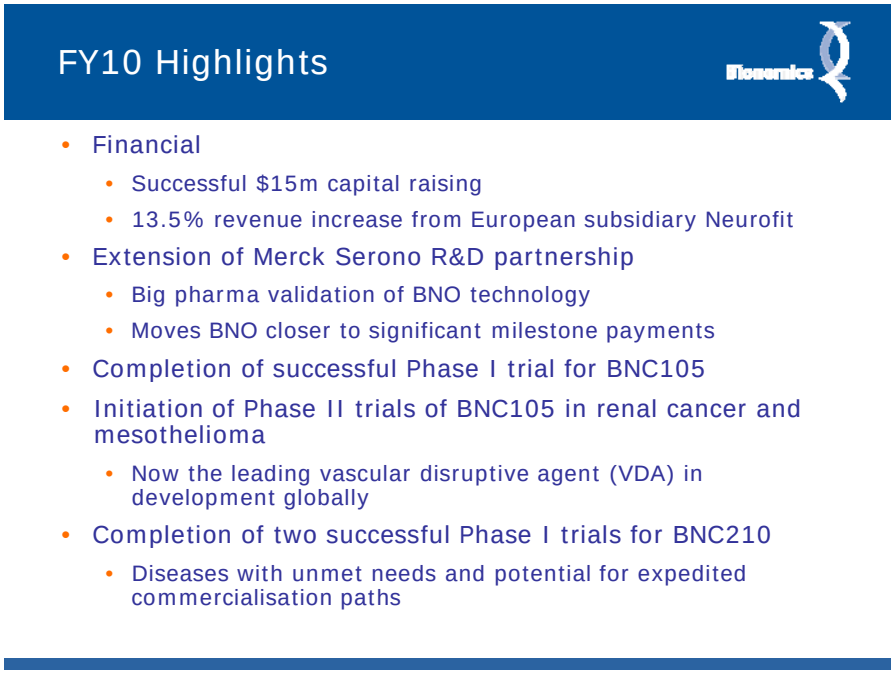
Bionomics Limited

ABN 53 075 582 740

ASX ANNOUNCEMENT
15 October 2010

CEO Presentation to Bionomics' Annual General Meeting 2010

It is a pleasure to warmly welcome you to Bionomics' 2010 AGM. I also offer a special thank you to our interstate shareholders for making the effort to be here today. I am delighted to report on the sweeping progress your Company has made this year in delivering on Bionomics' strategy and advancing our position as a world-class, international clinical development Company, with validation of our technologies through a partnership with global Pharma Company Merck Serono, and a solid financial position.



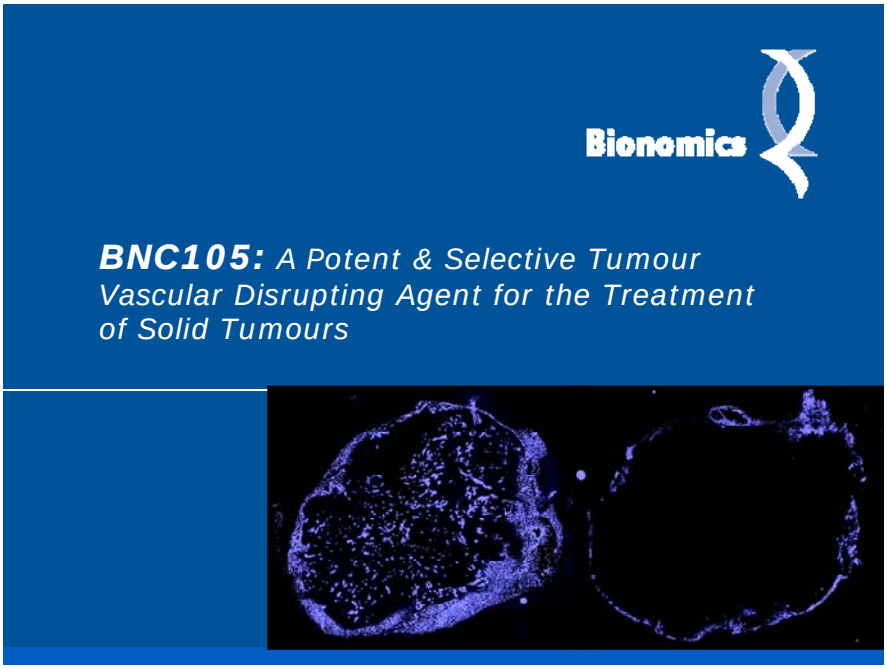
Our overwhelming focus for the 09-10 financial year has been on building value in our drug candidate pipeline:

Our lead assets, anti-cancer agent BNC105 and anti-anxiety and depression drug BNC210 are both proceeding systematically through human trials here in Australia as well as in the US and Europe. As they do so they are attracting significant attention from potential global partners;

Our Multiple Sclerosis program, in partnership with the global Pharma subsidiary of Merck KGaA, Merck Serono, is also progressing strongly, bringing Bionomics closer to achieving significant milestones under our 2008 Development and Licensing Agreement;

And in the background, Bionomics continues to leverage its technology platforms, Multicore®, Angene® and ionX®, to prioritise exciting new pipeline opportunities to bring online. In this respect we are very pleased with our continuing engagement with the CRC for Cancer Therapeutics.

Let me touch on the highlights of our clinical achievements over the last 12 months starting with the BNC105 program.

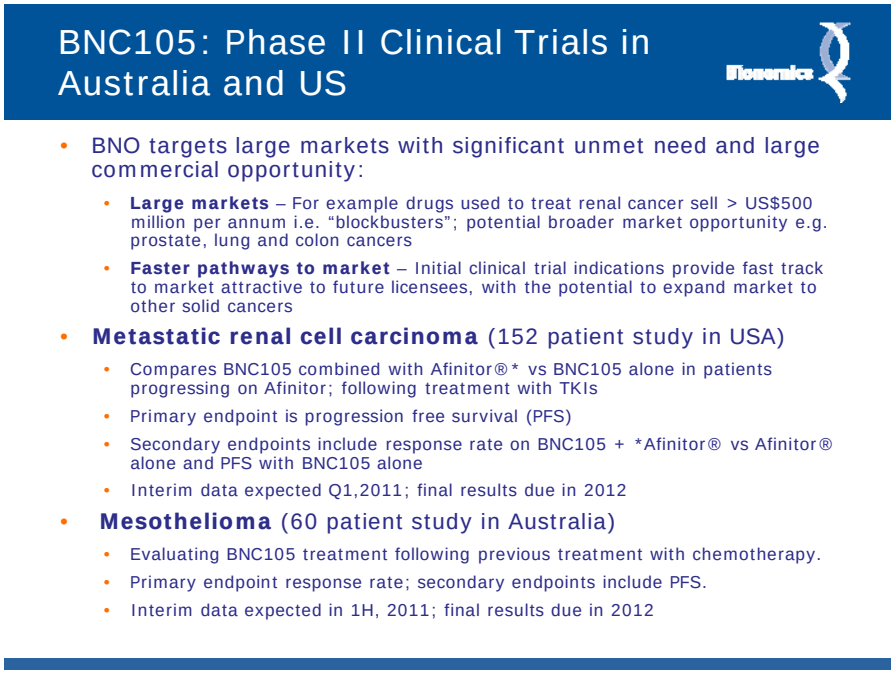


In 2010 BNC105 emerged arguably as the leading Vascular Disrupting Agent (VDA) in development in the world, based on its clear competitive advantages. The drug's 100-fold selectivity for cancer cells over healthy tissue, direct cancer killing action in addition to rapid shutdown of tumour blood supply and safety profile all combine to make our cancer drug candidate, in the words of Bioshares' analysts – "the one to watch over the next 12 months".

It has performed to all our expectations so far: during the year we reported the success of Bionomics' first clinical trial in patients with advanced cancers. There was evidence of VDA activity (confirmed by tumour imaging), no complicating side-effects, and encouragingly, disease progression was halted in a few cases including two patients with mesothelioma and renal cancer.

These two indications have since become our initial choice of target for the next phase of development for BNC105. While BNC105 has the potential to treat all solid tumours, neither renal cancer nor mesothelioma is effectively managed by current treatments over time. Both, therefore, offer opportunity for BNC105 to be fast-tracked by the FDA allowing a seamless transition to Phase III with

significant time saving if Phase II data looks promising. This is an important feature in the commercial positioning of BNC105 for deal making.

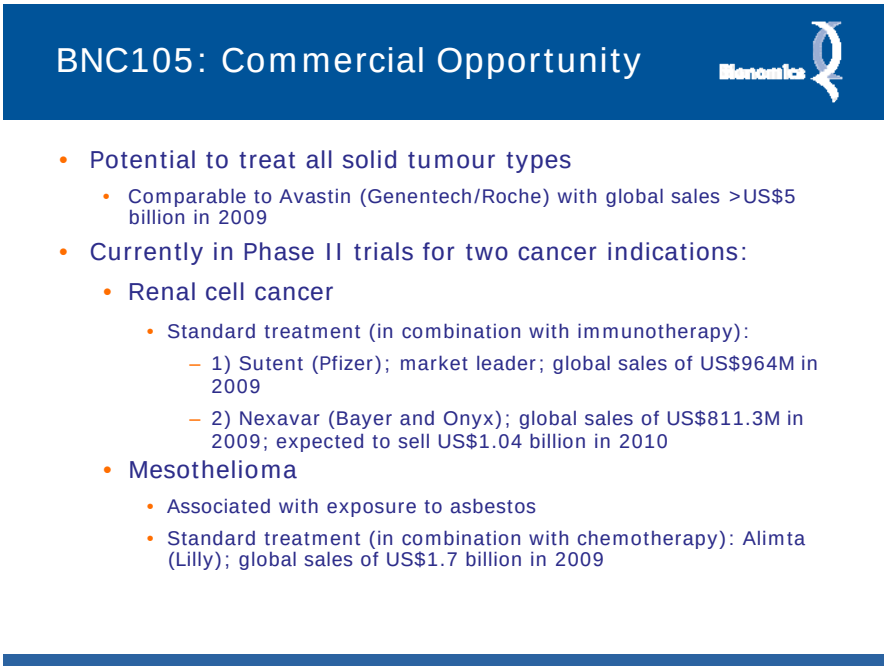


In January 2010, the Phase II clinical trial in patients with metastatic renal cancer was initiated through US-based Hoosier Oncology Group. This was followed in March by the initiation of a second Phase II trial in patients with advanced mesothelioma, the deadly asbestos related cancer. The mesothelioma trial is being conducted here in Australia and is in collaboration with the Australasian Lung Cancer Trials Group and the NHMRC Clinical Trials Centre.

Significant unmet clinical need exists today in the treatment of both renal cancer and mesothelioma. 200,000 cases of renal cancer are diagnosed worldwide each year, 55,000 in the US alone. Many patients are diagnosed when they already have advanced disease and for these patients, the 5 year survival rate is still a very disappointing 2%.

Mesothelioma has virtually no effective treatment after first line chemotherapy and patients typically have a life expectancy of less than 1 year. Mesothelioma usually manifests in patients 20 to 40 years after exposure to asbestos. While the dangers of asbestos exposure are now realised, world asbestos production peaked in the 1980s and the incidence of mesothelioma is expected to increase into the next decade.

The start of our trial of BNC105 in patients with mesothelioma attracted nationwide TV coverage on the 7 network. Footage of the story is available on Bionomics' website. At that time I and other members of the Bionomics team were privileged to meet a mesothelioma sufferer who spoke eloquently about the impact of this awful disease and of the hope offered by potential new treatments such as BNC105. This meeting strengthened our resolve to try to make a positive contribution by doing all we could to fast track BNC105 through clinical trials.



BNC105 has the potential to treat all solid tumour types

To get an idea of the blockbuster sales potential of BNC105, one only has to look at the 2009 global sales of Avastin which exceed US $5 billion. Other hints on the sales potential for BNC105 come from the 2009 global sales of Sutent (for renal cancer) and Alimta (for mesothelioma and lung cancer) which were reported as US$964M and US$1.7B respectively. Many of us recall the battle to have Alimta placed on the Australian PBS for the treatment of mesothelioma with a final positive recommendation in late 2007. It is currently part of the only chemotherapy regime approved for the treatment of mesothelioma and prior to its use the average time from diagnosis to death was 153 days. In BNC105 we hope to make a significant impact on this terrible cancer.

First approved by the FDA in 2004 for the treatment of mesothelioma, the registration path of Alimta provides an indication of how rapid the transition of BNC105 to market could be if data from the current clinical trial is positive. Mesothelioma is an Orphan Drug indication and potential new treatments can receive Fast Track designation by the FDA. As I have already indicated a fast path to market is important to potential licensees of BNC105 and we eagerly await interim data which is anticipated in the first half of 2011 calendar year.

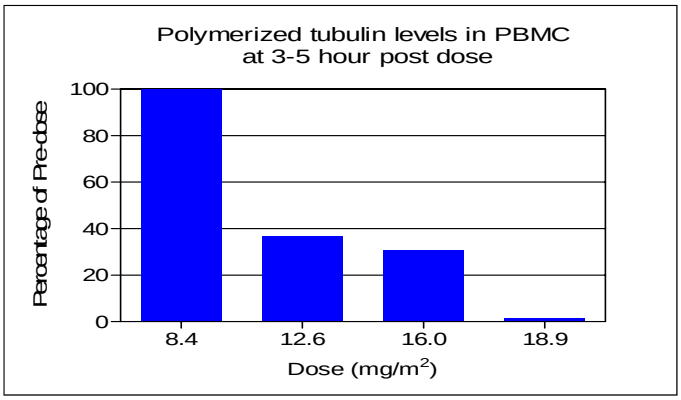
Based on patient recruitment, initial data from our renal cancer trial is anticipated in Q1 next year. These near term milestones put the spotlight on BNC105 as “one of the ones to watch”.

One of the advantages we have in the development of BNC105 is that we are able to monitor BNC105 activity in cancer patients by a simple blood test. BNC105 works by binding tubulin, thereby reducing its level in blood cells. In a clear point of differentiation from our VDA competitors, when BNC105 caused a dose dependent decrease in polymerized tubulin in the blood cells of cancer patients in our Phase I clinical trial this was the first demonstration of “on target” activity by a VDA.

Tubulin is an example of a “biomarker”. Both the FDA and large Pharma companies are placing increasing importance on the use of biomarkers in clinical trials of new cancer drugs. Thus this

important first by BNC105 is significant commercially – for potential licensees – as well as in the regulatory approval process.

Phase I – Conducted in Australia under IND; Confirmed Safety, Evidence of Anti-tumour and VDA Activity



- ***BNC105 binds to tubulin***
- ***First demonstration by a VDA of "on target" activity in cancer patients***

In addition to the demonstrable clinical progress, last year Bionomics filed four new patent applications covering BNC105. These new patent applications included, a method for treating macular degeneration with BNC105, as well as the previously mentioned method for assessing the on-target activity of BNC105 as a biomarker in the clinic. Strengthening our IP position on BNC105 and broadening our IP coverage enhances our commercial position with BNC105.

BNC105 Intellectual Property Position

Independent *novelty* and *freedom-to-operate* searches show that BNC105 is novel and inventive and that Bionomics has full freedom to develop this compound and is not infringing the patent claims of any other party.

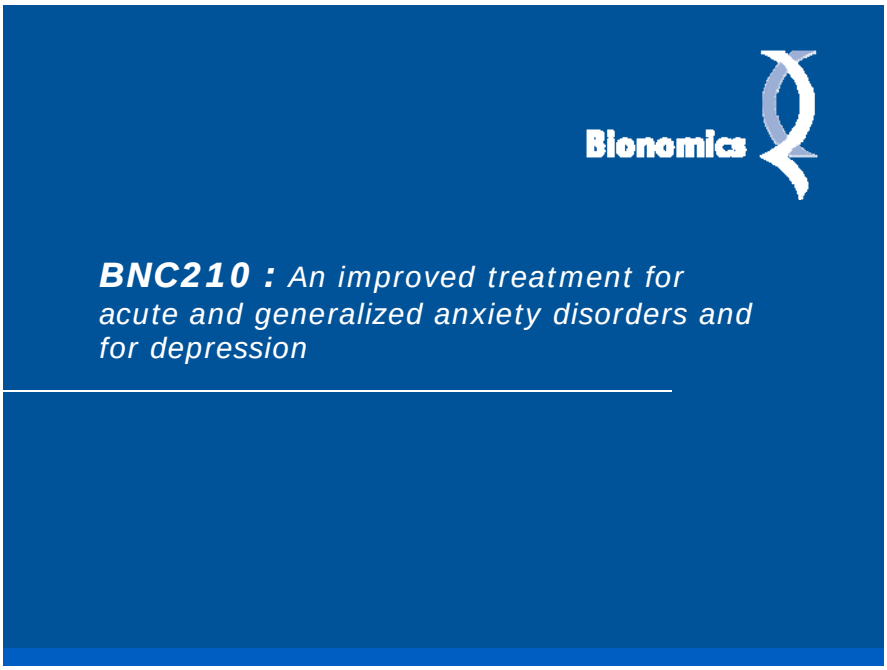
Core IP:

- Patent application filed in February 2006
- Owned by Bionomics
- Filed worldwide

Supporting IP:

- Two patent applications filed in 2005 and 2006
  - Chemical classes related to BNC105
- Four patent applications filed in 2009
  - Methods for treating proliferative diseases with combinations comprising BNC105
  - Method for treating macular degeneration with BNC105
  - Method for assessing the on-target activity of a tubulin targeting agent e.g. as a biomarker in the clinic

I'd like to take a moment to congratulate the BNC105 team and acknowledge their dedication in completing the Phase I trial whilst initiating 2 new clinical trials of BNC105, and for their research efforts which are adding value to the BNC105 licensing package.



Turning now to BNC210, our anti-anxiety and depression program has also made significant strides since our AGM last year with the initiation and completion of two Phase I clinical trials. The first trial showed that BNC210 was safe and well tolerated with no clinically significant side-effects. Blood levels of the drug were reached, sufficient to achieve efficacy when compared with animal trials, suggesting that a once-a-day dose is feasible.

A second trial, completed in June built on this data by showing that BNC210 taken after food achieved up to four times higher levels in the blood than when taken on an empty stomach. This means that less drug is likely to be required to achieve efficacy, widening the therapeutic window and further reducing the risk of side-effects.

Even at the highest doses tested, there were no clinically significant side-effects and this is in marked contrast to currently marketed drugs whose efficacy is counter balanced by adverse effects that include sedation, memory impairment and loss of motor co-ordination.

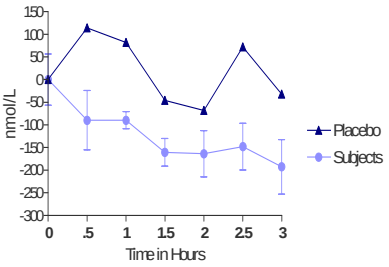
Last month our clinical trial data was presented at the European Congress of Neuropsychopharmacology (ECNP). These trials of BNC210 were conducted by the Pain and Anaesthesia Research Centre (PARC) at the Royal Adelaide Hospital under the guidance of Professor Paul Rolan. I'd like to convey my thanks to the team at PARC for their contribution to this program.

BNC210: Successful Phase Ia clinical trials completed in H1, CY2010

RESULTS:

- BNC210 safe and well tolerated, no clinically significant side-effects eg no sedation or memory loss
- BNC210 achieved blood levels in excess of that required for efficacy in animal trials – food increases blood levels by >4X
- BNC210 treated subjects showed lower stress hormone (cortisol) levels

BNC210 reduced stress hormone levels



Next steps: Phase Ib trials

The next steps for BNC210 are the recently approved concurrent Phase Ib trials to be conducted by Forenap Pharma which are now underway in France.

European Phase Ib Trials: Data Anticipated Q1, CY 2011

Trial 1: Evaluation of the effect of BNC210 on CCK-4 induced panic-like symptoms in healthy young male subjects.

Twenty-two subjects will be enrolled. All subjects will receive two CCK-4 challenges, one with drug and the other with placebo. The doses of BNC210 or placebo will be administered as an oral suspension to subjects following food. CCK-4 will be administered as an intravenous injection.

Panic Attacks: An Important Segment of the Anxiety Market

- Xanax, a benzodiazepine like Valium, was the first drug to be approved for the treatment of:
  - Most prescribed psychistric drug in the US
  - In 2009, 1 prescription of Xanax was issued every second in the US
- A serious health problem:
  - At least 20% of adult Americans, or about 60 million people, will suffer from panic attacks at some point in their lives
  - About 1.7% of adult Americans, or about 3 million people, will have full-blown panic disorder at some time in their lives, with the peak age at which people have their first panic attack being 15-19 years
- Panic attacks may be sudden and often unexpected, may appear to be unprovoked, and are often disabling.

Strategy to partner with Phase I data – process underway

One trial will evaluate the effect of BNC210 on chemically-induced panic in otherwise healthy volunteers. A peptide called CCK will be used to induce anxiety and a brief panic attack. Our scientists have previously demonstrated that BNC210 effectively overcomes heightened anxiety in a rodent model of CCK challenge. This data was presented last month at ECNP by Dr Sue O'Connor on behalf of the joint Bionomics and Neurofit teams who conducted the studies.

Panic is an important segment of the anxiety market. There are some very interesting US statistics on panic attacks. Some 60 million Americans will experience a panic attack at some time in their lives, with a first attack typically experienced in the mid to late teens. Xanax, a benzodiazepine like Valium, was the first drug approved to treat panic attacks around 30 years ago. Xanax is the most frequently prescribed psychiatric drug in the US, with one prescription issued every second.

European Phase Ib Trials: Data Anticipated Q1, CY 2011

Trial 2: Comparison of BNC210 with Lorazepam, a drug closely related to Valium.

Twenty-four healthy male subjects will be recruited for the study. All subjects, at different times in the study, will receive two doses of BNC210 (300mg and 2,000mg) one dose of Lorazepam and one dose of placebo following food.

Strategy to partner with Phase I data – process underway

The second of the concurrent trials will compare BNC210 with Lorazepam, a Valium-like drug. Lorazepam is a benzodiazepine which is known to impair memory and also cause sedation. All currently available data has indicated that BNC210 is free of the major side-effects of many of the currently marketed drugs to treat anxiety and depression and that it is highly potent. Our current trials will, if positive, provide confirmation of this through direct comparison with Lorazepam and they have the prospect of providing initial efficacy signals in an acute anxiety setting.

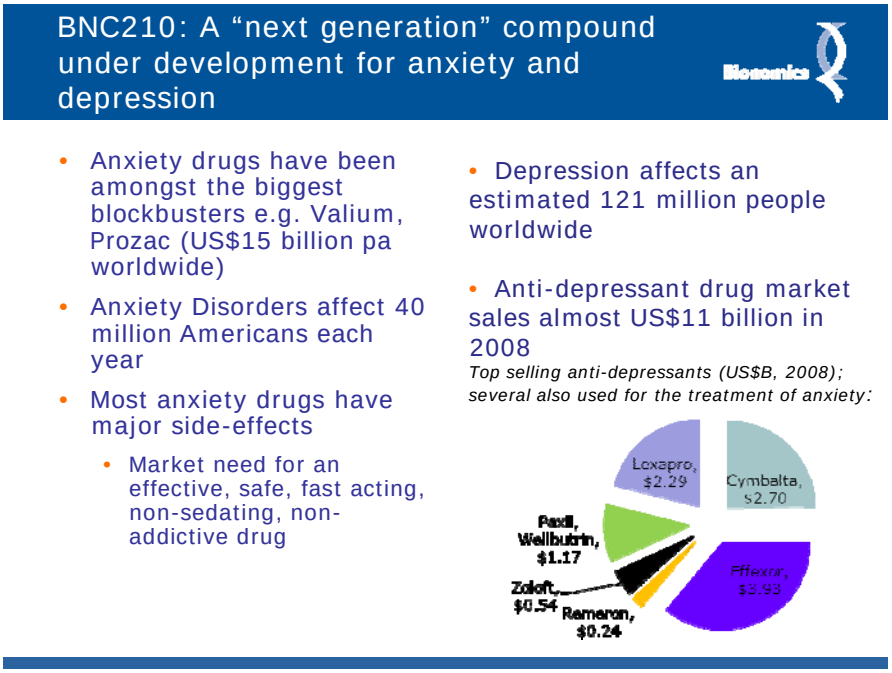
BNC210: Combines the best features of major classes of current treatments for anxiety

DRUG	No Sedation	No Addiction	No Memory Impairment	Fast Acting	No Drug/Drug Interactions	Once-a-Day Dosing
BNC210	✓	✓	✓	✓	✓	✓
Valium	X	X	X	✓	✓	✓
Prozac	✓	✓	✓	X	X	✓
Buspar	X	✓	✓	X	✓	X

Speed is important in our business and I am pleased to indicate the clinical component of the trials is anticipated to be completed by the end of 2010, with data analysis completed in Q1 next year.

As shareholders know our strategy is to partner BNC210 for Phase II development and beyond with a large company. The current trials have been specifically designed with that goal in mind. Whist they are still single dose studies, success in these trials will provide valuable data which will further differentiate BNC210 from currently marketed drugs used to treat anxiety, and, strengthen our negotiations in the partnering process.

The market opportunity for BNC210 in the treatment of anxiety and depression is very significant as my next slide shows.



A very significant corporate achievement this year was the extension of Bionomics' collaboration with Merck Serono. Merck Serono is a leading pharmaceutical company and pioneer of new treatments for Multiple Sclerosis including Rebif, a blockbuster drug which commands approximately 25% of the global market for MS drugs, which was valued last year at US$8 billion.

A number of compounds discovered by Bionomics are currently under testing in a program fully funded by Merck Serono, to which Merck Serono has also allocated significant internal resources.

With the extension of the collaboration Bionomics is closer to receiving the first milestone payments. Under our agreement, for each compound selected, Bionomics can earn up to US$47 million in milestone payments plus a royalty on product sales.

I'd like to congratulate our team here in Adelaide and our team at Neurofit for their solid technical progress in this program over the past 12 months.

Drugs Currently Under Development In Partnership

Kv1.3 blockers

- BNO partnered with Merck Serono, a leading pharmaceutical company and pioneer of new treatments for multiple sclerosis including Rebif® (2009 sales US$2.05 billion; projected US$2.24 billion sales in 2010).
- Potential to lead to a patient friendly MS drug which is:
  - Highly effective with fewer side affects
  - Orally active (not injected)
- A number of compounds currently under testing, fully funded by Merck Serono.
- Significant resource allocation by Merck Serono committed to the collaboration.
- Revenue to BNO per successful compound: up to US$47 million in milestone payments + royalties.
- Annual revenue of MS drugs world wide was US$8 billion in 2009; significant market growth projected to 2025.

MERCK SERONO

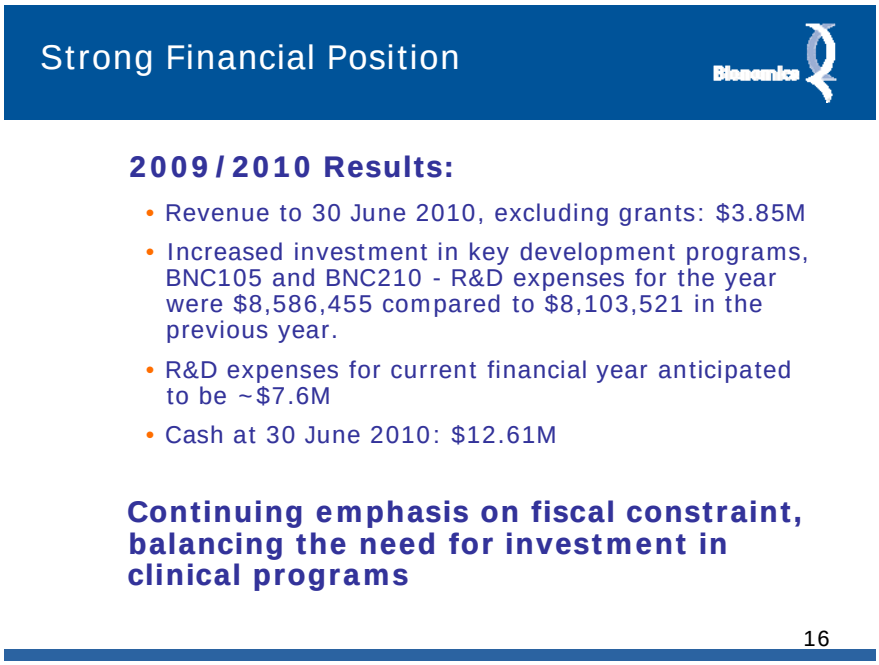
In addition to the tremendous upside of our Merck Serono partnership, this partnership represents a very strong validation of Bionomics strategy to partner multiple drug candidates in a flexible way, and validation of the underlying strength of our fully integrated drug discovery platform. Our integrated drug discovery platform, “our engine room”, allows us to be flexible on the timing of partnerships to extract maximum value for each program. Depending on the program we may choose from the outset to partner in discovery or to partner whilst in clinical development.

On top of this we have well advanced development irons in the fire. We have succeeded in taking 2 new drug candidates with huge potential into clinical trials in 2 years and we now have four clinical trials in progress, including 2 Phase II trials. These are our points of difference – points of difference which make Bionomics a compelling investment proposition and an exciting Company to be a part of.

Bionomics’ Business Model

- Generate and validate multiple drug candidates from proprietary technology platforms
  - Fully integrated drug development program – proprietary technologies for each step in the drug discovery process
- Adopt a flexible approach to extracting maximum value from the most promising candidates
  - Prepared to license out at any stage from discovery to advanced clinical trial
- Have several well advanced development irons in the fire
  - Four clinical trials in progress, including two Phase II
  - Fully funded R&D partnership with Merck Serono on multiple sclerosis

Bionomics is well funded with $12.6 million at 30 June 2010 and the performance of Neurofit was strong as our European subsidiary reaped the benefits of the continuing move to out-sourcing by the big Pharma companies. Over FY10 our investment in R&D, including our key clinical programs was $8,586,455. We expect that our investment in the current year will be less as the “hump” of BNC105 clinical trial start-up costs occurred last financial year.



Outlook:

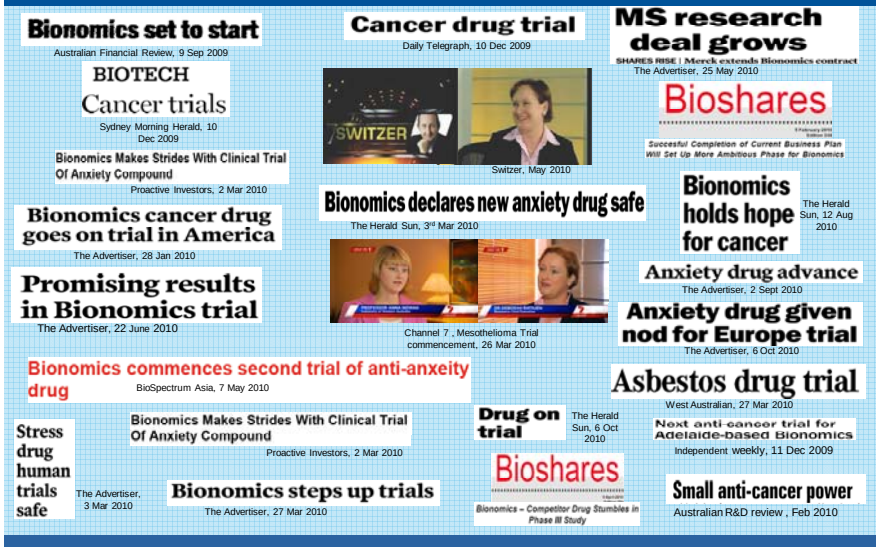
I anticipate that 2011 will be a transformational year for Bionomics as we complete Phase Ib trials of BNC210 and our Phase II BNC105 cancer trials reach interim data points. We have already made good progress in the new financial year towards reaching our clinical trial milestones with the start of the European Phase Ib trials of BNC210. As we move into calendar year 2011 we look forward to interim data from our BNC105 clinical trials in renal cancer patients and patients with mesothelioma. We also look forward to the completion of our current trials of BNC210.

Outlook – 2011 will be a transformational year for Bionomics

Milestone	Timing (CY)
BNC105	
Initiation of Phase II renal cancer trial	Q1/2010 ✓
Initiation of mesothelioma Phase II clinical trial	Q1, 2010 ✓
Presentation of BNC105 clinical data at ASCO	Q2/2010 ✓
Presentation of BNC105 data at AACR	Q2/2010 ✓
Interim Phase II clinical data - renal	Q1/2011
Interim Phase II clinical data - mesothelioma	H1/2011
BNC210	
Results BNC210 Phase Ia trials	Q1 & Q2/2010 ✓
Presentation of BNC210 clinical data at ECNP	Q3/2010 ✓
Approval Phase Ib clinical trials	Q3/2010 ✓
Presentation of BNC210 data at Neuroscience 2010	Q4/2010
Data Phase Ib clinical trials	Q1/2011

I'd like to thank the entire Bionomics team, our collaborators and contractors for playing their part in helping us to reach important goals in 2010. I would also like to sincerely thank the Board for their unwavering support throughout the year. As I have already indicated 2011 is anticipated to be a transformational year for Bionomics with significant clinical trial data becoming available to enable the Company to execute on the next stage of its growth strategy. Thank you to all shareholders for your belief in Bionomics, our business model is now sustainable with the added benefit of a multiplier effect based on an innovative and highly productive platform which can generate numerous drug candidates and two highly competitive and valuable clinical stage assets. I will end my presentation with a slide indicating some of the press coverage of your Company over the past year. Thank you once again.

Bionomics in the News



FOR FURTHER INFORMATION PLEASE CONTACT:

Bionomics Limited
Dr Deborah Rathjen

CEO & Managing Director

+6I8 8354 6I0I / 04I8 I60 425
drathjen@bionomics.com.au

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 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.

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

Factors Affecting Future Performance

This announcement contains "forward-looking" statements within the meaning of the United States' Private Securities Litigation Reform Act of I995. 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 BNCI05 or BNC2I0, 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.