Company Description:

Bionomics is an international biotechnology company with operations in Australia and Europe focused on the discovery and development of innovative therapeutics for cancer and diseases of the central nervous system. Bionomics has small molecule product development programs in cancer, anxiety, Alzheimer's disease and multiple sclerosis.

BNC105, which is undergoing clinical development to treat cancer, potently and selectively restricts blood flow within tumours. BNC105 offers blockbuster potential if successfully developed. A clinical program is also underway for a new-generation treatment of anxiety disorders based on BNC210 which exhibits efficacy without sedation.

Recently Bionomics entered a collaboration, research and licensing agreement with Ironwood Pharmaceuticals to further develop and commercialise BNC210. Under the terms of this agreement, Bionomics may receive up to US$345m in milestone payments plus royalties on product sales.

Bionomics has a long-standing research collaboration and license agreement with global Pharma company Merck Serono in its Multiple Sclerosis program. Under the terms of this agreement Bionomics can earn up to US$47m in milestone payments and a royalty on product sales for each compound selected in this multi-compound deal. Merck Serono funds all R&D.

Operations:

BNC 210 - Improved treatment for Anxiety Disorders - offers dramatic competitive advantages over existing treatments. It provides excellent relief of anxiety in animal models and so far in human trials and shows no evidence of sedation, memory impairment or tendency to addiction. BNC210 has a rapid onset of action and is suitable for oral dosing. BNC210 appears to act by a completely novel mechanism of action distinct from known drugs and may therefore represent the first in a new class of novel anxiety drugs offering dramatically improved patient benefits. BNC210 is licensed to Ironwood Pharmaceuticals.

BNC105 - VDA for treatment of cancer/tumors - is a novel compound being developed by Bionomics as a Vascular Targeting Agent (VDA) for treatment of cancer. VDAs are drugs that disrupt the blood vessels that nourish tumours. This approach has a number of advantages over classical chemotherapy: occlusion of a single blood vessel can result in the death of thousands of tumour cells, it is applicable to a wide variety of cancers and since the therapy targets the blood vessel rather than the tumour, it is unlikely that mutant tumour cells will emerge that are resistant to the therapy. Importantly, the drug also has no effect on normal blood vessels. BNC105 is now in Phase II trials for three cancer indications: renal cancer, ovarian cancer and mesothelioma.

Kv1.3 - Blockers for inflammatory disorders including Multiple Sclerosis - In this effort to develop a safer way to treat multiple sclerosis Bionomics has partnered with Merck Serono, a leading pharmaceutical company and pioneer of new treatments for multiple sclerosis (MS) including Rebif® (2009 sales US$2.05 billion; projected US$2.24 billion sales in 2010). The effort uses MultiCore® chemistry and ionX® platforms while being fully funded by Merck Serono, including any costs associated with clinical development and commercialisation. In June 2011 the research agreement was extended by at least another year.
Recent Developments:

- Ironwood Pharmaceutical / Bionomics License Agreement to further develop and Commercialise BNC210: up to US$345 million in milestone payments plus royalties on product sales
- Successful Phase Ib clinical trials demonstrated that BNC210 reduced the symptoms of panic attack and had no side-effects commonly associated with marketed drugs to treat anxiety
- Data showing molecular link between neurotrophic effects of BNC210 and its anti-anxiety properties presented at Neuroscience 2011
- BNC105 renal cancer trial progresses – combination with targeted therapy Afinitor safe and well tolerated with patient recruitment continuing
- BNC105 Phase III ovarian cancer trial planned – combination with gemcitabine and carboplatin, the drugs often combined for a standard of care chemotherapy in a number of cancer indications including ovarian
- Merck Serono deal extended

Intellectual Property/Products/Product Development Programs:

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. 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.

Bionomics has over 40 patents or patents pending for novel drugs in development and technology platforms including medicinal chemistry, disease genes associated with epilepsy and cancer, and drug targets associated with angiogenesis.

Significant Contractual Arrangements:

Bionomics recently entered into a collaboration, research and licensing agreement with Ironwood Pharmaceuticals to develop and commercialise BNC210, Bionomics’ investigational anti-anxiety compound. Bionomics has also partnered with Merck Serono for the development and commercialisation of Bionomics’ Kv1.3 ion channel blockers for the treatment of MS.

Future Outlook:

The next 12 months will see a number of important near term valuation catalysts for Bionomics shareholders, including:

- BNC105 clinical trial program: Completion of US renal cancer trial and initiation of ovarian cancer trial
- Alzheimer’s disease program: Drug candidate selected to enter IND enabling studies and clinical development

Presentation by:

Dr Deborah Rathjen
CEO & Managing Director

A seasoned biotech executive with significant experience in research, business development, and licensing. Dr Deborah Rathjen joined Bionomics in June 2000 from Peptech Limited (subsequently named Arana), where she was Manager of Business Development and Licensing. Dr Rathjen was a co-inventor of Peptech’s Tumour Necrosis Factor (TNF) technology and leader of the company’s successful defence of its key TNF patents against legal challenges. This provided Peptech with a strong commercial basis for securing license agreements with BASF, Centocor and other companies with anti-TNF products and for developing their own TNF products.

In 2004/2005, Dr Rathjen identified, negotiated and successfully completed the acquisitions of Iliad Chemicals and Neruofit. The successful integration of these businesses into Bionomics resulted in two drug candidates which are in clinical trials for the treatment of cancer and anxiety. Dr Rathjen recently negotiated a collaboration, research and license agreement with Ironwood Pharmaceuticals for Bionomics’ anti-anxiety drug BNC210 and in 2008 a commercialising deal of Bionomics’ technologies for Multiple sclerosis with Merck Serono. Dr Rathjen is Chairperson of the AusBiotech Board.

Contact Details:

Correspondence Address: 31 Dalgleish Street, Thebarton, South Australia 5031
Phone Number: +61 (0)8 8354 6101
Email Address: drathjen@bionomics.com.au
Website: www.bionomics.com.au

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