Europe. Attended by more than 7,000 psychiatrists, neurologists, psychologists and neuroscience researchers from over 100 different countries, it brings together distinguished scientists and young researchers to discuss the latest achievements and future perspectives in neuropsychopharmacology and related disciplines.

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 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.