

Bionomics Limited

May 2006

Advancements in Drug Development

Background

Bionomics Limited (Bionomics) is a South-Australian company with an exciting early-stage pipeline of novel drug candidates. The most advanced compound, BNC-105; is an investigational anti-cancer compound targeting the blood vessels that feed tumours. Pre-clinical studies demonstrated that BNC-105 is more effective than more advanced similar drugs, currently in human clinical trials. Three other compounds are in development for the treatment of Multiple Sclerosis, Cancer and Epilepsy/Anxiety.

These novel investigational drugs have exhibited promise in pre-clinical trials and all are targeting billion dollar markets.

In addition to its drug discovery endeavours, the company has licensed two Epilepsy diagnostic tests to three diagnostic companies. For the year ending June 2005, the company received \$571k in license fees and royalties from the diagnostic partnerships.

Also, the company licensed eight gene targets to Genmab Inc, for further development. Genmab specialises in development of therapeutic antibodies. Under the terms of the agreement, the two companies will share equally in the research and development costs and the commercial rights and returns from antibody products they co-develop.

Forthcoming Events

Bionomics aims to take BNC-105 into clinical trials in 2007. Within 24 months, Bionomics expects to have two compounds in Phase I/II Clinical Trials.

Programme	Anticipated Status	Date
Cancer Programme (BNO105):	Drug Candidate Selection	Q1 06
	Preclinical Completed	Q3 07
	Phase I/IIa Initiated	Q4 07
MS Programme:	Lead Candidate Selection	Q2 06
	Preclinical Completed	Q4 07
Anxiety Programme:	Lead Candidate Selection	Q2 06
	Preclinical Completed	Q4 07
Epilepsy Programme:	Lead Candidate Selection	Q2 06
	Preclinical Completed	Q4 07

Conclusion

Bionomics is a solid research and development company. The investigational drugs in development are unique and it is their uniqueness that should allow the company to license them after the completion of Phase I/II Clinical Trials.

The company is currently capitalised at \$31m and is trading at a heavy discount to its Australian peers. The quality of the technology, proven capability to undertake license deals and the blue-sky potential of the technology suggests that undervalued relative to its peers.

Year end 30 June, A\$m	2004A	2005A	2006E	2007E	2008E
Revenue	1.66	2.75	4.53	6.64	6.42
-License Fees & Royalty	0.10	0.57	1.14	2.84	3.19
-Grants	1.43	1.72	2.90	3.25	2.62
Total Expenses	5.23	7.38	9.31	10.53	8.82
-Depr'n & Amort'n	0.52	0.52	0.56	0.53	0.52
-R & D Expense	3.11	4.46	4.68	4.91	5.16
Net Interest Expense	(0.00)	0.00	0.02	0.02	0.00
Net Loss	(3.57)	(4.63)	(4.78)	(3.89)	(2.40)
EPS (diluted) (¢)	(7.26)	(2.96)	(3.04)	(2.46)	(1.50)
Net Op. Cash Flow	(2.98)	(3.33)	(3.53)	(2.67)	(1.33)
Cash Resources	8.70	9.01	5.14	2.08	0.54
Shares on Issue (m)	48.7	154.9	155.7	156.5	157.3

Assumptions on Page 5

Price

\$0.22

Recommendation

Spec Buy

Stock Code ASX:BNO, BNOOA, BNOOB
US OTC: BMICY

www.bionomics.com.au

STOCK SUMMARY

Market Cap	\$32.60m
Ordinary Fully Paid	126.4m
Ordinary Fully Paid (restricted)	28.5m
12 Month Price Range	10¢ - 26¢
Monthly Share Turnover	2.7m
Quoted Shares – BNOOB@ 22¢	31.5m
Quoted Shares – BNOOA@ 50¢	9.8m
Unlisted Options (Various)	11.1m

DIRECTORS

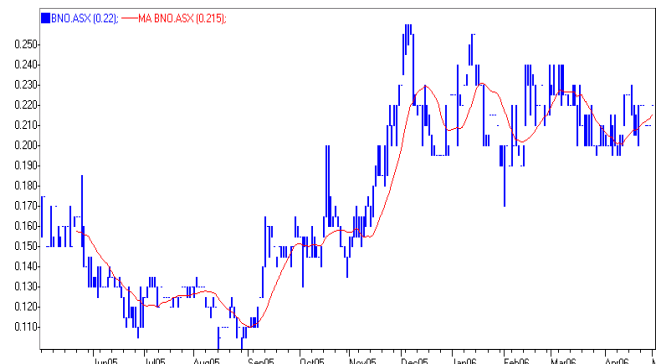
Peter Jonson	Non Executive Chairman
Deborah Rathjen	Chief Executive Officer
George Jessup	Non Executive Director
Christopher Henney	Non Executive Director
George Morstyn	Non Executive Director
Peter Maddern	Non Executive Director

MAJOR SHAREHOLDERS

Start-Up Australia Ventures Pty Ltd	18.41%
Start-Up Australia Ventures Pty Ltd	9.16%
Australian National University	8.46%
Link Traders (Aust) Pty Ltd	5.30%
Bernard Luke Flynn	3.84%
Duncan Mount	3.52%
National Nominees Ltd	3.08%
Citicorp Nominees Pty Ltd	2.78%
Asia Union Investments Pty Ltd	2.26%
Mandalay Capital Pty Ltd	2.19%
Link Traders (Aust) Pty Ltd	1.80%
Boom Australia Pty Ltd	1.71%
Irrewarra Investments Pty Ltd	1.39%

PREVIOUS REPORTS BY INTERSUISSE

Bionomics (Intersuisse) - Mar 05
Bionomics - Strategic Acquisition to Accelerate Drug Discovery and Leverage Capabilities (Intersuisse) - Jun 05
Bionomics – Going for Growth (Rodman & Remshaw / Elixir Intersuisse) - Dec 05



Strategic Direction

The strategic direction developed and implemented by Bionomic's management in 2005 saw the acquisition of Neurofit and Iliad Chemicals, two very complementary assets. The integration of these assets was successful and the synergic benefits previously stated by the company are being delivered. Specifically, the cancer focussed Vascular Disrupting Agents (VDA) and the multiple sclerosis focussed Kv1.3 programmes have progressed more rapidly, than could have happened within Iliad Chemicals and Bionomics' compounds are benefiting from the broad range of assays provided by Neurofit in the multiple sclerosis and anxiety programs.

The company continues to remain realistic about its resources, resource allocation and primary goals. The Genmab partnership is the most recent example of this trait. Bionomics management recognised that the company did not have the resources to progress development of drugs to eight promising gene candidates. The partnership frees up the company's resources, plus provides an undisclosed up-front payment and potential, milestone payments and royalties that are estimated in the range of 5% on sales.

Management retains its focus to develop a company with a \$200m market capitalisation, based on 2 clinical programs and 5 preclinical programs within its core areas of cancer (targeting cancer blood vessels) and Central Nervous System (CNS) disorders (targeting ion channels). At the time the company made this strategic decision it gave itself 3 years to complete the goal. The company has 23 months remaining to complete this goal. The company is currently capitalised at about \$31m, up from the \$16m market cap when its strategy was announced. To achieve this objective, Bionomics plans to direct the majority of resources towards its anti-cancer compound BNC-105 and its multiple sclerosis program focussed on the potassium ion channel Kv1.3.

BNC-105 should be the first compound to enter clinical trials, with Phase I/IIa clinical trials planned for 2007. Indications are that the company will achieve its development milestone goals.

2006 Pipeline Milestones

- ❖ Cancer Program:
 - Drug Candidate Selection Q1 06
- ❖ MS program:
 - Lead Candidate Selection Q2 06
- ❖ Anxiety program:
 - Lead Candidate Selection Q2 06
- ❖ Epilepsy program:
 - Lead Candidate Selection Q2 06

2007 Pipeline Milestones

- ❖ Cancer Program:
 - Preclinical Completed Q3 07
 - Phase I/IIa Initiated Q4 07
- ❖ MS program:
 - Preclinical Completed Q4 07
- ❖ Anxiety program:
 - Preclinical Completed Q4 07
- ❖ Epilepsy program:
 - Preclinical Completed Q4 07

2008 Pipeline Milestones

- ❖ Cancer Program:
 - Further Phase II Initiated Q2-Q4 08
- ❖ MS program:
 - Phase I/IIa Initiated Q4 07
- ❖ Anxiety program:
 - Phase I/IIa Initiated Q4 08
- ❖ Epilepsy program:
 - Phase I/IIa Initiated Q4 08

Pipeline Summary

Bionomics' pharmaceutical development pipeline is early-stage, but solid and it constitutes a unique suite of assets combining novel, proprietary drug targets with proprietary chemistry with the result. The development of novel compounds to treat diseases with an unmet-medical-need, which affect a high proportion of the population, is a strategy that allows for a high level of value creation. Bionomics' strategy is to complete early clinical development, a clear value inflection point, and to participate in further value creation through licensing to a major pharmaceutical partner. Bionomics management team have significant experience in deal making to underpin and execute this strategy.

The reason for the potential higher value of license deals for Bionomics' pipeline reflects the premium attached to drugs underpinned by proprietary chemistry. Novel chemistry provides a higher likelihood of a unique product attracting greater market share than a 'me-too' or second-generation product that will face direct competition from incumbent drugs.

The company has secured a significant licensing deal with the Danish antibody company Genmab A/S (market capitalisation approximately US\$900m) for 8 proprietary angiogenesis targets. This deal will expand its pipeline through the development activities undertaken by Genmab.

The company is generating revenue from royalties upon diagnostics licensed to speciality genetic-screening companies. These licences provide BNO access to a spread of high quality distribution channels, which the company does not have the resources to build itself and provides evidence of the deal making potential of the company's non-core assets.

Product Development Pipeline	
Project	Status
SMEI Diagnostic (Epilepsy)	Market
BFS Diagnostic (Epilepsy)	Market
Antibody targets (Angiogenesis)	Partnered
BNC-105 (Cancer/blockade of blood supply)	Preclinical
Kv1.3 (Multiple Sclerosis)	Chemistry
GABA (Anxiety/Epilepsy)	Chemistry
BNO69 (Cancer/Angiogenesis)	Screening

Source: Bionomics.

Cancer - Vascular Targeting Agents

Background

Tumours cannot grow without a blood supply. Therefore, blood vessels produced by tumours are ideal targets for suppressing tumour growth. Since tumour blood vessels are distant from normal resting blood vessels, they can be selectively destroyed without significantly affecting normal vessels.

Furthermore, the magnitude of the tumour mass supported by single malignant vessels implies that targeting tumour vasculature may result in substantial tumour regression.

Drugs targeting vascular growth are also likely to be used in combination with traditional chemotherapy and radiology therapies. In fact, success in vascular targeting is likely to be dependent on combination with addition of chemotherapy and / or radiotherapy to "mop up" the peripheral rim of malignant cells that receive vascular support from normal tissues, not destroyed by tumour-specific vascular disrupting agents (VDA)

The Technology

The Iliad Chemicals Pty Ltd acquisition provided BNO access to a library of unique VDAs. Preclinical trials indicate that intravenous BNC-105 is highly active and highly selective for tumour-associated blood vessels, without exhibiting toxicity to normal blood vessels.

Tumour Responsiveness to BNC-105 compare to the Control

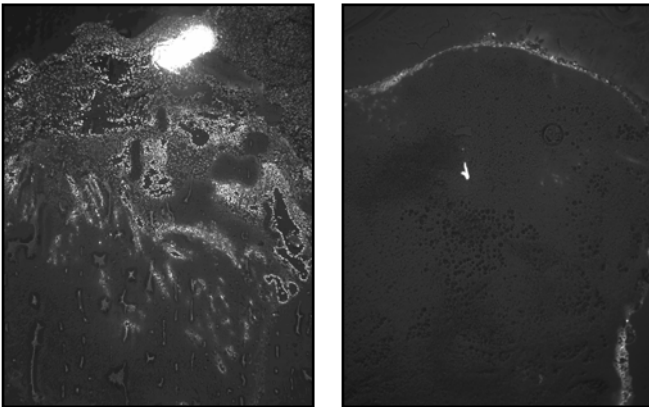


Figure 1: Figure on the left presents the vascular structure and tumour without treatment with BNC-105. Figure on the right presents a tumour 24 hours after treatment with BNC-105, demonstrating no blood circulation in the core of the tumour. The study was conducted in mice bearing breast cancer treated with a single IV injection

Magnification 40X. Source: Bionomics.

Importantly, BNC-105 is 10 fold more active and less toxic than a competitive product currently in later-stage clinical trials. Preclinical studies comparing BNC-105 against CA4P and ABT-751 suggested that BNC-105 has greater efficacy to its competitors.

As noted, VDAs are more effective when used in combination with other anti-cancer agents that target the peripheral rim of malignant tumour. Animal studies with

BNC-105 in combination with 5-FU or doxorubicin not only slowed tumour growth, but prevented tumour growth. Animal studies demonstrated that BNC-105 was capable of necrosing the central core of a tumour, whilst 5-FU and doxorubicin targeted the perimenteral cancer cells.

BNC-105 should enter Phase I/IIa Clinical Trials in 2007.

Mode of Action

BNC105 binds tubulin at the colchicine site. At low concentrations it interferes with microtubule dynamics inhibiting their ability to go through cycles of tubulin polymerisation. Tubulin polymerisation and degradation is an essential process in cell stability and mostly active in the dividing cells. The process of preventing division of tumour cells is a strategy used by the marketed taxane and vinca-binding drugs. Taxanes and vinca alkaloids bind to different sites of the tubulin heterodimer, preventing formation of polymerised tubulin.

Partnerships

The BNC-105 drug discovery programme is not partnered.

Competition

The Fast Track and Orphan Drug designation given by the FDA for OXiGENE's VDA (CA4P) has caused extensive media and industry attention on the VDA class of drugs. Although CA4 studies have reported potentially side-effects, that can be serious. Evidence suggests that the therapeutic benefits were great enough to continue CA4P clinical trials and CA4P is now in Phase III.

An important finding in preclinical studies was that BNC-105 has a higher therapeutic window relative to CA4P and ABT-751. Also, BNC-105 was more potent than CA4P by at least 10 fold. The result is significant as it implies that BNC-105 will hypothetically be more active with fewer side effects.

Comparable compounds in clinical trials to BNC-105 are a class of drugs referred to as small molecule tubulin inhibitors (SMTIs). These are all VTAs. As many of these investigational drugs have a different mode of action to BNC-105, many are likely to be complementary to BNC-105.

Due to the potential promise given to VTA, quite a number are in development. Although, BNC-105 will not have the first mover advantage for this class of drugs, demonstration of substantially greater selectivity and potency evident in preclinical studies may translate to a clinical advantage.

Emerging Small Molecule Tubulin Inhibitors

Name	Description	Status	Company
CA4P	Combretastatin A-4 disodium phosphate	III ^{◇,∅}	Oxigene
ZD6126	Phosphate prodrug of N-acetylcolchicol	II [†] T [‡] S	AstraZeneca
AS1404	Flavonoid	II [◇]	Antisoma
TZT1027	Synthetic derivative of dolastatin 10	II*	Teikoku
ABT-751	Synthetic Heterocycle	II	Abbott
DMXAA	NA	II	Antisoma / Roche
Oxi 4503	Combretastatin A-1 disodium phosphate	I	Oxigene
AVE 8062	Combretastatin A-4 Prodrug	I	Sanofi-Aventis
CYT997	Novel Tubulin Inhibitor	I	Cytopia
SB-743921	KSP inhibitor	I	GSK / Cytokinetics
MPC-6827	Novel Tubulin Inhibitor	I	Myriad
BNC-105	Undisclosed	PC	Bionomics
Various	Various (generally Natural Products)	PC	Various

II = Phase II Clinical Trials, I = Phase I Clinical Trials, PC = Preclinical Studies T = Terminated, S = Suspended, * = Licence agreement with Daiichi Pharma terminated in May 2005. † = In Combination with Oxaliplatin, 5-Fluorouracil and Leucovorin for Metastatic Colorectal Cancer, ‡ = Metastatic Renal Cell Carcinoma, ◇ = Metastatic Lung Cancer, ∅ = Thyroid Cancer

Source: Company Reports and SEC Filings

In well as the SMTI's, a combination of competitive and complementary forces can expect to come from the second-generation taxanes in development. The complementary force will come the possible ability to use BNC-105 in combination with the taxanes because of the different mechanism-of-action. The competitive forces are likely to come from the second-generation taxanes' improved route of administration. In addition, the second-generation taxanes have improved bioavailability and lower toxicity to the incumbent taxanes (i.e. paclitaxel); plus the taxanes are very common, well-understood and familiar therapy.

Selected Emerging Second Generation Taxanes

Name	Description	Status	Company
XRP9881	10-DAB	II ^Δ	Aventis Pharma
XRP6258	10-DAB	I	Aventis Pharma
Ortataxel	14-b-hydroxy-DAB	II	Bayer/Indena
MAC-321	10-deacetyl-7-propanoyl baccatin	II	Wyeth-Ayerst
DJ-927	7-deoxy-9-b-dihydro-9,10,10-acetal taxane	I	Daiichi Pharma

II = Phase II Clinical Trials, I = Phase I Clinical Trials, Δ = Metastatic Breast Cancer

Source: Company Reports and SEC Filings

Market Size and Penetration

The objective of Bionomics' program is to develop a treatment which disrupts blood vessels and [romotes cell death in solid tumours in patients with advanced cancer.

From a medical standpoint there is enormous unmet need for effective cancer therapy of this type. According to statistics from the US, cancer accounts for approximately 600,000 annual deaths (25% of all deaths). Each of these represents a treatment failure. Using US statistics alone, the annual treatment cost for cancer is more than US\$40bn¹. According to the Cancer Council website, cancer is the leading cause of death in Australia, with over 36,000 Australians dying each year. 88,000 new cases are diagnosed each year.

Vascular Disrupting Agents represent a totally new class of anti-cancer agent, applicable across a very wide range of cancer types. Approximately 90% of cancer patients have solid tumours and would therefore be candidates for treatment with a VDA.

The market potential for a product matching Bionomics' product profile can be appreciated from the following statistics: The worldwide market for anti-cancer therapeutics US\$25bn². Of this approximately 93% is for treatment of solid tumours³.

Cytostatic agents (chemotherapy), represents nearly 50% or US\$10bn in cancer-related therapy expenditures. As VDAs and angiogenesis inhibitors may be used as an adjunct to chemotherapy, it would be reasonable to estimate that their market potential is similar to that of chemotherapy. This is consistent with an estimate of US\$12bn developed by Scrip Reports by other means. VDAs are expected to account for roughly half this estimate. Independently, ASInsights have

¹ Angiogenesis: A therapeutic and Market Outlook, Scrip Reports, 2002

² Global Pharmaceutical Outlook, Deutsche Bank 2001; The Cancer Matrix, UBS Warburg, 2001; Angiogenesis: A therapeutic and Market Outlook, Scrip Reports 2002

³ Scrip Report

estimated worldwide sales of VDAs growing very rapidly to US\$600m by 2010⁴.

Combining information from a variety of sources, VDAs may offer a market potential of US\$4-6bn.

Assuming a successful early clinical trial program a licensing deal with a major pharmaceutical company may return in the range of US\$50 to US\$500 million in upfront and milestone fee in addition to a double digit royalty stream, based on the terms of recent oncology licensing deals for products between Phase I and Phase II.

Multiple Sclerosis

Background

Multiple Sclerosis is a degenerative disease of the central nervous system that is characterised by the loss of the myelin sheath around nerves, leaving scar tissue called sclerosis. These damaged areas are also known as plaques or lesions.

When myelin or the nerve fibre is destroyed or damaged, the ability of the nerves to conduct electrical impulses is disrupted, causing the symptoms of MS.

People with MS can expect one of four clinical courses of disease, range between mild to severe.

- Relapsing-Remitting – The most common form of MS at the time of initial diagnosis, affecting 85% of sufferers
- Primary-Progressive – A relatively rare form affecting 10% of sufferers.
- Secondary-Progressive - 50% of people with relapsing-remitting MS developed this form of the disease within 10 years of their initial diagnosis, before treatment. Long-term data are not yet available to demonstrate if secondary progression is significantly delayed by treatment.
- Progressive-Relapsing: A relatively rare form affecting 5% of sufferers.

The Technology

The company is developing several lead series, including khellinone analogues, which show very good selectivity and greater than 100nM potency for Kv1.3.

Bionomics' strategy for developing multiple sclerosis therapeutics is based upon inhibiting the Kv1.3 potassium channel, a key regulator of effector memory T-Cells of the immune system. The Kv1.3 ion channel is highly expressed on effector memory T-Cells, which can destroy myelin via an auto-immune reaction.

Bionomics has identified a number of compounds with potency better than 100nM and good specificity for Kv1.3 over other ion channels.

⁴ ASInsights 2003 Vascular Targeting Agents: Current Status and Strategic Opportunities

The company is currently selecting a lead compound for further optimisation, which should be finalised in Q2 2006. Bionomics plan is to nominate a drug candidate for this program in 2007.

The Kv1.3 ion channel also a development target for other autoimmune diseases including rheumatoid arthritis and for insulin resistant diabetes (a.k.a type 2 diabetes). Similarly there is recent evidence that Kv1.3 is involved in obesity. Kv1.3 blockers may thus have broader clinical application and hence market potential. Multiple Sclerosis represents a good setting for proof of concept.

Mode of Action

The Kv1.3 channel is one of two potassium channels expressed by human T lymphocytes that are involved in proliferation and cytokine secretion⁵.

Bionomics has demonstrated the efficacy of their Kv1.3 inhibitor by inactivating T-Cells and treating mice engineered to simulate human MS.

Partnerships

The Kv1.3 drug discovery programme is not partnered.

Competition

There is no cure for MS and therapeutics are designed to retard progression of the disease. Ultimately for most patients, their condition becomes refractory to drugs.

The FDA approved therapeutics are all based on modulating the immune system to retard the autoimmune response against myelin.

FDA Approved MS Therapeutics

Brand Name	Agent	Company	Annual Global Sales (2005)
Avonex®	Interferon β 1-a	Biogen IDEC	US\$1.5bn
Betaseron®	Interferon β 1-b	Chiron ⁶	€ 867m
Copaxone®	Glatiramer acetate	Teva	US\$1.2bn
Rebif®	Interferon β -1a	Serono	US\$1.3bn
Novantrone®	Mitoxantrone	Serono	US\$70m
Tysabri®	Natalizumab	Biogen IDEC	Relaunched March 2006

Source: Company Reports and SEC Filings

A potential drug based on inhibition of the Kv1.3 ion channel would be a welcome addition to the practitioner's 'medicine bag'. Early indications suggest that prevention of myelin destruction can be controlled by inhibition of the Kv1.3 ion channel. However, the

⁵ The other is the calcium-activated K⁺ channel IKCa1 and not related to Bionomics' research programme

⁶ On February 24, 2006 Schering AG notified Chiron of its intention to exercise its option under the Regulatory Filing, Development and Supply Agreement to purchase or lease all assets used by Chiron in the manufacture for Schering of Betaseron®.

development of a Kv1.3 remains early-stage, and it will be several years before a compound enters the market.

Numerous research programmes for the treatment of multiple sclerosis are underway. There is a widespread and extensive effort directed at controlling the T-cells that attack nerve cells. This is because of the clear unmet-medical need, the inadequacy of existing drugs and the potential market of a novel drug in the market.

In respect of competing Kv1.3 programs, all are early stage, with public information reporting that all compounds are in the discovery stage of development. Nevertheless, it is likely that some companies are undertaking preclinical evaluation extrapolated from the time period and the stage of the discovery data. We base this estimation on the next logical step on the discovery data publicly presented. We conclude that clinical trials on a Kv1.3 inhibitor are not expected from any players for at least 1½ to 2 years. As previously noted Bionomics anticipates nomination of its MS drug candidate in 2007.

Our analysis indicates that BNO's Kv1.3 inhibitor is at par with its competitors in relation to the developmental stage. There is no player in the Kv1.3 inhibitor space that has the clear timing first-mover-advantage.

Kv1.3 Inhibitors in Development

Name	Company	Status
Correolide	Merck	Discovery
Benzamide	Merck	Discovery
ShK and analogues including ShK-L5	Airmid/University of California Irvine	Discovery
Psoralen and analogues including PAP-1	University of California Irvine/University of California Davis	Discovery
Various	Evotec / Lectus Therapeutics	Screening
UK-78282	Evotec	Discovery
Unknown	4SC	Discovery
Genistein	Wroclaw Medical University	Discovery
Kaliotoxin	The Forsyth Institute	Screening
Various	Universities and Academic Institutions	Discovery, Chemistries

Source: Company Reports, Patents and General Reviews

Bionomics appears to have at this time standout technical-first-mover advantage relative to its competitors, based on the identified deficiencies of the competitors. Whilst the clinical benefits of these compounds have not been elucidated, early studies have identified several technical pros and cons. Noteworthy, Bionomics does have a compound that appears to be orally available and highly specific to the Kv1.3 ion channel. These are two advantages that are sought after in a new drug candidate.

Advantages and Disadvantages of Select Kv1.3 Inhibitors in Development

Compounds	Advantages	Disadvantages
Correolides	Orally active in animal models	Complex natural products. Limited selectivity to KV1.3. Toxic
Benzamides	Small compound and simple to manufacture	Moderate Selectivity to KV1.3
ShK-L5	High Selectivity to KV1.3	Polypeptide (Large Molecule) Not orally available Expensive
Psoralens	Potent Moderate selectivity	Potential toxicity
BNOs KV1.3	Orally active in animal models High Selectivity to KV1.3	Toxicity Unknown

Source: Bionomics

However, the main competition will come from the other agents in clinical trials for the treatment of MS. If one class of compound in clinical trials proves to be highly efficacious in treating MS, this class of compound is likely to dominate the market with the other therapeutics being relegated to secondary, complementary or niche applications.

Products in Development for the Treatment of MS

Name	Status	Name	Status
Abatacept	II	Interferon- τ	II
ABT 874	II	IR 208 (NeuroVax™)	II
Alemtuzumab	II	Laquinimod	II
Anapsos	I	Liposome encapsulated mitoxantrone	I
Anti-interferon- γ Ab	I	MBP 8298	II
ATL 1102	I & II	MLN 1202	II
BAY 361677	I	MLN 3897	I
BG 12	II	MM 093	I
BHT 3009	I	MMP-12 inhibitor	I
C 6448	II	MS vaccine (Tovaxin™)	I
CDP 323	I	Peginterferon α -2b	II
Cladribine (Mylinax®)	III	Peptide T	I
CNTO 1275	I	Pirfenidone	II
Cobra venom peptide	NA	R 1295	I
CTLA4-Ig	I	(Skleroneurin™)	PC
Daclizumab	II	CCR2 antagonists	I
E 2007	II	Rituximab	II
Fampridine (Neurelan®)	III	Sargramostim	I
Fingolimod	II & III	Simvastatin	NA

Fludarabine	II	T 0047	II
GEM SP	II	T cell replacement therapy	I
Glatiramer acetate (Copaxone®)	III	Talampanel	NA
Hydroxyzine	II	Temsirrolimus	II
Ibudilast	II	Teriflunomide	III
Immune globulin	II	Tiplimotide	II
Interferon β	III	TV 3606	I
Interferon β -intranasal	I	TV 5010	II
Interferon-α-n3	II	Xaliproden	II
Interferon-β /EMZ 701	II		

Source: PhRMA

Market Size and Penetration

Multiple Sclerosis affects around 350,000 persons in the US, with an incidence of 30 patients per 100,000.

Our analysis suggests that the novel interferon therapies will penetrate the market by cannibalising existing interferon market share, but not expanding market share.

The compounds in development (or recently re-approved) to watch are those that modulate T-Cell activity. Specifically, Tysabri®, T-Cell vaccines and other T-Cell disruptors are compounds that have will potentially cause a paradigm shift in MS therapies. T-Cell modulators are expected to expand the MS therapeutic market; however the issues identified with Tysabri® suggest that T-Cell modulators will not be used in combination with Interferon therapy. The combination of Interferon and Tysabri® resulted in an increase in the cancer, PML. It should be noted that the target of Tysabri® is widely expressed on immune and other cells, unlike the more restricted expression of Kv1.3 referred to above.

As a potential T-Cell disruptor with greater specificity and selectivity, we believe that a Kv1.3 inhibitor would be compound that could grow market share, once it enters the market. We believe an effective T-Cell disruptor, with an acceptable side-effects profile, will generate over US\$1bn per annum in sales two years post launch.

Epilepsy and Anxiety Programs

Background

γ-Aminobutyric acid (GABA) is the principal inhibitory neurotransmitter in the mammalian brain. It acts through 2 classes of receptors, GABA-A receptors that are ligand-operated ion channels and the G-protein-coupled metabotropic GABA-B receptors. Impairment of GABAergic transmission by genetic mutations or application of GABA receptor antagonists induces epileptic seizures, whereas drugs augmenting GABAergic transmission are used for anti-epileptic

therapy⁷. The GABA-A receptor exerts many pleiotropic effects that include sedation, anxiety, cognition and anaesthesia. A significant market therefore exists for selective GABA-A receptor agonists.

The Technology

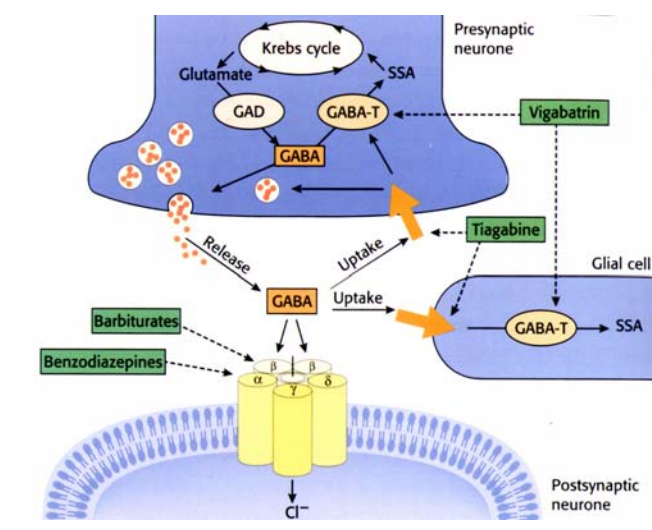
Bionomics is developing oral anxiolytics and anti-epileptics that target the GABA-A receptor. These drugs and the causative gene were identified using the ionX® ion channel discovery platform and the EpiMouse™ transgenic mouse epilepsy drug screening tool.

A lead compound will be selected for further development in Q2 2006. Bionomics aims to complete preclinical development after which the company will seek a licensing partner for this program.

Mode of Action

The GABA-A receptor is an ion channel on nerve cells and mutant GABA-A receptor is associated with some forms of epilepsy.

Diagrammatic Representation of the Mode of Action of GABA and Epilepsy Drugs.



Partnerships

The GABA-A drug discovery programme is not partnered.

Competition

Approximately 17 drugs are marketed, many of which are already off patent. First-line therapies use carbamazepine (Tegretol®), sodium valproate (Depakote® / Valcote®), phenytoin (Dilantin®) or ethosuximide as mono-therapy or in combination. These drugs treat approximately 80% of patients.

If unsuccessful, newer second-line anticonvulsant therapy are employed, such as Neurontin® (gabapentin),

⁷ Recent Advances in Epilepsy Research - Devin Binder - October 2003

Lamictal® (lamotrigine), Keppra® (levetiracetam), Topamax® (topiramate), Trileptal® (oxcarbazepine) and Sabril® (vigabatrin). Other drugs occasionally used in treatment include benzodiazepines and barbiturates. With the appropriate treatment, about 80% of people are treatable, with surgery helping a small number of drug refractory patients.

Top Prescribed Epileptic Drugs in the US for 2004	
Name	Prescription Number
Neurontin (Gabapentin)	15,476,692
Topamax	5,799,851
Lamictal	3,734,346
Dilantin	3,624,606
Phenytoin sodium	3,323,412
Trileptal	2,858,706
Carbamazepine	2,729,492
Gabapentin	2,239,430

Source: www.rxlist.com

Although the majority of patients control their epilepsy effectively through incumbent medications, around 20% (1:10,000) of the epileptic patient population cannot control their seizures. Hence, the condition remains a significant health issue.

In addressing this problem, there is considerable effort in developing new or improved drugs.

Selected Anti-Epileptic Drugs in Later Stage Clinical Trials		
Molecule	Company	Status
(Ampanel) Talampanel*	Ivax, Lilly	II
406725	GSK	I
Becampanel*	Novartis	II
Brivaracetam	UCB	II
E 2007	Eisai	II
Lacosamide	Schwarz	III
NS 1209/SPD 502	NeuroSearch, Shire	II
Retigabine	Valeant	II
Rufinamide*	Eisai, Novartis	NDA
Safinamide	Newron, Pfizer	II
Valrocecide	Teva, Acorda	II

* = Modulate GABA

Source: Company Reports and SEC Filings

Market Size and Penetration

According to the WHO, up to 50m people worldwide, equating to a prevalence of at least 1 per 2,000 of the general population will have epilepsy at any one time.

Epilepsy is forecast to have relatively static growth in terms of prevalence of the disease, with 6m sufferers forecast to be affected by the disease by 2010⁸.

Bionomics' GABA-A receptor antagonist is likely to experience extensive competition from incumbent and the investigational drugs. Without significantly advantageous clinical data, we believe that BNO's GABA-A drug is unlikely to attract billion dollar sales due to the cost / economics of generic drugs and competition in the sector. We believe that BNO's GABA-A receptor inhibitor is likely to be an effective complementary therapy in combination with existing generic drugs.

Cancer - Angiogenesis

Background

Angiogenesis (*Latin: the growth of new blood vessels*) is an important natural process occurring in the body, both in health and in disease.

In the cancerous state, tumour cells produce blood vessels and the body loses control over angiogenesis. Angiogenesis-dependent diseases, particularly metastatic tumours, result when new blood vessels grow excessively. The new vessels provide nutrition to the tumour cells and allow tumour cells to escape into the circulation and lodge in other organs.

Three angiogenesis compounds have received FDA approval and currently on the market. Sutent® and Nexavar® were approved in the last quarter. Avastin® was approved in 2004 and now has blockbuster sales.

The Technology

Bionomics is working to develop small molecule inhibitors of BNO69. This compound was identified using the Angene® discovery technology and Bionomics has identified and filed patents on over 150 novel genes involved in the angiogenesis process.

The company has used siRNA technology, antibodies and other techniques to validate BNO69 as a target for an anti-angiogenesis approach with exciting results. Preliminary studies have demonstrated that BNO69 inhibition blocks the growth of tumours in mice whilst BNO69 has been shown to be specifically over-expressed in human malignant breast cancer biopsies. BNO69 may therefore present significant development potential – both in terms of a small molecule drug target but also a biomarker of malignant breast cancer.

Mode of Action

BNO69 is a RhoGAP protein that regulates angiogenesis by modulating the GTPase protein, which in turn regulates the polymerisation of tubulin. Because of its focus on this well-validated pathway for cancer treatment

⁸ The CNS Market Outlook to 2010 - October 2005 – Business Insights

(tubulin polymerisation) Bionomics has been able to target both established tumour blood vessels as well as new blood vessel formation.

Partnerships

Whilst BNO69 is at this stage unpartnered, eight targets identified from the angiogenesis programme have been licensed to Genmab A/S. Genmab will develop therapeutic antibodies for the treatment of cancer and other angiogenesis-related pathologies to these targets.

The partnership with Genmab is a solid strategic move, as it allows the company to free resources that can be directed towards the VDA /cancer and MS programmes which utilize the company's MultiCore® chemistry capability to create small molecule drugs. Pragmatically, Bionomics does not have the resources to develop drugs to these targets in a timely manner and the attraction of this deal is its upside potential for non-core assets.

Competition

The success of Avastin® has led to the enormous interest in the sector. Roughly 1,000 laboratories around the world today are studying anti-angiogenesis, and more than 300 biopharmaceutical companies have drugs in development.

Selected Angiogenesis inhibitors in phase II/III development

Agent	Mechanism
Angiozyme	Ribozyme
Endostatin	Induction of endothelial cell apoptosis
ZD6474	VEGF-receptor signaling inhibitor
Thalidomide	Unknown
Neovastat	MMP inhibitor
Bevacizumab	Anti-VEGF inhibitor
PI-88	Heparanase Inhibitor
SU6668	VEGF, FGF & PDGF receptor signaling inhibitor
PTK787 / Vatalanib	VEGF-receptor signaling inhibitor

Source: National Cancer Institute

The leading agent in the category, Avastin® (bevacizumab) was approved by the FDA in February 2004 to treat metastatic colon cancer and was the first anti-angiogenesis drug to enter the market.

In January 2006, the FDA approved Sutent® (sunitinib), anti-cancer treatment for patients with gastrointestinal stromal tumours (GIST), a rare stomach cancer, and advanced kidney cancer. Sutent, received a priority review and was approved in less than six months. It is a tyrosine kinase inhibitor working through multiple targets to deprive the retard angiogenesis.

In December 2005, the FDA approved Nexavar® (sorafenib) tablets for the treatment of patients with advanced renal cell carcinoma (RCC). In March 2006, Nexavar® was approved in Europe. Nexavar® inhibits the signaling of VEGFR-2 and PDGFR-β, key receptors

of Vascular Endothelial Growth Factor, or VEGF, and Platelet-Derived Growth Factor, or PDGF. Both receptors play a role in angiogenesis, which is the formation of blood vessels required to support tumour growth.

Market Size and Penetration

Avastin® has been a very successful drug, with Genentech reporting US\$1.1bn in US sales for the year ending December 2005, up from US\$544m in the year ending December 2004. Roche holds the rights to sell Avastin® into countries outside the US, and for the year ending December 2005 reported sales of 1.7bn Swiss Francs.

BNO69 will not have the application first mover advantage. By the time BNO69 reaches the market; the environment will be mature with various angiogenesis inhibitors generating billions of dollars in sales collectively. The advantage that BNO69 will have over other agents in the market will be its mode of action. BNO69 is likely to be the only compound modulating angiogenesis via modulating the GTPase protein, giving the compound potential advantages for refractory patients and in combination with incumbent therapeutics to improve clinical efficiency.

Diagnostics

Genetic-based diagnostics were the first fruit to come from Bionomics' gene screening platform technologies. The company has a number of diagnostics in the pipeline, as well as two diagnostics licensed to distribution partners and generating sales. These two tests can distinguish Benign Familial Seizures (BFS) and Severe Myoclonic Epilepsy of Infants (SMEI)

Benign Familial Seizures Genetic Test

BFS are convulsions that strike newborns and babies in the first year of life. Prognosis for these children is generally very good. However, the severe and unpredictable nature of their convulsions may lead to parental anxiety.

Bionomics BFS genetic test is based upon the identification of mutations in three genes that are associated with the condition.

The BSF diagnostic has been licensed to Laboratory Corporation of America® Holdings

A detailed review of the Bionomics' BSF diagnostic and the BSF market is presented in Bionomics – Going for Growth (Elixir Rodman/Remshaw Intersuisse) November 2005 and Bionomics Limited - Strategic Acquisition to Accelerate Drug Discovery and Leverage Capabilities (Intersuisse) June 2005

Severe Myoclonic Epilepsy of Infants (SMEI) Genetic Test

SMEI in Infants is a severe form of epilepsy that strikes children in their first year of life. It results in frequent seizures and is often associated with mental retardation. Diagnosis is very important because SMEI patients may

actually experience aggravated seizures when treated with common epilepsy medications and aggressive treatment with correct medications may reduce the neurological damage inflicted upon the child until the condition subsides in later life.

Bionomics' SMEI Genetic Test is based upon the discovery that the condition is associated with mutations in the SCN1A gene

The SMEI Genetic Test is under license to Athena Diagnostics, Laboratory Corporation of America® Holdings and Genetic Technologies Limited (ASX:GTG) for distribution worldwide through the Gendia network of clinical laboratories.

A detailed review of the Bionomics' SMEI diagnostic and the SMEI market is presented in Bionomics – Going for Growth (Elixir Rodman/Remshaw Intersuisse) November 2005 and Bionomics Limited (Intersuisse) March 2005

Diagnostic Licensees

The terms of the distribution agreements are commercial-in-confidence, yet an industry average royalty rate would be about 10% on sales. The price of a SMEI and BSF tests is about US\$1500 per assay to the patient.

For the year ending June 2005, the company received \$571k in license fees and royalties from the diagnostic partnerships.

Athena Diagnostics

In September 2004, Athena Diagnostics was granted a license to market Bionomics' SMEI in North America and Japan. Athena has a battery of 12 epilepsy diagnostic tests and a total of 80 genetic-based diagnostic tests.

Genetic Technologies Limited

In November 2004, licensed distribution of the SMEI diagnostic to GTG. Distribution is through GTG worldwide GENDIA network of international genetic testing laboratories in more than 70 countries.

Laboratory Corporation of America® Holdings (LabCorp®)

In November 2005, Bionomics appointed LabCorp to distribute its SMEI and BSF diagnostic tests.

NASDAQ quoted LabCorp is the second largest provider of diagnostic services in the US, with a national network of 33 clinical laboratories and approximately 1,300 patient service centres, LabCorp provides clinical testing services to more than 220,000 physicians, government agencies, managed care organisations, hospitals, clinical labs, and pharmaceutical companies.

Platform Technologies

Bionomics has the capability to progress new compounds from concept to preclinical development.

The tangible innovation driver owned by Bionomics is its three drug discovery platform technologies.

- The MultiCore® platform was acquired through the Iliad acquisition and used to identify BNC-105 and Kv1.3 channel inhibitors targeting cancer and multiple sclerosis; respectively.
- The IonX® platform succeeded in identifying the epilepsy diagnostics and the GABA-A Receptor investigational drug.
- The Angene® drug discovery platform identified eight targets now licensed for antibody-therapeutic development to Genmab and BNO69.

A detailed review of the Bionomics' SMEI diagnostic and the SMEI market is presented in Bionomics – Going for Growth (Elixir Rodman/Remshaw Intersuisse) November 2005 and Bionomics Limited (Intersuisse) March 2005

MultiCore®

MultiCore Chemistry Platform MultiCore is a diversity orientated chemistry platform. Bionomics is able to produce focused compound libraries of complex chemical ring structures. These libraries are thought to have the advantage of being focused on the target of interest and being weighted towards drug-like characteristics. By facilitating combinatorial development around complex drug-like molecules, Bionomics is able to create new patentable molecules that may represent improvements on pre-existing drug leads. These compounds can also be synthesised in fewer steps, thus reducing manufacturing costs.

ionX®

The IonX® platform was used to identify, validate and design diagnostics and therapies for ion channel associated diseases. The technology is a combination of bioinformatics analysis and large-scale mutation screening, identifying over 150 gene variations in the ion channel families; GABA receptor, nicotinic acetylcholine receptor, sodium channels and potassium channels. Disease associated mutations are further validated by electrophysiology (patch clamp) studies and the EpiMouse™ model acquired through the NeuroFit acquisition.

Angene®

Angene® was used to identify and validate new drug targets for angiogenesis, particularly in the areas of cancer and inflammation, as well as the discovery of new compounds.

Using the platform, Bionomics has identified and patented over 600 angiogenesis associated genes. Bionomics has a co-development partnership with Genmab A/S for the development of human antibody therapeutics targeting eight angiogenesis targets.

The Angene® platform was also successful in identifying the BNO69 gene. The company is currently developing therapeutics targeting the BNO69 protein associated with angiogenesis.

Partnerships

Drug Development Partnerships

Genmab A/S

In March 2002 Bionomics provided Genmab A/S the rights to develop therapeutic antibodies to eight angiogenesis targets.

Under the terms of the agreement, the two companies will share equally in the research and development costs and the commercial rights and returns from antibody products they co-develop. The details of the deal are undisclosed.

Drug Discovery and Research Partnerships

PerkinElmer Inc.

Bionomics and PerkinElmer collaborate in the evaluation and optimisation of new ion channel reagents through use of the ImageTrak, PerkinElmer's kinetic cellular screening platform. The ImageTrak has been incorporated into Bionomics' ionX® drug discovery program for epilepsy and anxiety.

Bionomics will also serve as a reference site for PerkinElmer's cellular screening platforms in the Asian market.

Walter and Eliza Hall Institute (WEHI)

The WEHI collaboration brings drug discovery collaborations, specifically through the Iliad assets.

Louisiana State University

The Health Sciences Center is also part of the Louisiana Gene Therapy Research Consortium, which began operations in 2000. The Consortium, has developed a gene therapy delivery system that is highly efficient against solid tumours. Bionomics and the LSU have begun a collaborative study of Bionomics' proprietary BNO69 gene, inhibition of which shows promise for treating cancer.

Howard Florey Institute, Melbourne

The Howard Florey Institute is funded to study the function of isolated epilepsy genes in cell systems, which provide Bionomics with important functional genomics information.

Women's & Children's Hospital - The Department of Cytogenetics and Molecular Genetics

The department was involved in the Human Genome Project, and has mapped and isolated a number of human disease genes, including several concerned with epilepsy and mental retardation.

University of Melbourne

The Epilepsy Program at the University of Melbourne is integrated with the clinical comprehensive program of the Austin & Repatriation Medical Centre.

Board and Management

Board

Bionomics Board has previously proven experience and is detailed in Intersuisse's report on Bionomics Limited dated March 2005.

In summary, Christopher Henney (non-executive director) has founded and grown companies of the calibre of Structural GenomiX Inc, ICOS Corp, Dendreon and Immunex.

George Morstyn (non-executive director) was the former Senior Vice President of Development and Chief Medical Officer of Amgen Inc, the world's largest biotechnology company.

Deborah Rathjen (CEO and managing director) was the Business Development Manager of Peptech where she invented Peptech's TNF technology and formulated its TNF patent defence and licensing strategy, in addition to commercialising other IP assets which include a drug delivery system, a product now incorporated into marketed anti-aging creams and an immune modulating drug.

George Jessup (non-executive director) is joint managing partner of Start-up Australia Pty, one of Australia's best-known life sciences venture capital firms.

Peter Maddern (non-executive director) is the MD of Palmerston Projects Pty Ltd.

Chairman P Jonson was a former chief economist with the Reserve Bank of Australia,

Management

Dr Deborah Rathjen CEO and Managing Director (see above)

Mr Stephen Birrell (CFO and Company Secretary) has over 20 years experience in commercial management, financial, treasury and company secretarial roles in a variety of industry sectors including food, clothing, cosmetics, accounting and financial services with local, national and international firms. In these roles Mr Birrell gained experience with high growth companies and mergers and acquisitions.

Alex Szabo was appointed Bionomics' Vice President of Business Development in January 2005. Prior to joining the company was successively Vice President of Business Development for Cerylid Biosciences and for Starpharma. Before that, Dr. Szabo was Vice President of Marketing at Stratagene (USA), where he had global responsibility for marketing and business development activities. Dr. Szabo had previous positions with Affymetrix, Beckman-Coulter and Pharmacia Biotech.

Dr Gabriel Kremmidiotis BSc (Hons), PhD (Vice President Cancer Research). Dr Kremmidiotis is a founding scientist of Bionomics and has been responsible for the development of Bionomics' cancer

biology platform Angene®. Formerly Senior Medical Scientist at the Department of Cytogenetics & Molecular Genetics at the Women's & Children's Hospital in Adelaide, Dr Kremmiotis has several patent inventions on breast cancer tumour suppressor genes, including Bionomics' BNO64 and BNO1 genes as well as other tumour suppressor genes.

Dr Bernard Flynn (VP Chemistry) is a distinguished Australian chemist that has received a number of awards for his contribution to medicinal chemistry and is also a successful business executive. Dr Flynn is the creator of the Multicore® chemistry and was the CEO of Iliad Chemicals, prior to its acquisition by Bionomics. Dr Flynn was the first Senior Lecturer appointed to teach the first specialist medicinal chemistry degree course offered in Australia, at the Victorian College of Pharmacy. He has a B.Sc.(Hons) from the University of Melbourne and a Ph.D. from Adelaide University.

Dr Frank Sams-Dodd (VP Preclinical Research and General Manager of Neurofit SAS) is Project Leader of the BNC105 development program. Prior to Bionomics, Dr Sams-Dodd was Director of CNS Research at Boehringer Ingelheim.

Risks

- Royalty revenues from diagnostics will not be a company maker. We anticipated peak royalty revenue to stabilise between one to two million dollars per annum. Further royalties and up-front payments would be forthcoming with the licensing of additional diagnostics. It is anticipated that additional diagnostic tests will be licensed, yet there is no guarantee that additional diagnostic will be out-licensed. Nevertheless, the company will remain reliant upon government grants as the bulk of its revenues.
- The company's business plan is reliant upon establishing development and commercialisation partnerships. In its favour the company has historically demonstrated strong capability at establishing partnership to advance all operations of its business and we expect such activities to continue, however there is no guarantee that this will occur into the future.
- The withdrawal and recent re-approval of Tysabri® demonstrated the paramount importance of an understanding of the full ramifications of immunosuppression within the context of treating multiple sclerosis. The target of Tysabri is widely expressed on several classes immune cells as well as other cells which play a role in preventing spontaneous tumours. Tysabri® was re-approved, but it cannot be used in combination with interferon due to increased risk of multifocal leukoencephalopathy (PML). It is not yet known whether a Kv1.3 inhibitor has a similar probability of

increasing the risk of PML when used in combination with interferon or immune suppressors.

- Although the company is targeting large market, these markets are highly competitive. All of Bionomics' drugs are will face tough competition.
- Bionomics' technology is early-stage and biotechnology companies with early-stage programmes tend to exhibit share-price volatility greater than other asset classes quoted on the ASX. Bionomics is an investment for the high risk tolerant investor.

Financials

In April 2006, the company announced it received a Commercial Ready Grant of \$3.7m. This grant will be used to progress BNC-105 into Phase II Clinical Trials.

As of December 2005, the company reported grants received of \$1.192m, Receipts from Customers of \$0.642m and Payments to Suppliers and Employees of \$4.313m. Net interest received was \$3k, reporting a Operating Cash Flow Loss of \$2.475m.

Net Investing and Financing Cash Flow was a loss of \$141k.

The company had cash of \$6.388m. This cash would support the company for just over one year.

The company holds \$4.4m of debt, all relating to a building loan agreement with a fixed interest rate at 6.97% per annum.

The company has Net Tangible Assets of \$4.144m.

Valuation

Due to the fact that Bionomics current does not have any products in Human Clinical Trials, we were preferred not to use an Options Model to ascertain a valuation. Our approach to the estimation of the value for the company through comparable company and median deal terms.

International Comparable Companies

Several companies are comparable to Bionomics' business operations post the acquisition. Most are private and predominantly venture funded. The two comparable listed companies, Avalon Pharmaceuticals and Ecopia, are valued at US\$39.5m and C\$31.4 m; respectively.

Although differences exist between these companies, their principal similarity is a unique drug discovery and development system and pre-clinical (or earlier) in-house drug development pipeline.

Name	Status	Key Points
Amphora Discovery Corp.	Private	A total of US\$68m in venture funding has been injected into the company.
Avalon Pharmaceuticals	NASDAQ NM - AVRX	Market Cap US\$39.5m (April 2006)
ComGenex International	Consortium	Consortium
Ecopia	TSX-EIA.TO	Market Cap C\$31.4 m (April 2006)
Iconix Pharmaceuticals	Private	Raised a total of about US\$100m for Venture and Partnership funding.
Infinity Pharmaceuticals	Private	Raised US\$50m in a Series C from Novartis, J&J and AmGen. Estimated valuation US\$200-250m.
Inpharmatica	Private	A total of £49M had been raised though Venture funding.
Morphochem	Acquired by Biovertis in 2005 for an undisclosed sum.	In 2001, Morphochem raised €15m taking the total to €74m raised in Venture, Partner and Government funding
Santhera Pharmaceuticals AG	Private	In 2004, Graffinity Pharmaceuticals raised €15m in a Series C, before merging with Myocontract AG to form Santhera and raising another €28m.
NeoGenesis (acquired by Schering-Plough)	Acquired by Schering-Plough in 2005 for an undisclosed sum.	NeoGenesis had previously raised a total of US\$54m in Venture funding.

Source: SEC Filings and other Company Reports

Australian Comparable Companies

The most comparable Australian company is Cytopia. It is developing a VDA inhibitor (CYT997), which is currently in Phase I Clinical Trials. CYT997 has similarities to BNC-105. Cytopia is currently trading on the ASX, with a market capitalisation of \$84m.

Two companies with technology platforms and no drugs in clinical trials are Evogenix and Phylogica.

Evogenix has four compounds in pre-clinical trials, focusing on osteoporosis, respiratory disease and cancers. Evogenix is capitalised at \$43m.

Phylogica focuses on the development of peptide based therapeutics. The technology is based on Phymomers. Phylogica is capitalised at \$76m

Bionomics is currently capitalised at \$32m. At this valuation, we believe that the stock is undervalued relative to its Australian peers.

Industry Median Deal Terms

The median deal terms simply looks at the value of deals out-licensed from Biotech to Pharma companies. From 2000 to 2004, the median deal for an early (discovery to lead molecule stage) programme was US\$40m.

The break-down of the value of the deals was US\$5m in up-front fees, US\$25m in R&D, US\$42.5m in milestone payments and US\$10m in equity⁹. In addition such early stage deals are currently attracting on-going royalties on product sales. The value of such a deal was estimated at about \$13.0m

In the event Bionomics' out-licenses all its assets today, it would be capable of generating out-licensing revenues within this range for each of its four core programmes. The net value of four such deals for Bionomics would be about \$52m. This broad assessment of the industry is not a valuation of the company, but a representation of the value within the company at this point in time if it was to be crystallised.

Bionomics' strategy is to continue the development of its lead cancer program completing early clinical trials prior to out-licensing. This is likely to significantly increase the value of its cancer assets just by virtue of drug candidate nomination and entry into the clinic. Similarly, it is the company's present intention to progress its multiple sclerosis program into the clinic prior to out-licensing.

In the event Bionomic's out-license assets after the completion of Phase I/II, it would be capable of generating a license deal in the range of US\$100m. The industry average deal during 2001 to 2005 contained US\$15m in up-front fees, US\$20m in R&D, US\$150m in milestone payments and US\$15m in equity. The present value of such a deal is about \$38.6m. The company is planning such a deal with BNC-105 and Kv1.3 after the completion of early stage clinical trials. Again, this is not a valuation of the project, but the indicative value that Bionomics could receive after completing a license post Phase I/II clinical trials

Conclusion

Bionomics is a solid, early-stage, company with a pipeline of four drug discovery programmes, an extensive patent portfolio and generating revenue from two diagnostics licensed to three distribution partners.

We anticipate strong progress in the company's pipeline over the coming 12 to 18 months including The initiation of Phase I/IIa clinical trials of BNC-105, selection of a MS drug candidate and completion of preclinical studies to support an IND filing for this indication.

We anticipate additional non-core assets (diagnostics and validated drug targets) to be out- licensed over the next 24 months, generating additional revenue and attracting up-front payments.

⁹ The deals did not include the all of these figures. These figures are only the median paid (or payable) in agreements with these terms negotiated into the out-license agreement.

Patents

Bionomics and its related companies have an integrated portfolio of patents and patent applications, covering novel genes and gene products, their use for diagnosis, drug discovery and development, diagnostic methods, animal models, composition of matter and therapeutic use relating to drug candidates.

Through the worldwide Patent Cooperation Treaty (PCT) mechanism, Bionomics and its related companies is prosecuting 18 series of patents and patent applications. Bionomics has been granted 2 new patents since July 2003.

PCT Number	Patent Application	Patent Name and Description	Status
Epilepsy			
Australian Patent No. 701228*	CHRNA4	Diagnostic and treatment methods relating to Autosomal Dominant Nocturnal Frontal Lobe Epilepsy (ADNFLE). Priority Date: 28 June 1995.	Granted in Australia.
AU01/00541	CHRN2	Mutation in the beta-2 nicotinic acetylcholine receptor subunit associated with Nocturnal Frontal Lobe Epilepsy: Genes, gene products and their therapeutic and diagnostic uses. Priority Date: 11 May 2000.	Granted in New Zealand.
AU01/00729	GABA-A	Mutation associated with epilepsy: GABA-A receptor subunit genes, gene products and their therapeutic and diagnostic uses. Priority Date: 20 June 2000.	Granted in New Zealand. National phase in Australia, Canada, Europe, Japan, USA
AU01/01648	SCN1A	Sodium-channel alpha1-subunit and their polypeptides and their treatment of generalised epilepsy with febrile seizures plus: genes, gene products and their therapeutic and diagnostic uses. Priority date: 20 December 2000.	National phase in Australia, Canada, Europe, Japan, New Zealand, USA.
US Patent Appn 11/262647	Super SCN1A	Sodium-channel alpha1-subunit and their polypeptides and their treatment of generalised epilepsy with febrile seizures plus: genes, gene products and their therapeutic and diagnostic uses. Priority date: 31 October 2005.	International phase.
AU02/00910	SSCP	Mutations in ion channels: various ion channel subunit genes, gene products and their therapeutic and diagnostic uses. Priority date: 18 July 2001.	National phase in Australia, Canada, Europe, Japan, New Zealand, USA.
AU2004/001051	SSCP #2	Mutations in ion channels: various ion channel subunit genes, gene products and their therapeutic and diagnostic uses. Priority date: 7 August 2003.	International phase.
AU2004/000295	SMEI Diagnostic	Methods for the diagnosis and treatment of epilepsy: SMEI diagnostic methods. Priority date: 27 March 2003.	National phase in Australia, Canada, Europe, Japan, New Zealand, USA
20059031146	SMEI Diagnostic Update	Methods for the diagnosis and treatment of epilepsy: SMEI diagnostic methods. Priority date: 16 June 2005.	Provisional.
AU2004/001399	BFS Diagnostic	A diagnostic method for neonatal or infantile epilepsy syndromes: benign familial seizures panel diagnostic methods. Priority date: 13 October 2003.	National phase in Australia, Canada, Japan, USA.
Breast Cancer/Angiogenesis			
AU02/00096	BNO1	Novel gene BNO1 mapping to chromosome 16q24.3: gene, gene products and their therapeutic and diagnostic uses. Priority date: 31 January 2001.	Granted in US, National phase in Europe.
AU02/01282	Angiogenesis Macroarray	DNA sequences for human angiogenesis genes: genes, gene products and their therapeutic and diagnostic uses. Priority date: 27 September 2001.	Granted Australia and New Zealand National phase Canada, Europe, Japan, USA.

PCT Number	Patent Application	Patent Name and Description	Status
AU2004/000383	Angiogenesis Microarray	Method for identifying nucleic acid molecules associated with angiogenesis: methods, genes, gene products and their therapeutic and diagnostic uses. Priority date: 28 March 2003.	National phase in Europe, Japan, USA
AU2005/001188	BNO69 siRNA	DNA sequences for human angiogenesis genes: genes, gene products and their therapeutic and diagnostic uses. Priority date: 9 August 2004.	International phase.
MS/Kv1.3			
AU03/00351*	#1	Therapeutic ion channel blocking agents and methods of use thereof: methods and compositions of matter. Priority date: 20 March 2002.	National phase in Australia, Canada, China, Europe, Israel, Japan, New Zealand, South Africa, USA
US Patent Appn 60/662051*	#2	Novel potassium channel blockers and uses thereof: methods and compositions of matter. Priority date: 15 March 2005.	International phase.
AU2006/000333	#3	Novel potassium channel blockers and uses thereof: methods and compositions of matter. Priority date: 15 March 2005.	International phase.
Cancer/VDA			
AU02/00099*	Multicore/VDA #1	Synthesis for the preparation of compounds for screening as potential tubulin binding agents: methods and compositions of matter for vascular targeting agents. Priority date: 1 April 2001.	National phase in Australia, Canada, Europe, Japan, New Zealand, USA.
US Patent Appn 10/466769	Multicore/VDA #1	Chemical compounds and processes: methods and compositions of matter for vascular targeting agents. Priority date: 14 February 2005.	Provisional.
AU2006/000192	VDA#2	Novel tubulin polymerisation inhibitors. Priority date: 14 February 2005	International phase.
US Patent Appn	VDA#3	Chemical compounds and processes: methods and compositions of matter for vascular targeting agents Priority date:	Provisional.
Neurofit			
FR02/00934	Fri/Fri Mouse Model	Method for determining the therapeutic efficacy of a medicament against Parkinson's Disease and/or Parkinson syndrome using an <i>fri/fri</i> mouse as a model. Priority date: 16 March 2001.	National phase in Europe.
EP2004/05183	Phenothiazine derivatives	Use of piperazine phenothiazine derivatives, or a pharmaceutically acceptable salt or ester thereof, in the manufacture of a medicament with neuroprotector and/or neurotrophic effects on CNS and/or PNS. Priority date: 25 April 2003.	International phase and national phase in USA.

* Patent exclusively licensed to Bionomics or related company.

Financial Summary

	2004a	2005a	2006e	2007e	2008e
	AUD '000				
Operating Revenue	1.66	2.75	4.53	6.64	6.42
-Sales	0.00	0.30	0.34	0.39	0.45
-Grants Received	1.43	1.72	2.90	3.25	2.62
-Licensing Fees & Royalties	0.10	0.57	1.14	2.84	3.19
-Others	0.13	0.17	0.15	0.16	0.16
Operating EBITDARD	0.05	0.35	0.48	1.59	3.29
-R&D	3.11	4.46	4.68	4.91	5.16
Operating EBITDA	(3.06)	(4.11)	(4.20)	(3.33)	(1.87)
-D&A (Excluding Goodwill)	0.48	0.47	0.51	0.49	0.48
Operating EBITA	(3.53)	(4.58)	(4.71)	(3.82)	(2.35)
-Goodwill Amortised	0.04	0.05	0.05	0.04	0.04
EBIT	(3.57)	(4.63)	(4.76)	(3.87)	(2.40)
-Net Interest Expense	(0.00)	0.00	0.02	0.02	0.00
NPBT	(3.57)	(4.63)	(4.78)	(3.89)	(2.40)
Reported NPAT	(3.57)	(4.63)	(4.78)	(3.89)	(2.40)
NPAT (adjusted for amortised goodwill)	(3.53)	(4.58)	(4.74)	(3.84)	(2.36)
Weighted Number of Shares (undiluted)	48.66	154.92	155.71	156.49	157.28
Weighted Number of Shares (diluted)	57.76	207.30	210.80	214.30	217.80
Adjusted EPS (undiluted)	(7.26)	(2.96)	(3.04)	(2.46)	(1.50)
Adjusted EPS (diluted)	(6.11)	(2.21)	(2.25)	(1.79)	(1.08)
Reported NPAT	(3.57)	(4.63)	(4.78)	(3.89)	(2.40)
Non-Cash Items					
D&A	0.52	0.52	0.56	0.54	0.52
Provisions	0.05	0.16	0.31	0.33	0.31
Other	0.03	0.15	0.05	0.05	0.05
Changes in Assets and Liabilities					
Δ Debtors	(0.05)	0.00	(0.07)	0.11	0.20
Δ Creditors	0.13	0.62	0.42	0.22	0.01
Δ Operating Assets	(0.09)	(0.16)	(0.01)	(0.02)	(0.02)
Operational Cash Flow	(2.98)	(3.33)	(3.53)	(2.67)	(1.33)
Payment for PPE	(0.13)	(0.43)	(0.33)	(0.38)	(0.38)
Payment for Business	0.00	(2.19)	0.00	0.00	0.00
Investing Cash Flow	(0.13)	(2.62)	(0.33)	(0.38)	(0.38)
Sub Total	(3.11)	(5.95)	(3.86)	(3.05)	(1.71)
Net Borrowings	0.00	(0.08)	(0.18)	(0.18)	0.00
Proceeds from Share Sale	6.27	6.78	0.17	0.17	0.17
Issue Expenses	(0.53)	(0.29)	0.00	0.00	0.00
Financing Cash Flow	5.74	6.40	(0.01)	(0.01)	0.17
Net Increase in Cash	2.63	0.45	(3.87)	(3.06)	(1.54)
Cash At the Beginning of the Year	6.07	8.70	9.01	5.14	2.08
Fx	0.00	(0.14)	0.00	0.00	0.00
Cash At the End of the Year	8.70	9.01	5.14	2.08	0.54

Note: the company has 31.5m options at 22 cents. These were not included in the above model. These options expire in Jan 2009.

Important Information

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In 2004, Intersuisse Limited was the underwriter and broker to a Rights Issue and Placement, and Intersuisse Corporate was the corporate adviser. During 2005, Intersuisse Corporate was the corporate adviser to Bionomics in respect of corporate matters including the merger and acquisition activity with Illiad, and Intersuisse Limited arranged a Placement. For all the stated corporate activity (in 2004 and 2005) both Intersuisse Limited and Intersuisse Corporate received fees on normal commercial terms. As a result, investors should be aware that Intersuisse Limited and Intersuisse Corporate might have a conflict of interest that could affect the objectivity of this report. Intersuisse does not currently provide corporate services to Bionomics.

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