



Friday 21 April 2006

Securities and Exchange Commission
Judiciary Plaza,
450 Fifth Street,
Washington DC 20549



SUPPL

Re: Bionomics Limited - File number 82-34682

Please see attached provided pursuant to Section 12g3-2(b) file number 82-34682.

Yours sincerely

A handwritten signature in black ink, appearing to read "Stephen Birrell".

Stephen Birrell
CFO & Company Secretary

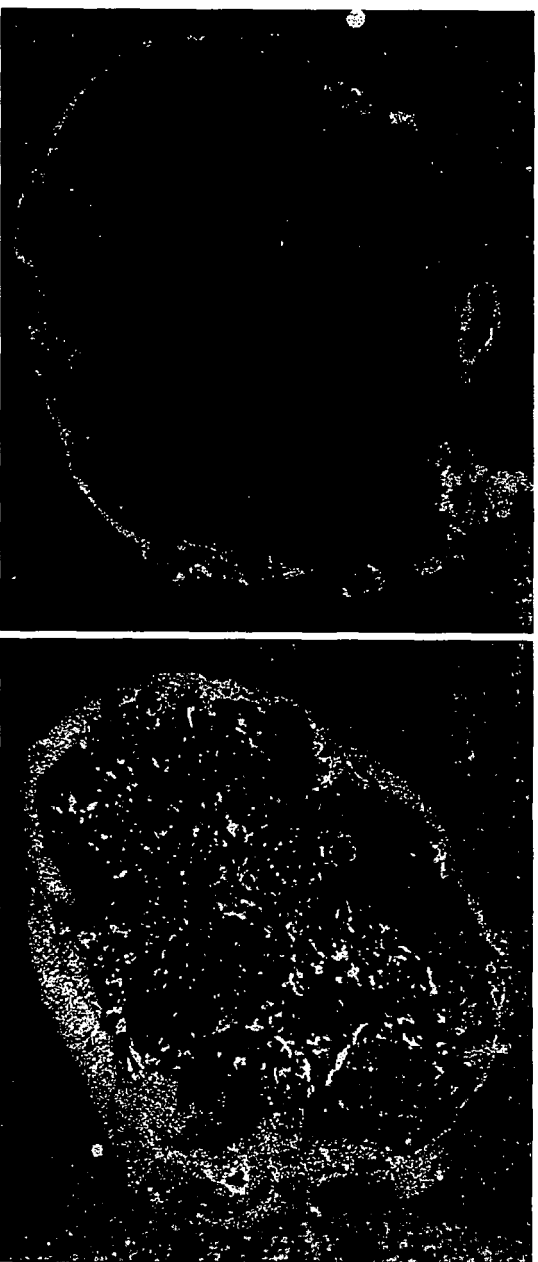
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Bionomics

April 2006

BNC105:
A powerful vascular disrupting agent (VDA)
and next generation treatment for cancer



Safe Harbour Statement

Factors Affecting Future Performance

This presentation contains "forward-looking" statements within the meaning of the United States' Private Securities Litigation Reform Act of 1995. Any statements contained in this presentation that relate to prospective events or developments, including, without limitation, statements made regarding Bionomics' development candidate BNC105, its drug discovery programs and pending patent applications are deemed to be forward-looking statements. Words such as "believes," "anticipates," "plans," "expects," "projects," "forecasts," "will" and similar expressions are intended to identify forward-looking statements.

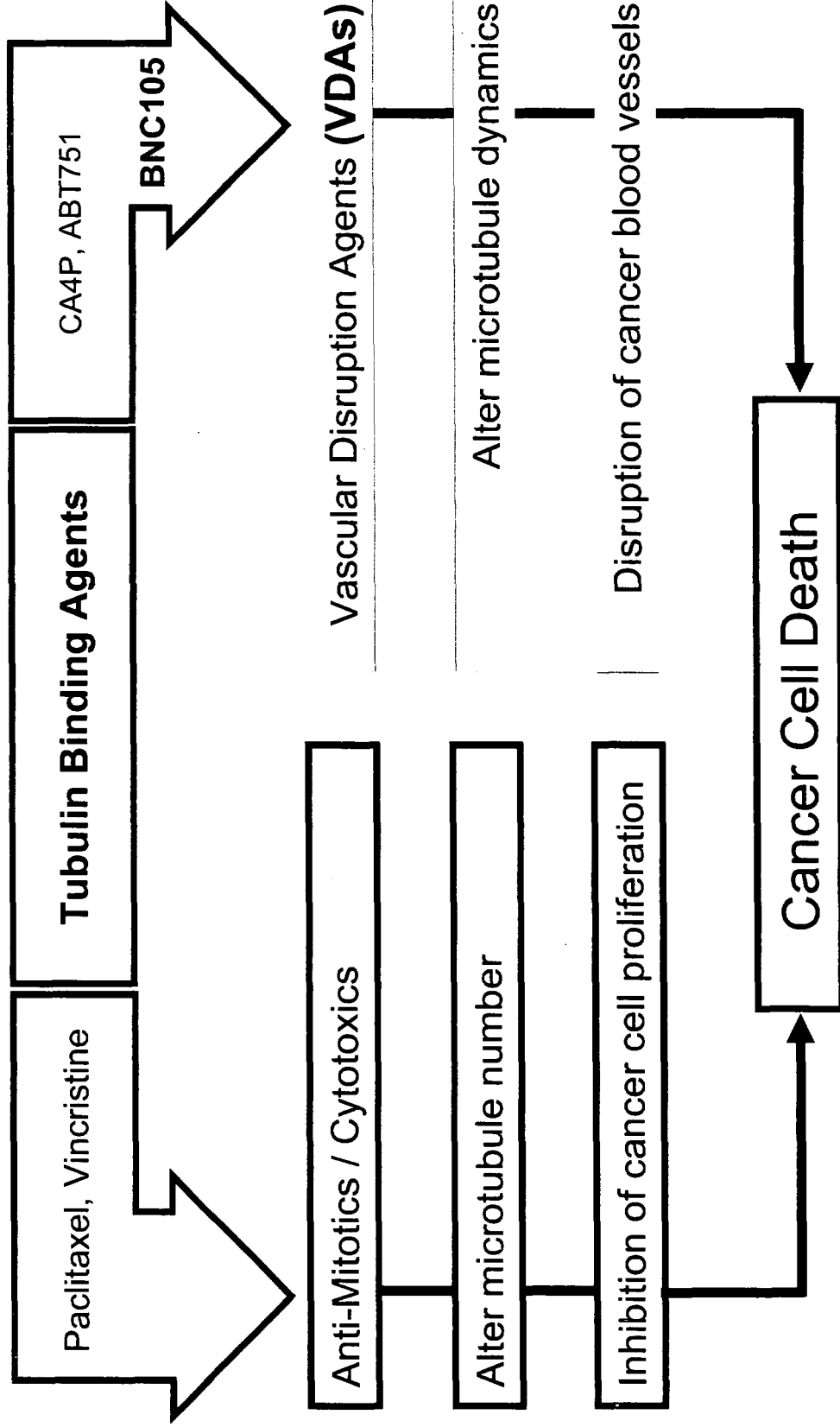
There are a number of important factors that could cause actual results or events to differ materially from those indicated by these forward-looking statements, including risks related to our available funds or existing funding arrangements, a downturn in our customers' markets, our failure to introduce new products or technologies in a timely manner, regulatory changes, risks related to our international operations, our inability to integrate acquired businesses and technologies into our existing business and to our competitive advantages, as well as other factors. Results of studies performed on competitors products may vary from those reported when tested in different settings.

Subject to the requirements of any applicable legislation or the listing rules of any stock exchange on which our securities are quoted, we disclaim any intention or obligation to update any forward-looking statements as a result of developments occurring after the date of this presentation.

Introduction

- Vascular Disrupting Agents (VDAs) shut down the blood supply of cancers
- Bionomics drug candidate **BNC105**
 - selectively shuts down cancer blood vessels
 - inhibits the growth of tumours in preclinical tests
 - significantly enhances the efficacy of chemotherapeutics doxorubicin and 5-fluorouracil
 - exhibits a broad therapeutic window in mice
- The market potential for a successful drug with the product profile of **BNC 105** is significant

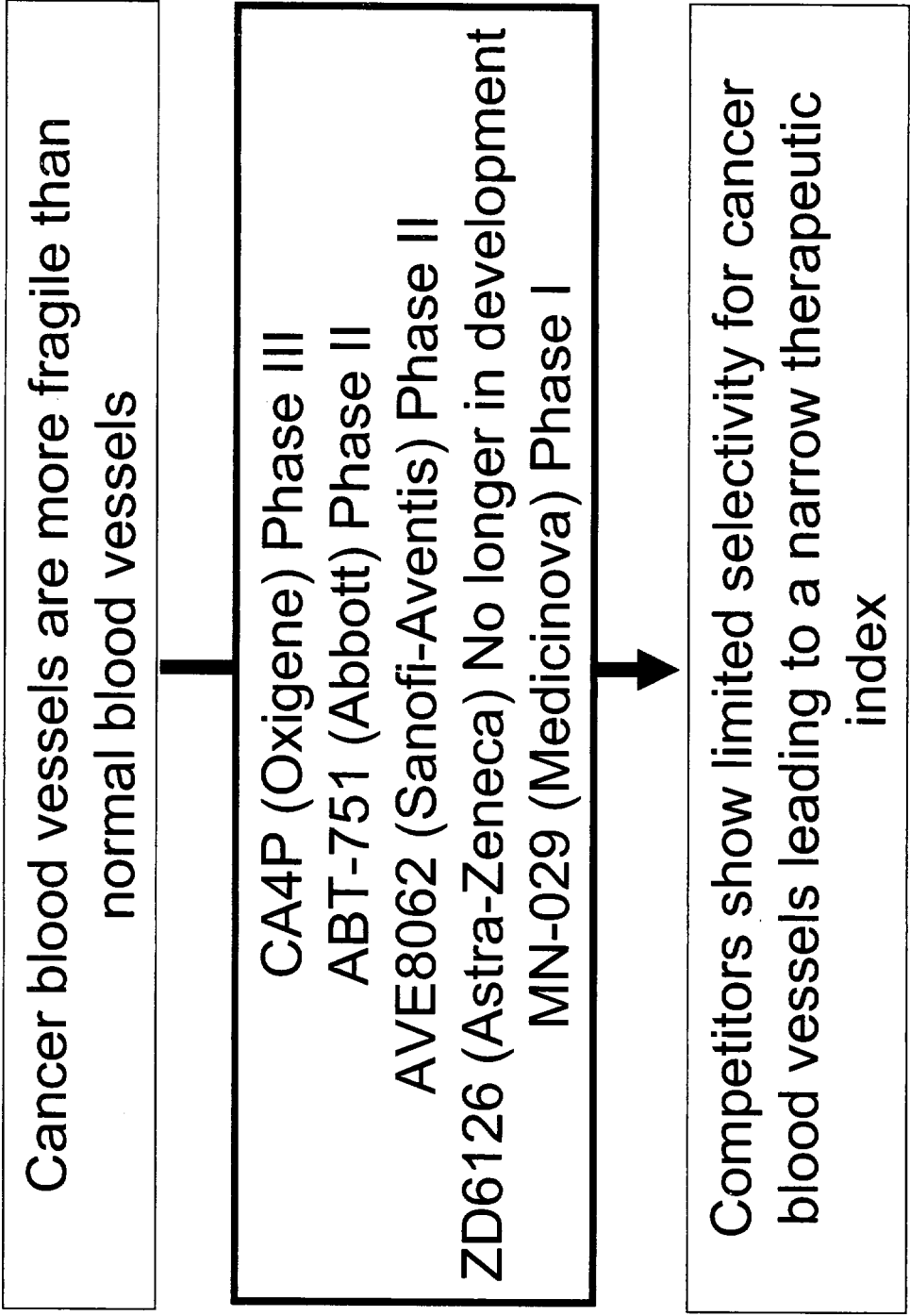
Anti-cancer compounds target Tubulin VDAs promise more effective treatment



BNC105 Target Product Profile

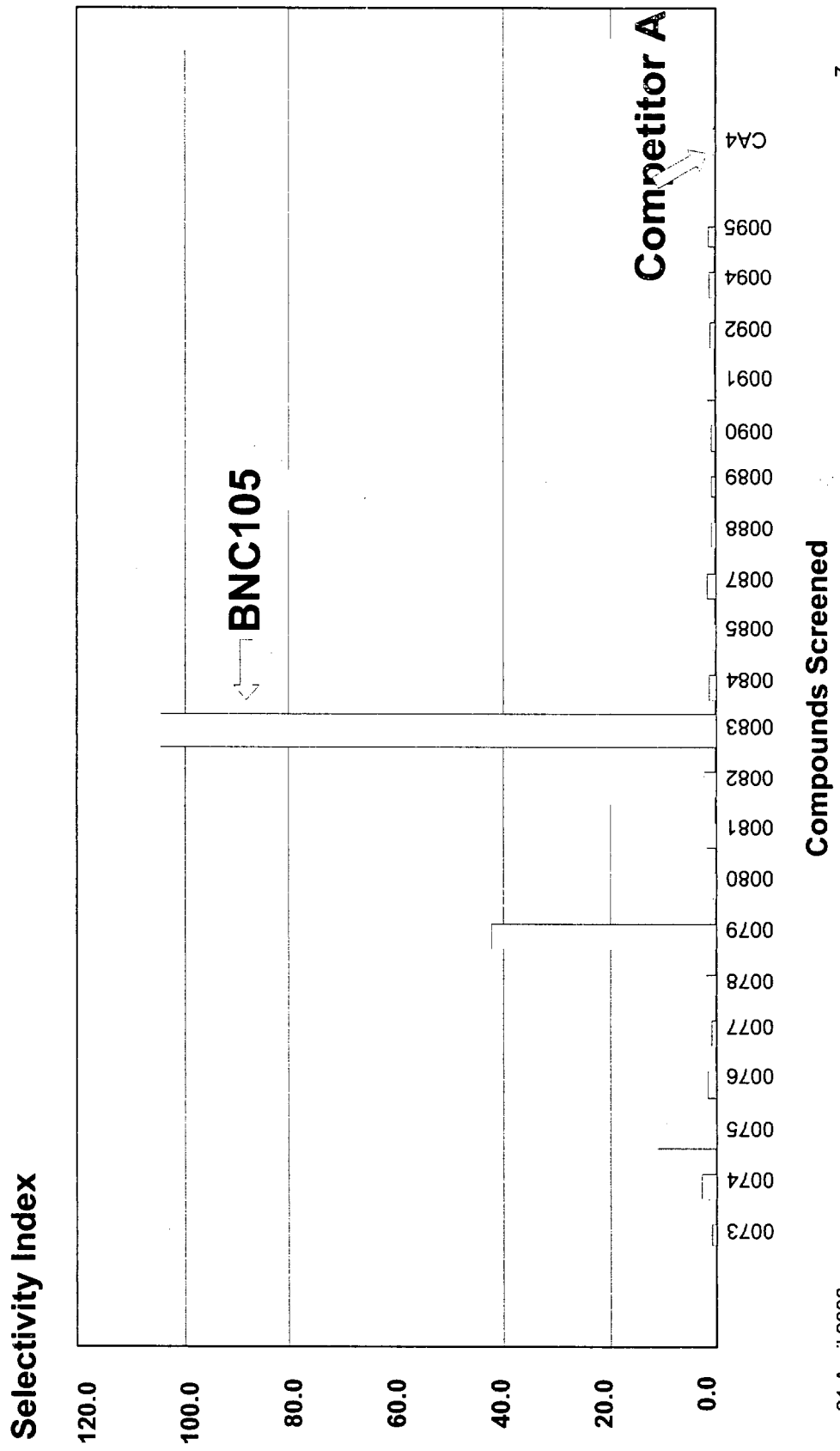
A treatment which shuts down blood vessels and promotes cell death in solid tumours, when added to chemotherapy or radiotherapy in patients with advanced cancers.

Increased selectivity for cancer blood vessels is a key competitive advantage of **BNC105**



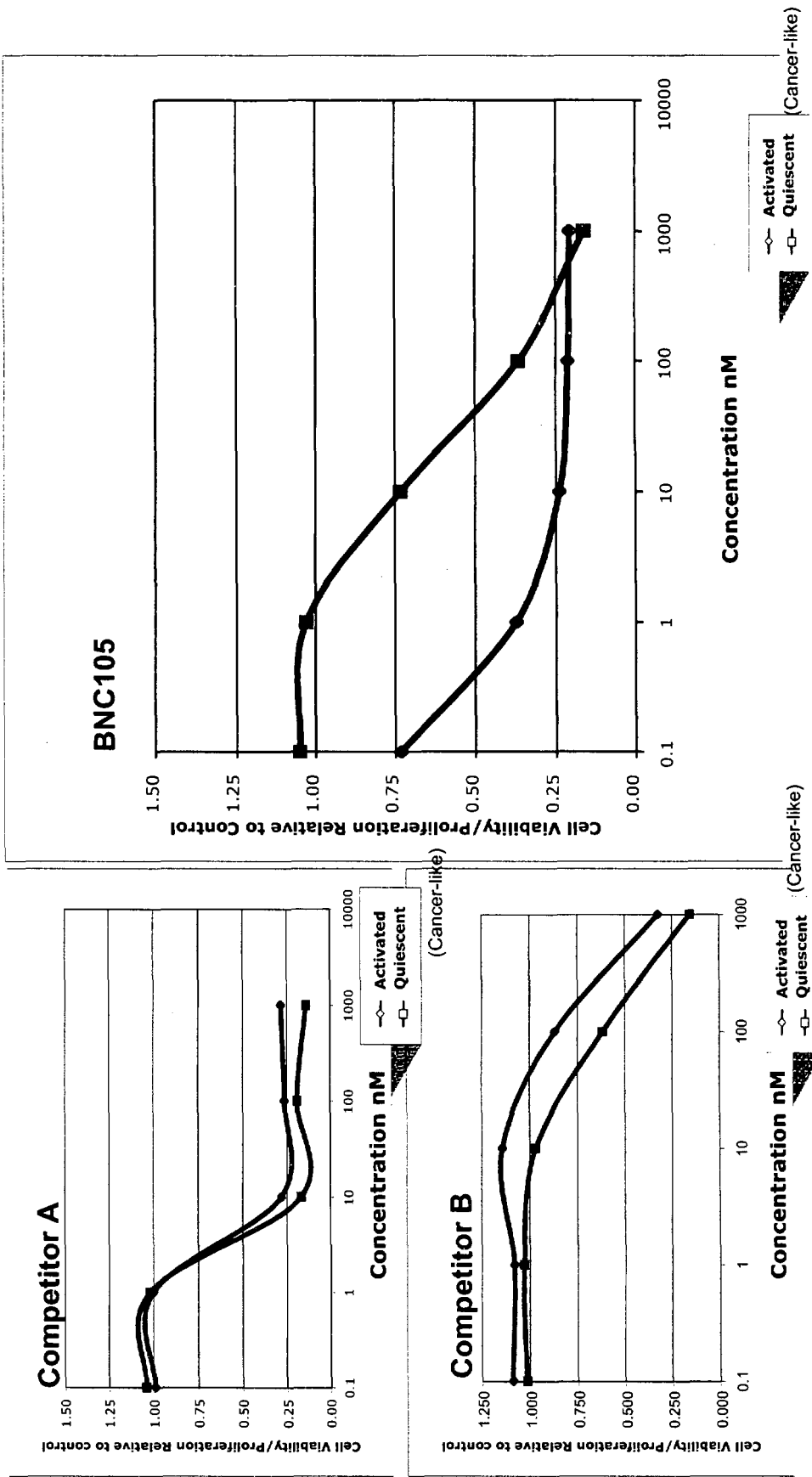
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BNC105 exhibits 100-fold selectivity for activated blood vessel cells
This selectivity is not displayed by a leading competitor



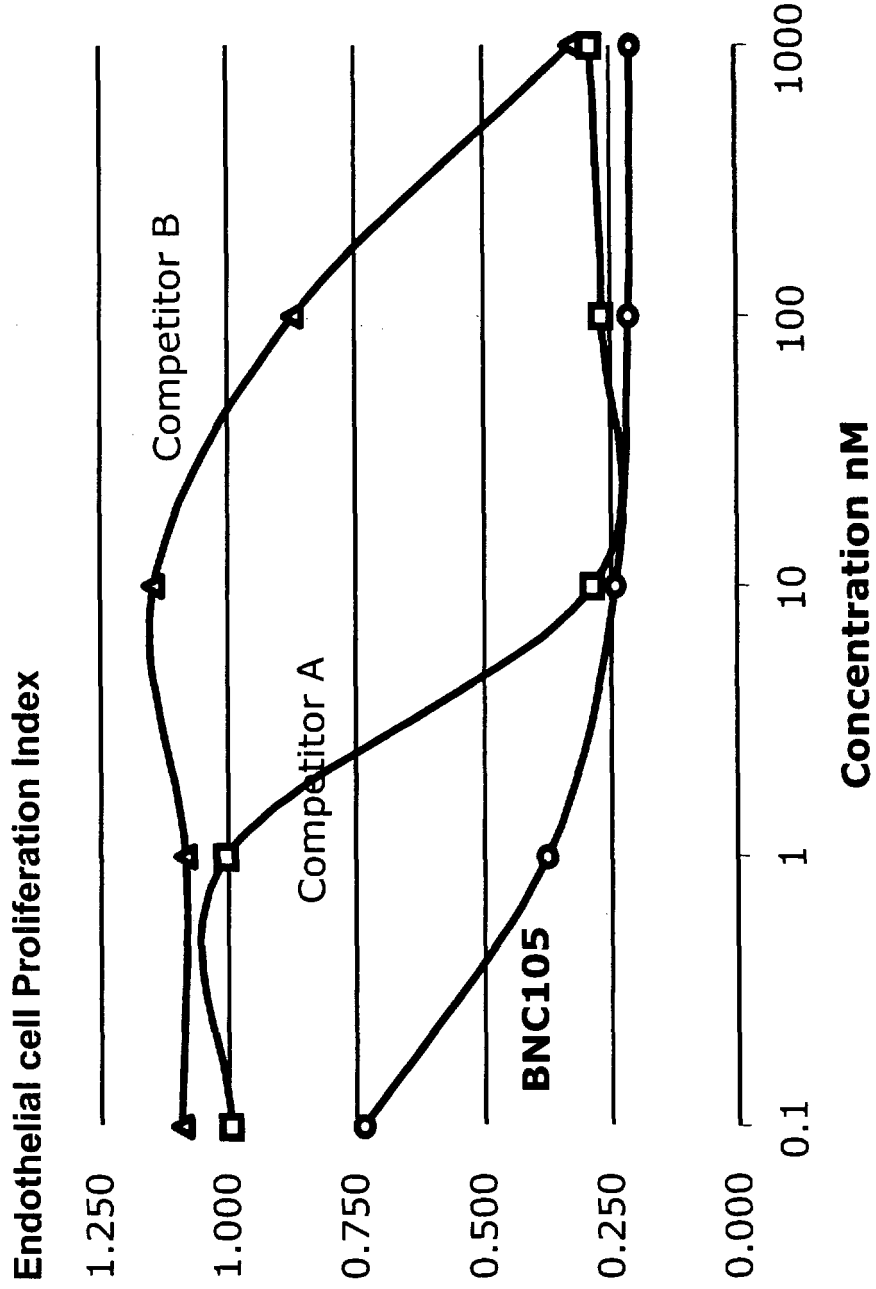
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BNC105 more selectively targets the activated blood vessel cells found in cancer



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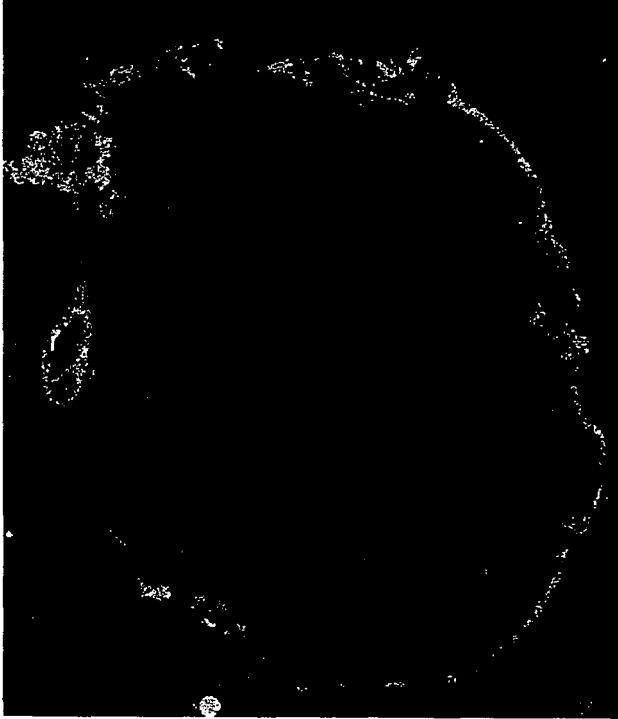
BNC105 is more potent than leading competitors



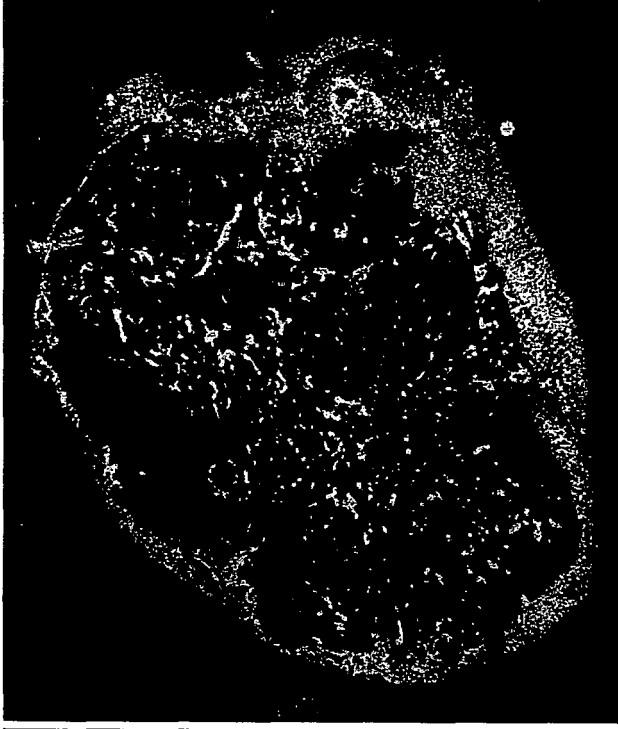
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BNC105 shuts down the blood supply of human breast cancer in preclinical trials

BNC105 (10mg/kg)

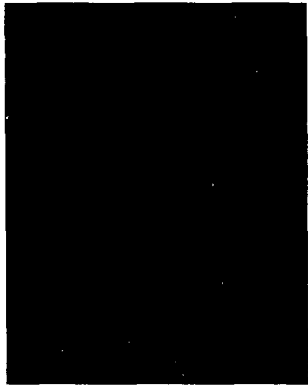
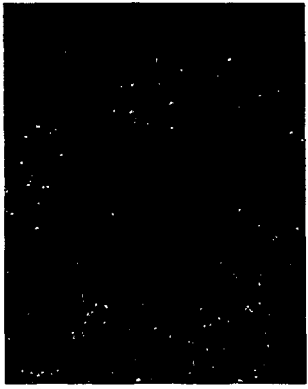
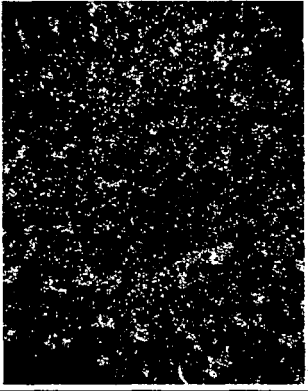
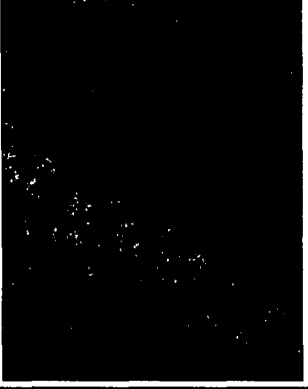


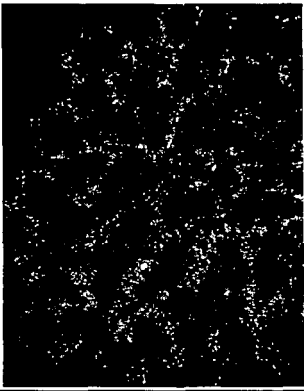
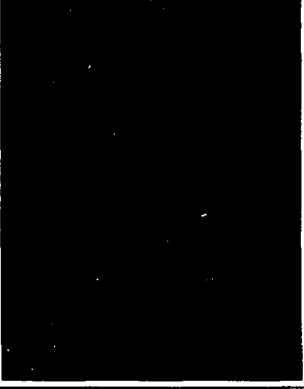


Saline



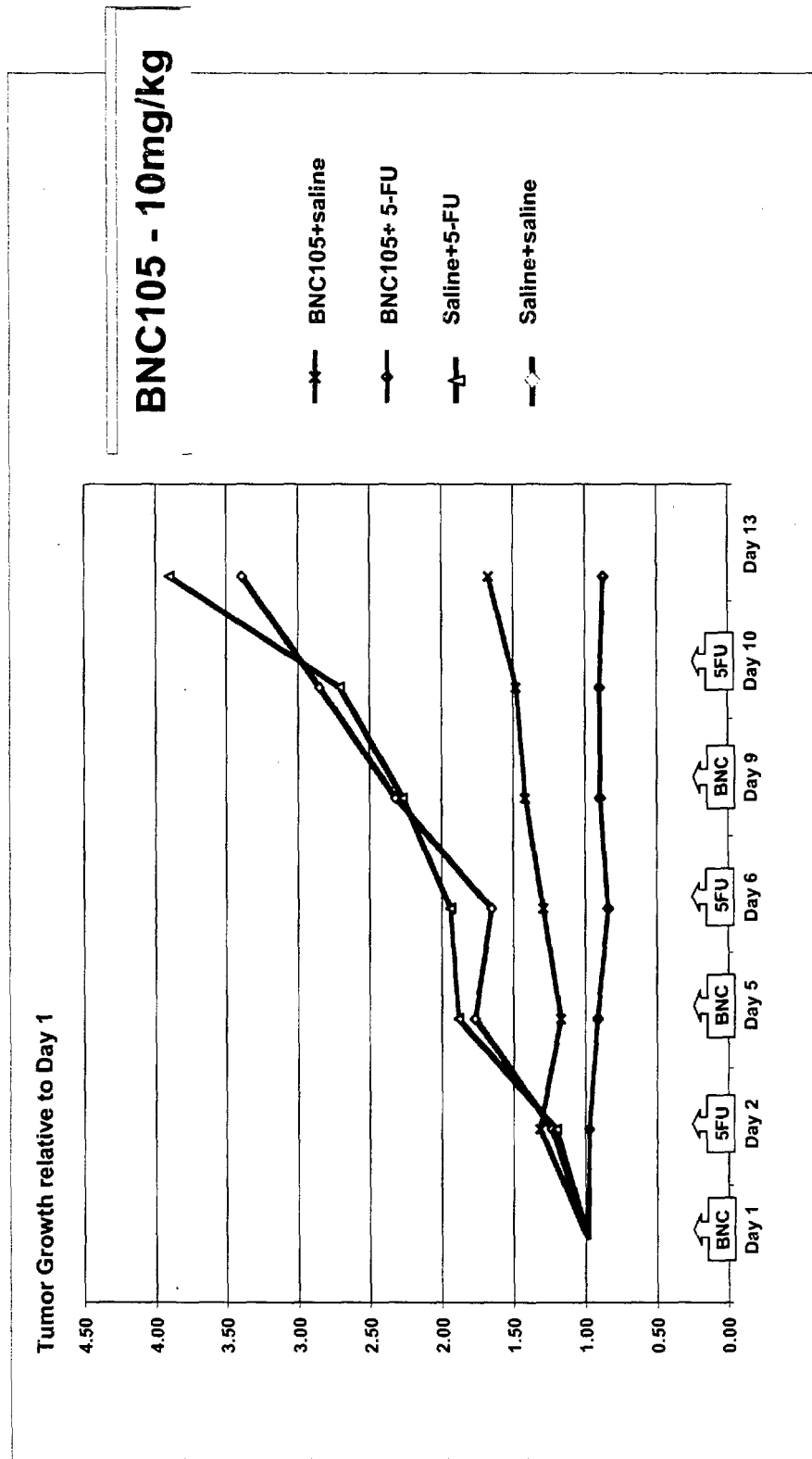
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BNC105 does not affect the blood supply of normal organs

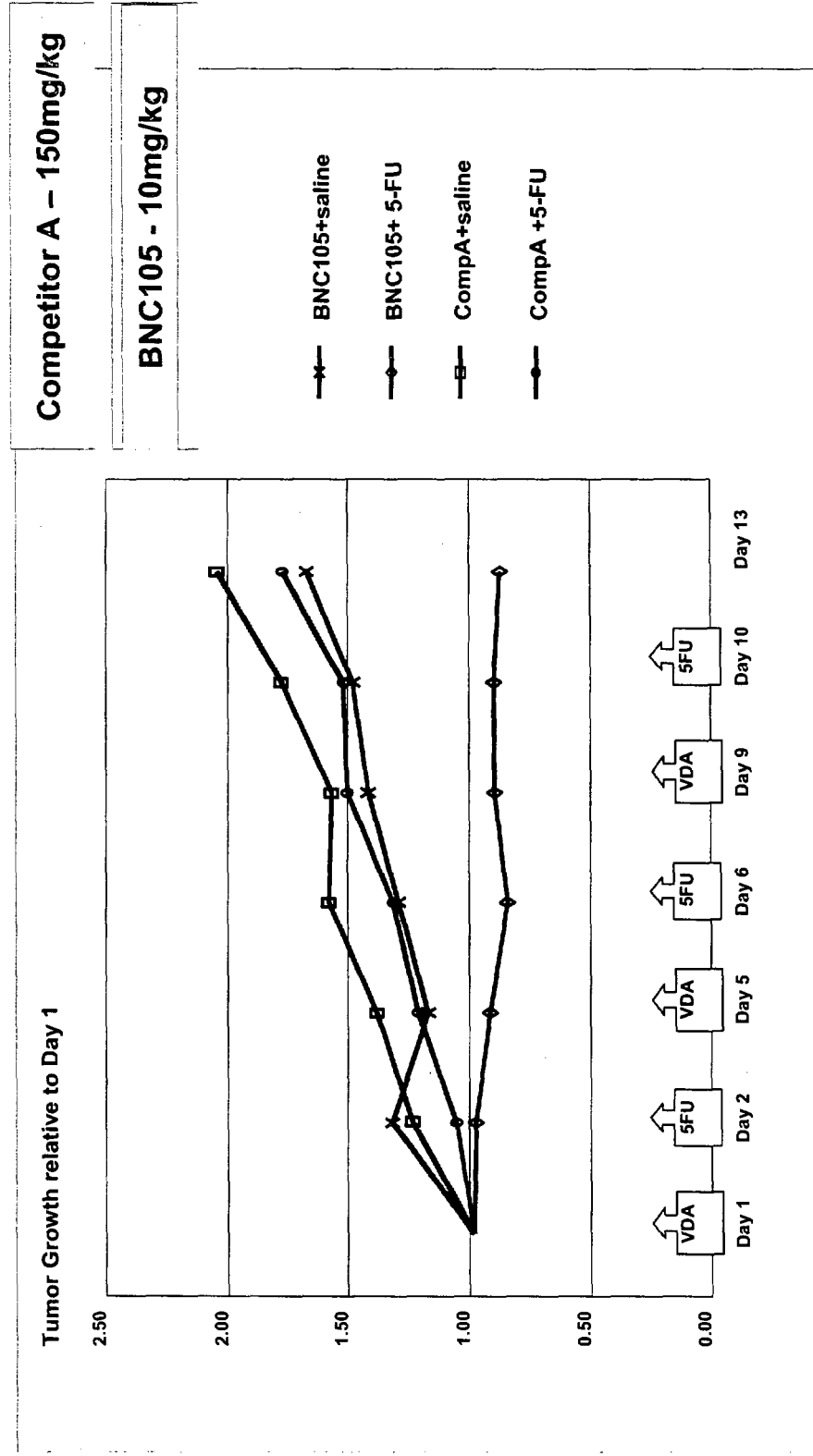
Heart	Kidney	Liver	Spleen	
				BNC105 10mg/kg
				Saline

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BNC105 enhances the anti-cancer effect of 5-FU in model systems of human breast cancer



In human cancer models BNC105 performs better than a leading competitor



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The market potential for BNC105

- **VDA**s and angiogenesis have an estimated market potential of ~US\$12 billion
(Scripp Reports 2002; ASInsights 2003)
- The worldwide market for anti-cancer therapeutics is ~US\$25 billion
(Scripp Reports 2002; Deutsche Bank 2001; UBS Warburg 2001)
 - 93% is for treatment of solid tumours
 - Cytotoxic chemotherapy represents ~US\$10 billion in cancer related therapy expenditures
- Cancer accounts for ~600,000 annual deaths in the US, each of these represents a treatment failure (Scripp Reports 2002)
 - US figures suggest the annual treatment cost in the US for cancer is US\$40 billion

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BNC105: Key Points

- **selectively shuts down cancer blood vessels. It targets cancer blood vessels at concentrations that leaves normal blood vessels intact**
- **is 150 times more potent than its closest competitor in achieving tumor blood vessel shut down in animal models of breast cancer**
- **inhibits tumor growth at a dose which is 15 times lower than its closest competitor in animal models of human breast cancer**
- **significantly enhances the efficacy of chemotherapeutics doxorubicin and 5-fluorouracil**

BNC105: Key Points

- In mice **BNC105** exhibits a therapeutic window that is approximately 20 times better than its closest competitor
- **BNC105** exhibits appropriate physicochemical properties which allow it to be used as a drug
- There exists a strong market potential for a successful drug with the product profile of **BNC 105**

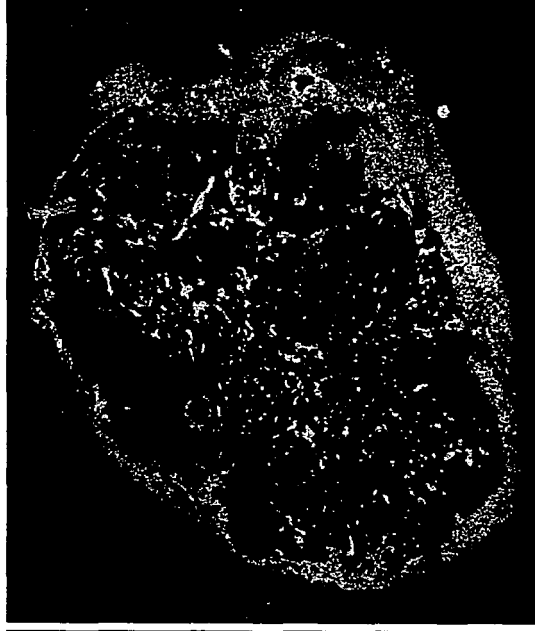
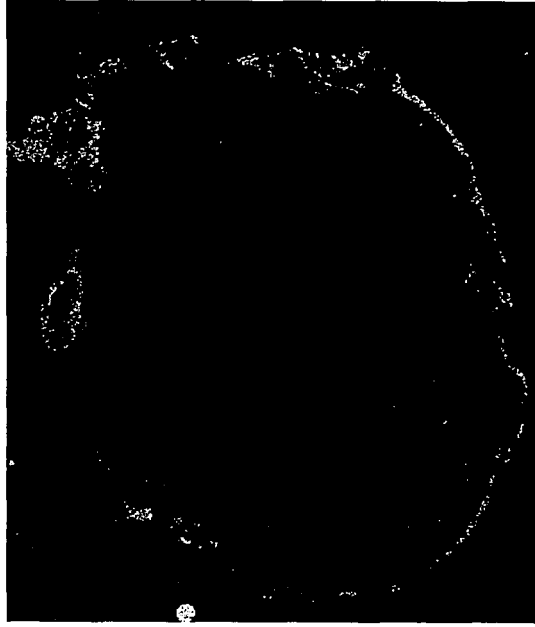
BNC105: Next Steps

- **Next 12 months**
 - Scale-up synthesis and manufacture
 - Formal toxicology

- **Late 2007**
 - Investigational New Drug (IND) filing with US FDA
 - Approval to commence clinical trials

BNC105

*A powerful vascular disrupting agent
(VDA) and next generation
treatment for cancer*



Bionomics

*Developing revolutionary therapies
for cancer and CNS diseases*



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Stephen Birrell
CFO & Company Secretary



ASX ANNOUNCEMENT
21 April 2006

BIONOMICS NOMINATES CANCER DRUG CANDIDATE

- **First drug candidate for Bionomics**
- **Marks transition to a drug development company with an emerging pipeline**
- **Oncology development team and drug advisory committee established**

Australian drug development company Bionomics Limited (ASX:BNO) today announced that it has nominated BNC105 as the drug candidate the Company will progress into scale-up manufacture and formal toxicology prior to its entry into clinical development for the treatment of cancer.

Nominated drug candidate BNC105

BNC105 is a new type of drug called a Vascular Disruption Agent (VDA) that acts to rapidly shut down the blood supply within a tumour. It thereby "starves" the tumour of the oxygen and nutrients it needs to survive.

Vascular Disruption Agents have significant clinical potential in the treatment of cancer, as they may potentially be applied across a very wide variety of cancer types, including colon, lung and breast cancers. The market potential for VDAs has been estimated at approximately US\$5 billion annually (ASInsights, 2003).

While other companies are also pursuing the VDA approach, preclinical studies suggest that BNC105 may have the strongest selectivity on tumour blood vessels, relative to its effects on normal organs. Preclinical studies have also indicated that BNC105 is able to improve the effectiveness of current drug treatments for cancer, including doxorubicin and 5-fluorouracil. The features displayed by BNC105 which lead to its selection include:

- BNC105 selectively shuts down cancer blood vessels. It targets cancer blood vessels at concentrations that leave normal blood vessels intact.
- In mice, BNC105 exhibits a therapeutic window that is approximately 20 times better than the currently most advanced VDA in clinical development. Therapeutic window refers to the difference between the dose at which a drug is effective and the dose at which side-effects become apparent.

- BNC105 inhibits tumour growth at a dose which is 15 times lower than the most advanced VDA in development in an animal model of human breast cancer.
- BNC105 significantly enhances the efficacy of chemotherapeutics doxorubicin and 5-fluorouracil to an extent greater than that seen with the most advanced VDA in development. Extension of these studies to other commonly used cancer chemotherapeutics will continue in order to expand the potential clinical use of BNC105.

A presentation outlining key features of BNC105 accompanies this announcement. There will be a conference call on Wednesday 26 April 2006 at 9.30 am AEST on this presentation. Dial in details for the conference call are 1800 505 427 (within Australia) or +61 3 9221 4444 (outside Australia) and enter participant passcode 8354 when prompted.

Bionomics transitions to a drug development company with an emerging pipeline

Dr Peter Jonson, Chairman of Bionomics, said that Bionomics' decision to nominate BNC105 as the company's first drug candidate and commence those activities which would progress the drug into the clinic represented a major milestone for Bionomics.

"The recognition of BNC105 as the Company's first clinical drug candidate marks its transformation to a drug development company with an emerging pipeline of therapeutic development programs targeting cancer, multiple sclerosis, epilepsy and anxiety and is a further tangible outcome of the acquisitions undertaken by Bionomics in 2005."

Managing Director and Chief Executive Officer Dr Deborah Rathjen said over the coming year Bionomics would undertake both the formal preclinical toxicology and safety studies and scale-up synthesis and manufacture required to gain the necessary approvals to conduct clinical trials in Australia and in the US.

"We believe that our drug candidate BNC105 has the potential to improve outcomes for patients with cancer, said Dr Rathjen. BNC105 has also demonstrated the value of our proprietary MultiCore® technology in rapidly synthesizing drug leads."

Oncology Development Team

The oncology development team assembled by Bionomics includes Dr Frank Sams-Dodd (VP Preclinical Development and BNC105 project leader); Dr Gabriel Kremmidiotis (VP Cancer Research) and Dr Bernard Flynn (VP Chemistry) as well as external consultants with specialist expertise in pharmacology, toxicology, drug manufacture, clinical and regulatory issues. This group will oversee the full BNC105 development program. In addition Bionomics is actively recruiting a Head of Clinical Operations to oversee the development of its emerging pipeline of therapeutic candidates.

Bionomics has also established a drug advisory committee to provide advice on the BNC105 development program. This group consists of Richard Morgan, an eminent toxicology consultant and ex Head of Toxicology at GlaxoWellcome (now GSK), and Associate Professor Danny Rischin, a medical oncologist at Melbourne's Peter

MacCallum Cancer Centre. Other appointments may be made to the drug advisory committee as required.

FOR FURTHER INFORMATION PLEASE CONTACT:

**DR DEBORAH RATHJEN
CEO & MANAGING DIRECTOR
BIONOMICS LIMITED
Ph: +61 8 8354 6101**

About Bionomics Limited

Bionomics (ASX:BNO) discovers and develops innovative therapeutics for cancer and diseases of the central nervous system. Bionomics has small molecule product development programs in the areas of cancer, anxiety, epilepsy and multiple sclerosis. Bionomics' most advanced program, the Vascular Disruption Agent (VDA) program for cancer, is based upon the identification of a novel compound that potently and selectively restricts blood flow to tumours. Bionomics' discovery and development activities are driven by its three technology platforms: Angene®, the company's angiogenesis target and drug discovery platform, incorporates a variety of genomics tools to identify and validate novel angiogenesis targets. MultiCore® is Bionomics' proprietary, diversity orientated chemistry platform for the discovery of small molecule drugs. ionX® is a set of novel technologies for the identification of drugs targeting ion channels for diseases of the central nervous system.

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

Factors Affecting Future Performance

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