

5 October 2010

Bionomics

Year End	Revenue (A\$m)	PBT* (A\$m)	EPS* (c)	DPS (c)	P/E (x)	Yield (%)
06/09	4.3	(6.2)	(2.5)	0.0	N/A	N/A
06/10	3.4	(7.4)	(2.5)	0.0	N/A	N/A
06/11e	3.8	(6.4)	(2.0)	0.0	N/A	N/A
06/12e	3.8	(6.6)	(2.1)	0.0	N/A	N/A

Note: *PBT and EPS are normalised, excluding goodwill amortisation and exceptional items; revenue is adjusted to exclude interest income, per IFRS. Excludes commercialisation revenue.

Investment summary: BNC210 trials approved

Bionomics is to start two new Phase Ib studies of its anti-anxiety compound BNC210 and has separately confirmed that enrolment into its two Phase II trials of vascular disrupting agent BNC105 is going to plan. Interim data from the BNC105 studies and final results from the two BNC210 studies are expected in early 2011. The investment case effectively hinges on partnering these drugs, most likely on the back of positive results in these studies. Bionomics has a reasonable window in which to do this, with cash sufficient to fund operations for the next two years.

Two Phase Ib studies of BNC210 to commence

Two Phase Ib trials have been approved by French authorities, one evaluating the drug in the CCK-induced anxiety challenge model and the other examining potential effects on the brain using EEG measurements. Both studies will measure cortisol and other biomarkers. Results from a Phase Ia study of BNC210, together with some new preclinical data in the CCK model, were presented recently at the European College on Neuropsychopharmacology (ECNP).

Recruitment into BNC105 studies going well

Bionomics has confirmed that enrolment in its Phase II trials of vascular disrupting agent BNC105 in renal cell carcinoma and mesothelioma is running according to plan. These studies should provide interim data later this year and early next, which is likely to be critical to Bionomics' efforts to partner the drug.

Cash: Funded for two years

With cash of A\$12.6m (net cash of A\$9.3m) as at 30 June 2010, Bionomics is funded for the next two years, providing a reasonable window in which to partner one or both products with interim/final data from the current studies.

Valuation: Valuation of A\$175m based on risk-adjusted NPV

We maintain our A\$175m valuation of Bionomics based on a risk-adjusted net present value of the two key programmes. This is derived from our assessment of the potential economic reward and timelines associated with the successful development of BNC105 and BNC210.

Bionomics is a research client of Edison Investment Research Limited

Price 27c
Market Cap A\$86m

Share price graph



Share details

Code BNO/BMICY
Listing ASX/NASDAQ
Sector Biotech
Shares in issue 318.1m

Price

52 week High 41c Low 26c

Balance Sheet as at 30 June 2010

Debt/Equity (%) N/A
NAV per share (c) 7.8
Net cash (A\$m) 9.3

Business

Bionomics is an Australian biotech company focused on developing small molecule products for cancer, anxiety, epilepsy and multiple sclerosis. Its lead programmes are a VDA (BNC105) and an anxiolytic/anti-depressant compound (BNC210).

Valuation

	2010	2011e	2012e
P/E relative	N/A	N/A	N/A
P/CF	N/A	N/A	N/A
EV/Sales	N/A	N/A	N/A
ROE	N/A	N/A	N/A

Revenues by geography

UK	Europe	US	Other
0%	75%	5%	20%

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Investment summary: Key studies all underway

Company description: CNS/cancer expertise

Bionomics is an Australian biotech company focused on the development of products for the treatment of cancer and CNS (central nervous system) conditions. The company was founded in 1999 and initially conducted research into the genetics of epilepsy, angiogenesis and breast cancer and later evolved into a drug development business. It has two compounds in clinical trials: BNC105, a vascular disrupting agent (in separate Phase II studies for mesothelioma and renal cell carcinoma) and BNC210, for which the mechanism has not been disclosed (in Phase I studies for anxiety). It also has a development partnership with Merck Serono for Kv1.3 inhibitors. The company is based in Thebarton, a suburb of Adelaide, and has a CRO subsidiary in Illkirch, near Strasbourg, France.

Bionomics has raised A\$75m in equity funding to date and completed two acquisitions: in January 2005 it acquired Neurofit Preclinical Research, a French CRO specialising in neurology (€1.25m in cash and shares), and in May 2005 it acquired Iliad Chemicals, a Melbourne-based firm with chemistry expertise (40.9m shares, with potential milestone payment of a further 13.6m shares). Bionomics listed on the ASX in 1999 and also has Level 1 ADR on NASDAQ (ticker BMICY) and has 34 employees.

Valuation

We maintain our A\$175m valuation of Bionomics based on a risk-adjusted net present value of the two key programmes. This is derived from our assessment of the potential economic reward and timelines associated with the successful development of BNC105 and BNC210. The valuation largely excludes the value of milestones (including those potentially receivable from Merck Serono in relation to the Kv1.3 programme) from potential licensing agreements for BNC105 and BNC210.

Sensitivities

Bionomics' investment case rests largely on the ability to partner BNC105 and/or BNC210. The company is subject to the usual risks associated with biotech drug development, including the possibility of unfavourable outcomes in clinical trials, success of competitors and commercial decisions by partners and potential partners. There is significant risk associated with a single product, with BNC105 contributing the bulk of our valuation. The valuation ascribes a relatively low probability to BNC210 because of its earlier stage of development, so there is considerable upside associated with success in development and partnering of this product.

Financials

Results for the financial year to 30 June show cash of A\$12.6m (net cash A\$9.3m). Bionomics generates revenue from licence fees and payments from Merck Serono as well contract research services from Neurofit. Projected R&D expenditures suggest that cash at 30 June 2011 will be c A\$6.3m (more if, as expected, a milestone is received). This suggests Bionomics is funded for the next two years, providing a reasonable window in which to establish a partnership for BNC105 and/or BNC210.

Investment update: Key 105 and 210 studies underway

Bionomics' investment case rests largely on the outcome of four clinical studies now underway: two Phase II studies with the vascular disrupting agent BNC105, and two Phase Ib studies with the anxiety/depression compound BNC 210. Interim data from the BNC105 studies and final results from the BNC210 studies should become available in early 2011 and are likely to be critical to Bionomics' efforts to partner these drugs. The value of any such arrangements is difficult to predict, but in both cases they could if successful deliver a substantial economic return to Bionomics.

Bionomics has other early stage compounds in its R&D pipeline, principally a programme partnered with Merck Serono on Kv1.3 inhibitors. Its pipeline has been generated from three proprietary technology platforms: Angene, an angiogenesis target and drug discovery platform; MultiCore, a proprietary, diversity orientated chemistry platform for the discovery of small molecule drugs; and ionX, a set of novel technologies for the identification of drugs targeting ion channels for diseases of the central nervous system. The current status of R&D activities are summarised in Exhibit 1.

Exhibit 1: R&D pipeline summary

Programme	Indication	Notes
BNC105	metastatic renal cell carcinoma/ mesothelioma/ (Phase II)	152-pt Phase II study of BNC105 in combination with everolimus in second-line mRCC and BNC105 alone in pts progressing on everolimus. Primary endpoint: six month PFS; secondary endpoints are response rate on BNC105+ everolimus; PFS with BNC105 alone; AEs of everolimus and BNC105 in combination or sequential regimen, OS and correlation of PFS with biomarkers. Interim results expected end 2010, with final trial data readout in 2012. 60-pt Phase II study in mesothelioma unresponsive to pemetrexed + cisplatin. Primary endpoint is response rate (modified RECIST) and secondary endpoints are: PFS; six-month PFS; time to treatment failure; OS; symptom control, quality of life and lung function. An interim analysis based on the first 24 patients enrolled (results due H111). Strong interim data may allow resizing study to provide pivotal data. Final results expected in 2012. Phase I data presented at ASCO 2010 ; preclinical data presented at AACR 2010 .
BNC210	Anxiety/depression (Phase Ib)	22-pt Phase Ib CCK challenge study and 24-pt Phase I (EEG) study starting (results expected in Q111). Phase Ia (SAD, MAD and PK/food effects) studies completed.
Kv1.3 inhibitors	Multiple sclerosis/other autoimmune conditions/ preclinical	Partnership with Merck Serono (Merck KGaA) . Up to US\$47m per compound based on successful development and commercialisation plus undisclosed royalties. Collaboration renewed in May 2010. Merck Serono will fund all development activities, including clinical development. Efficacy has been shown in animal models of inflammatory disorders such as Delayed Type Hypersensitivity (DTH) and Experimental Autoimmune Encephalomyelitis (EAE), a model of multiple sclerosis.
BNO69	Angiogenesis/ preclinical	Programme to develop small molecule inhibitors for novel target (p73 RhoGAP) for inhibiting angiogenic processes. BNO69 is over-expressed in endothelial cells. Xenograft models treated with BNO69 gene-silencing molecules showed a >75% reduction in size vs untreated tumours in experiments conducted over 31 days.
GABA _A agonists	Epilepsy/discovery	This discovery programme utilises Bionomics' ionX platform incorporating gene mutations observed in patients with epilepsy.

Source: Edison Investment Research

BNC210 – anxiety model and EEG studies

Bionomics has received approval to start two Phase Ib studies of BNC210, designed to demonstrate efficacy in the CCK (cholecystokinin) challenge model of acute anxiety and, it is hoped, a lack of sedation or memory impairment via use of electroencephalography (EEG). Together with the Phase Ia studies it has already completed (single and multiple ascending dose and food effects), the Phase Ib studies should be able to confirm 300mg of BNC210 (taken with food) as an effective dose for the next stage of development. Both studies should render interim results later this year with final results in Q111.

The CCK challenge study is a two-way crossover study in 22 male subjects, who will receive a single 2,000mg dose of BNC210 or placebo (with food) on separate occasions with CCK. The

primary endpoint will be the panic symptom scales. Secondary endpoints include the STAI (Spielberger State-Trait Anxiety Inventory) and e-VAS (emotional-Visual Analogue Scale); mood as measured by ARCI 49 (Addiction Research Center Inventory) and heart rate. The study will also record blood pressure, serum cortisol and adrenocorticotrophic hormone (ACTH) levels.

The cognition/EEG study is a four-way crossover study in 24 male subjects, who will each receive: 300mg BNC210, 2,000mg of BNC210, 2mg of lorazepam (as a positive control) or placebo. Each subject will receive two doses per assessment period on the four assessment periods, per a pre-defined schedule. The primary endpoint is attention measured by the critical flicker fusion threshold and multiple choice reaction time. Secondary endpoints are: psychomotor speed (digit symbol substitution test), quantitative wake EEG, visuo-motor coordination (peak saccadic velocity), memory (perceptual priming test), mood (e-VAS and ARCI 49) and sleepiness (Karolinska sleepiness scale). The study will also measure biomarkers (ACTH and cortisol levels).

BNC210 is a small molecule with an undisclosed mechanism (involving a “well-known pathway”). Preclinical studies suggest the drug could be effective for anxiety, both acute and chronic (generalised anxiety disorder), including with co-morbid depression (and may also have potential in depression). BNC210 has shown effectiveness in other animal models (including the light-dark box and marble burying), without evidence of dependence¹ following cessation of treatment. It has also shown activity in the rat model of depression, following both acute treatment and daily dosing for 14 days.² Other animal studies involving EEG have shown that BNC210 affects regions of the brain involved in anxiety.

Bionomics recently [presented](#) new preclinical as well as recent clinical data (food effects study) as posters at the European College of Neuropsychopharmacology. The preclinical data was from the rat elevated plus maze in animals pre-treated with BNC210 or diazepam alone and in a CCK-induced anxious state. The study showed BNC210 to be effective in reversing CCK-induced anxiety at doses ≥ 5 mg/kg without sedation. Diazepam was effective at 1mg/kg but was sedative at 3mg/kg. In separate preclinical studies, BNC210 has not shown any evidence of sedation as high as 1,000mg/kg. A food effects study, which was conducted earlier this year, showed that drug exposure (AUC) was four times higher when given to fed rather than fasted subjects.

The profile seen in preclinical and clinical studies to date suggests BNC210 could have a competitive advantage over existing anxiety treatments in terms of speed of onset of action, the absence of sedative, memory or motor impairment and risk of habituation. Current therapies have various side effects associated with their use. Benzodiazepines offer acute relief from anxiety but have sedative, cognitive and motor impairing side-effects and a risk of tolerance and addiction. SSRIs exhibit slow onset of action and are associated with side effects such as early agitation, gastric disturbances, sexual dysfunction and weight gain and can cause unpleasant side-effects on discontinuation (Exhibit 2).

¹ Abrupt cessation of treatment in rats dosed repeatedly with BNC210 for a period of 14 days at 0, 10, 30 and 100mg/kg/day did not produce changes in rat body temperature, weight gain or food consumption for the duration of the post-treatment period (five days).

² BNC210 exhibits antidepressant activity in the rat forced swim test, which was comparable to imipramine (active control). The antidepressant effect increased markedly following 14-days repeated administration, which was also seen with known antidepressants.

Exhibit 2: Competitive profile for anxiety treatments

Class/drug examples	Positives	Negatives	Notes
Benzodiazapines (alprazolam, bromazepam, clazepam, lorazepam, diazepam)	Rapid acting. Suitable for acute anxiety.	Sedation. Memory impairment/confusion. Reduced muscle coordination/balance.	Suitable only for short-term use because of risk of tolerance and habit formation. Generally recommended only for second line use.
Selective serotonin re-uptake inhibitors (paroxetine, escitalopram, sertraline, fluvoxamine)	Lack of sedation or cognitive impairment.	Slow onset of action (several weeks). Sexual dysfunction/weight gain. Discontinuation syndrome.	Various drug-drug interactions (contraindicated with MAOIs). Approved for panic, social anxiety and generalised anxiety in adults (paroxetine is contraindicated for children).
Azapirone (buspirone)	Lack of addiction/dependence/tolerance issues. Not sedative.	Slow onset of action.	Suitable for chronic use.
Serotonin, norepinephrine reuptake inhibitor (duloxetine, venlafaxine)	Lack of addiction/dependence/tolerance issues.	Withdrawal symptoms (venlafaxine).	Venlafaxine is contraindicated in children and adolescents because of risk of suicidal ideation.

Source: Edison Investment Research, literature sources

Anxiety covers a range of disorders (generalised anxiety disorder, panic, social anxiety disorder, post-traumatic stress disorder and obsessive compulsive disorder). It has historically been a large CNS market segment (although recently much reduced by patent expiries) but has seen little innovation in recent years and there are relatively few new molecules in development. Edison has been able to identify only eight novel compounds that are in or approaching Phase II studies or later (this is around half the number for schizophrenia or depression for example). Competing programmes are profiled in Exhibit 3.

Exhibit 3: Competing developments in anxiety

Class	Company	Mechanism	Notes
Lu AA21004	Lundbeck/ Takeda	5-HT ₃ antagonist, 5-HT _{1a} agonist and 5-HT enhancer	457-pt Phase III and 300-pt Phase II in relapse prevention (completed, no results yet). Three Phase III studies completed for depression; two did not reach significance, a third trial showed mixed results.
AZD2327	AstraZeneca	Selective, high affinity enkephalinergic agonist	80-pt Phase II study in anxious major depressive disorder (results due: Feb 2010).
GSK561679	GSK	CRFR1 antagonist	150-pt Phase II study in women with PTSD (results: Dec 2012). Failed a 150-pt Phase II study in depression (details). CRF1 antagonist.
ABIO 08/01	Abiogen	N/A	Phase II studies (no details disclosed).
ADX71149	Addex/J&J	mGluR2 PAM	Planned Phase II studies in Q111. Phase I studies included an anxiety challenge model.
orvepitant	GSK	NK1 antagonist	In Phase II for depression. Possible Phase II for anxiety.
AZD7268	AstraZeneca	enkephalinergic receptor modulator	231-pt Phase II study in major depression completed (no results published yet). Anxiety considered a second indication.
AZD 2327	AstraZeneca	Enkephalinergic modulator	80-pt Phase II study in anxious major depressive disorder (results due: Feb 2010).
ABT 436	Abbott	N/A	Phase I study completed.

Source: Edison Investment Research

BNC 105

Bionomics has confirmed that enrolment into its two Phase II trials of vascular disrupting agent BNC105 is going to plan. This is important because the interim data from these studies (due in Q410/Q111) will be central to Bionomics' licensing efforts for the drug.

The company is running Phase II studies in metastatic renal cell carcinoma (mRCC) and mesothelioma. The mRCC study evaluates BNC105 in combination with, or following, Afinitor (everolimus, Novartis) following treatment with tyrosine kinase inhibitors, while the mesothelioma study evaluates BNC105 as a single agent in second-line treatment after failure of Alimta (pemetrexed, Lilly)/cisplatin. The mRCC and mesothelioma indications, and competing programmes, are profiled in Exhibits 4 and 5.

Exhibit 4: Metastatic renal cell carcinoma (mRCC) profile

Description	Metastasised form of kidney cancer arising in the lining of the proximal convoluted tubules. Patients are usually diagnosed with non-metastatic RCC and undergo nephrectomy before disease usually becomes metastatic after a period of time (several years). Incidence is 210,000 cases/year worldwide (55,000 cases/year in the US and 63,000 in the EU). RCC accounts for c 90% of all kidney cancers. Five year survival rate in metastatic disease <2%.
Current treatments	Standard treatment for mRCC is immunotherapy (IL-2 or IFN-alpha) in combination with a TKI. Two TKIs: Sutent (sunitinib, Pfizer) and Nexavar (sorafenib, Bayer) and two mTOR inhibitors: Afinitor (everolimus, Novartis) and Torisel (temsirolimus, Pfizer) are currently approved. Afinitor is the only drug indicated for second line use. Avastin (bevacizumab, Roche) is approved in combination with IFN-alpha.
Competitive landscape	
Axitinib/ Pfizer	650-pt Phase III study for second line therapy (results: Sept 2010). 447-pt Phase III study vs sorafenib (results: April 2011).
Tivozanib (AV-951)/ AVEO/Kirin	500-pt Phase III study (TIVO-1) vs sorafenib (results: Dec 2011). 272-pt Phase II study (results due: August 2010).
Anyara (nap-tumomab)/ Active Biotech	524-pt Phase II/III study (results: February 2011). Interim data show median survival of 26.2 months (c 2x expected)
Aflibercept/ Sanofi-Aventis	ECOG-sponsored 120-pt Phase II study (results: April 2016).
Foretinib/GSK1363089 XL880/ GSK/Exelixis	71-pt Phase II study (results due: June 2010).
TKI258/ Novartis	81-pt Phase I/II study (results due: June 2010).
AMG 102/ Amgen	61-pt Phase II study (results due: August 2010).
AGS-003/ Argos	50-pt Phase I/II study in combination with sunitinib (results: Feb 2011).
IMA901/ Immatics	Phase III planned, based on positive results in 68-pt Phase II study (published at ASCO 2010).
Regorafenib/ Bayer	41-pt Phase II study (results: December 2010).
Ramucirumab/ Lilly	39-pt Phase II study (results: December 2010).
AMG386/ Amgen	80-pt Phase II study after cytokine failure in combination with sunitinib (results: May 2015).
Revlimid (lenalidomide)/ Celgene	68-pt Phase I/II study (results: October 2012).

Source: Edison Investment Research

Exhibit 5: Mesothelioma profile

Description	Cancer of the mesothelium (the membrane that forms the lining of several body cavities). Most commonly affects the pleura (the outer lining of the lungs and internal chest wall). Usually diagnosed at a late stage of the disease (life expectancy is only 6-12 months from diagnosis). Caused by prior exposure to asbestos. Incidence is 2,200 new cases/year in the US and c 5,000 cases/year in Europe.
Current treatments	Surgery and radiotherapy are used but are usually as a palliative treatment. Alimta (pemetrexed, Lilly) is approved in combination with cisplatin, based on a single study in 456 pts which showed median survival of 12.8m vs 9m for cisplatin alone. No other drugs are indicated for first or second line use.
Competitive landscape	
Zolinza (vorinostat)/ Merck & Co	600-pt Phase III study in second line setting (results: Sept 2011). Filing due in 2012.
Onconase (ranpirnase)/ Alfacell	300-pt Phase III showed a significant improvement in survival in pts who failed one prior chemotherapy regimen, a pre-defined sub-group, but not in all patients. FDA confirms additional study requirement. Updated survival data presented at ASCO 2010.
NGR-hTNF / MolMed	390-pt Phase III trial (NGR015) of NGR-hTNF plus best investigator's choice (BIC) versus placebo plus BIC (BIC includes supportive care alone or combined with one chemotherapeutic agent [either doxorubicin, gemcitabine, or vinorelbine]). Results 57-pt Phase II study presented at ASCO 2010.
MORAb-009/ Eisai	86-pt Phase II study (results: December 2011).
Recentin(cedirininib)/ AstraZeneca	NCI-sponsored 116-pt Phase I/II study of pemetrexed/cisplatin ± cediranib (results: March 2011); 50-pt academic sponsored study.
CBP501/ CanBas	72-pt Phase I/II study of CBP501 + pemetrexed + cisplatin (results: December 2010).
Milataxel/ Taxolog	90-pt Phase II study underway.
belinostat/ TopoTarget/Spectrum	37-pt Phase II completed (no results published). 100-pt Phase I study (results: October 2010).
Afinitor (everolimus)/ Novartis	39-pt Phase II study in pts with Merlin/NF2 loss as biomarker of sensitivity (results: December 2011).
Trovax/ Oxford BioMedica	Investigator-sponsored open-label Phase I/II study of TroVax (MVA gene therapy for 5T4 tumour antigen) in combination with first-line chemotherapy (pemetrexed/cisplatin).
AMG102/ Amgen	55-pt Phase II study in combination pemetrexed/cisplatin (results: October 2012).
Various	Investigator-sponsored studies with single agent and combinations of bortezomib, oxaliplatin, bevacizumab, imatinib and gemcitabine.

Source: Edison Investment Research

BNC105 is the only vascular disrupting agent to have shown a direct anti-tumour effect as a single agent and, with the failure of Novartis/Antisoma's ASA404 in first-line non-small cell lung cancer earlier this year, it has become one of the leading compounds in the class. An updated profile of the VDA competitive space is summarised in Exhibit 6.

Exhibit 6: Vascular disrupting agents: competitive landscape

Product	Company	Development stage/notes
ASA404/ AS1404 (DMXAA/ vadimezan)	Novartis/ Antisoma	900-pt Phase III study ATTRACT-2 in second-line non-small cell lung cancer in combination with docetaxel (interim analysis is due in H2 2010, results due: H111). A Phase III study in first-line NSCLC failed at an interim analysis. Investigator-sponsored 57-pt Phase II study in small cell lung cancer (results: March 2012).
Ombrabulin/ AVE8062	Sanofi-Aventis	300-pt Phase II/III study in advanced-stage soft tissue sarcoma after failure of anthracycline and ifosfamide (filing expected in 2011). 85-pt Phase I study in combination with platinum-taxane doublet in advanced solid tumours (results: April 2011). Two Phase II proof-of-concept trials in preparation for first line NSCLC and second line ovarian cancer (both expected to start in 2011). Other Phase I dose-escalation, PK and safety studies.
Zybrestat (fosbretabulin/ combretastatin/ CA4P)	Oxigene	180-pt Phase II/III (FACT) study with carboplatin/ paclitaxel in anaplastic thyroid cancer (results: early 2011). 63-pt Phase I/II study in primary or secondary liver cancer (results: due September 2010). 60-pt Phase II (FALCON) study with carboplatin, paclitaxel and bevacicumab in chemotherapy-naïve NSCLC (results: H210). Planned investigator-sponsored 36-pt Phase I study in AML and MDS.
Plinabulin/ NPI-2358	Nereus Pharma	180-pt Phase I/II study (ADVANCE) in combination with docetaxel in advanced NSCLC (results: November 2010).
Azixa (MPC- 6827)	Myrexis/EpiCept	68-pt Phase I/II study in recurrent glioblastoma multiforme (results: Jan 2011). 30-pt Phase I/II in combination with carboplatin in recurrent/relapsed GBM (results: Aug 2010).
CYT997	YM Biosciences	35-pt Phase II study in combination with carboplatin and etoposide in relapsed GBM (Phase I results: mid 2010/Phase II 2011).
corlibulin	EpiCept	33-pt Phase I in advanced cancer completed. Phase Ib with other chemotherapy planned.
ABT-751/ E-7010	NCI	88-pt NCI-sponsored Phase II study in refractory neuroblastoma (results: Jan 2012). Phase II studies in NSCLC in combination with taxotere and refractory haematological malignancies terminated. Prior development discontinued by Abbott.

Source: Edison Investment Research

Valuation

We maintain our A\$175m valuation of Bionomics based on a risk-adjusted net present value of the two key programmes. This is derived from our assessment of the probabilities of success and potential economic reward and timelines associated with the successful development.

Exhibit 7: Edison valuation model inputs

Note: Valuation uses net cash as of 30 June 2010.

Product	Indication	Status	Probability of success	Est launch	Est peak market	Potential market value	Est maximum royalty	Est peak sales
BNC105	mesothelioma	Phase II	30%	2013	25%	\$750m	18%	\$278m
BNC105	mRCC	Phase II	30%	2013	10%	\$1,500m	18%	\$281m
BNC105	other solid tumours	Phase I	15%	2014	5%	\$5,000m	18%	\$468m
BNC210	anxiety	Phase I	15%	2014	5%	\$5,000m	12%	\$487m
Kv-1.3	MS/other autoimmune	Preclinical	5%	2015	5%	\$10,000m	12%	\$900m

Source: Edison Investment Research

Sensitivities

Bionomics' business is subject to the risks associated with biotech companies, including the possibility of unfavourable outcomes in clinical trials, success of competitors and commercial decisions by partners and potential partners. The company's ability to partner BNC105 and/or BNC210 on favourable terms is crucial to the investment case and is therefore a key sensitivity.

Financials

Results for the financial year to 30 June 2010 show cash of A\$12.6m (net cash: A\$9.3m).

Bionomics generates revenue from licence fees and payments from Merck Serono as well contract research services from Neurofit. Projected R&D expenditures suggest that cash at 30 June 2011 would be c A\$6.3m (more if, as is expected, a milestone is received in this period). This suggests Bionomics is funded at least for the next two years and therefore has a reasonable window in which to establish a partnership for BNC105 and/or BNC210. Our financial model is shown in Exhibit 8.

Exhibit 8: Financial results and forecasts

Note: Under Australian accounting standards, interest income is treated as a revenue item. For international comparability, we have adjusted financial forecasts to exclude this and include grant income, per IFRS. Interest income is shown separately in the P&L (reported pre-tax profit is equivalent to that shown by the company). No assumption of potential licensing deals is anticipated in the model.

Year end 30 June	A\$ '000s	2008	2009	2010	2011e	2012e
		IFRS	IFRS	IFRS	IFRS	IFRS
PROFIT & LOSS						
Revenue		6,513	4,321	3,396	3,840	3,840
Cost of sales		(213)	(338)	0	0	0
Gross profit		6,300	3,983	3,396	3,840	3,840
EBITDA		(4,058)	(5,628)	(7,163)	(6,083)	(6,084)
Operating profit (before GW and except.)		(4,661)	(6,159)	(7,644)	(6,613)	(6,613)
Intangible amortisation		(479)	(502)	(474)	(500)	(499)
Exceptionals		0	0	0	0	0
Share-based payments		(258)	(242)	(336)	(242)	(241)
Operating profit		(5,398)	(6,903)	(8,454)	(7,355)	(7,353)
Net interest		(313)	4	240	150	(50)
Profit before tax (norm)		(4,975)	(6,156)	(7,404)	(6,463)	(6,663)
Profit before tax (FRS 3)		(5,712)	(6,899)	(8,214)	(7,205)	(7,403)
Tax		359	37	0	0	0
Profit after tax (norm)		(4,616)	(6,119)	(7,404)	(6,463)	(6,663)
Profit after tax (FRS 3)		(5,353)	(6,862)	(8,214)	(7,205)	(7,403)
Average number of shares outstanding (m)		225.3	243.0	300.8	318.1	318.1
EPS - normalised (c)		(2.0)	(2.5)	(2.5)	(2.0)	(2.1)
EPS - FRS 3 (c)		(2.4)	(2.8)	(2.7)	(2.3)	(2.3)
Dividend per share (c)		0.0	0.0	0.0	0.0	0.0
Gross margin (%)		96.7	92.2	100.0	100.0	100.0
EBITDA margin (%)		N/A	N/A	N/A	N/A	N/A
Operating margin (before GW and except.) (%)		N/A	N/A	N/A	N/A	N/A
BALANCE SHEET						
Fixed assets		19,457	18,837	17,618	16,695	15,667
Intangible assets		10,839	10,458	9,711	9,211	8,712
Tangible assets		8,618	8,379	7,908	7,484	6,955
Investments		0	0	0	0	0
Current assets		8,856	5,888	13,896	7,621	1,487
Stocks		79	122	113	128	128
Debtors		2,315	775	847	958	958
Cash		6,280	4,757	12,612	6,302	168
Other		182	232	324	232	232
Current liabilities		(3,051)	(2,791)	(3,236)	(3,465)	(3,465)
Creditors		(2,109)	(1,626)	(2,008)	(2,300)	(2,300)
Other current liabilities		(241)	(109)	(70)	(109)	(109)
Short-term borrowings		(572)	(529)	(627)	(529)	(529)
Long-term liabilities		(3,955)	(3,850)	(3,343)	(3,078)	(3,078)
Long-term borrowings		(3,536)	(3,165)	(2,692)	(2,392)	(2,392)
Other long-term liabilities		(50)	(50)	(50)	(50)	(50)
Net assets		21,307	18,083	24,936	17,773	10,611
CASH FLOW						
Operating cash flow		(6,512)	(4,986)	(7,100)	(5,955)	(6,084)
Net interest		569	287	468	150	(50)
Tax		0	0	0	0	0
Capex		(386)	(107)	(43)	(107)	0
Payment of deferred consideration		0	0	0	0	0
Capitalisation of development costs		0	0	0	0	0
Expenditure on intangibles		0	(4)	(3)	0	0
Acquisitions/disposals		0	0	0	0	0
Financing		103	3,739	14,944	0	0
Dividends		0	0	0	0	0
Net cash flow		(6,226)	(1,070)	8,266	(5,912)	(6,134)
Opening net debt/(cash)		(8,401)	(2,173)	(1,063)	(9,293)	(3,381)
HP finance leases initiated		0	0	0	0	0
Other		(4)	(39)	(37)	0	0
Closing net debt/(cash)		(2,172)	(1,063)	(9,293)	(3,381)	2,753

Source: Edison Investment Research, Bionomics accounts

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