

ASX ANNOUNCEMENT
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INDEPENDENT STUDY PROVIDES FURTHER VALIDATION OF BNC210 FOLLOWING RECENT SUCCESS OF PHASE Ib TRIALS

- **Study shows key link between the effectiveness of antidepressants and neurogenesis (the growth of new neurons in the brain)**
- **Encouraging support for the clinical development of BNC210 which has been shown to have anti-anxiety and antidepressant effects and potent enhancement of neurite outgrowth in primary neurons**

10 May 2011, Adelaide, Australia: Bionomics Limited (ASX: BNO) (ADR: BMICY) A recent research study conducted by an international team led by Dr Alexandre Surget of the Norwegian University of Science and Technology has demonstrated a key link between the effectiveness of antidepressants and neurogenesis (the growth of new neurons in the brain).

The research study, which has been published in the journal *Molecular Psychiatry*, describes an animal model of unpredictable chronic mild stress that produces depressed behaviour in mice and demonstrates the importance of neurogenesis for the ability of antidepressant compounds to reverse this depression. Stress is an important cause of anxiety disorders and depressive illness in humans, and the same effects can be seen in mice.

The stressed mice, who displayed overt signs of depression including weight loss and poor coat condition, were found to be producing fewer neurons in a part of the the brain called the dentate gyrus. The researchers found that giving the mice fluoxetine (marketed as Prozac) for five weeks while they were under the stressful conditions overcame the effects of stress and reduced their depression.

The key discovery in this research was that the antidepressant only worked if the dentate gyrus, in the brain, was able to generate new neurons.

The research provides encouraging support for the clinical development of BNC210:

- BNC210 has been shown to have potent enhancement of 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); and
- BNC210 is particularly effective in reducing the symptoms of stress. This has been shown in animal models of heightened stress, which has been induced either pharmacologically or environmentally.

Commenting on the results of the research, Dr Deborah Rathjen, CEO & Managing Director of Bionomics, noted "the findings of this independent research provide encouraging support for the clinical development of BNC210 which has all of the important properties necessary for successful treatment of anxiety and depression. In particular BNC210 works well in

situations involving stress, including in the recent Phase Ib trial where BNC210 reduced panic symptoms and speeded recovery following the administration of the stress and panic-inducing agent CCK”.

“BNC210 shows antidepressant activity in animal models of depression and it also potentially promotes neurite outgrowth, an indication of neurogenic activity. An advantage of BNC210 is that it is faster acting than marketed drugs such as Prozac,” she added.

To review the scientific publication copy the following details into your web browser: nature.com/mp/journal/vaop/ncurrent/full/mp201148a.html

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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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