

17 October 2001

The Manager Companies  
Australian Stock Exchange Limited  
20 Bridge Street  
SYDNEY NSW 2000

(2 pages by facsimile 1 300 300 021)

Dear Madam

**PUBLICATION OF DISCOVERY OF A DRUG THAT BLOCKS ENHANCEMENT OF  
VIRUS-LIKE PARTICLE BUDDING CAUSED BY HIV-1 PROTEIN Vpu**

The Directors are pleased to advise that Biotron Limited ('Biotron') researchers have identified potential new drugs for the treatment of HIV-AIDS. The research has been published in the European Biophysics Journal.

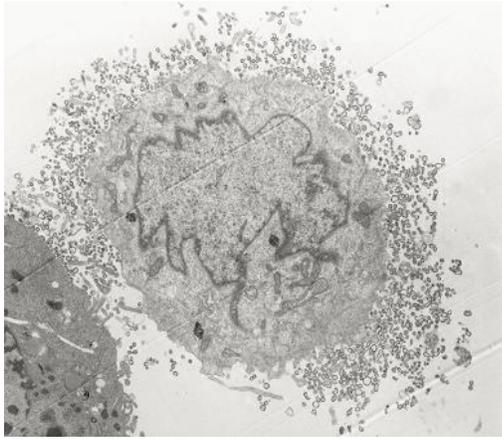
**Virion Project**

The human immunodeficiency virus (HIV-1) must replicate itself many times in many cells to cause AIDS. When the virus enters a cell, it makes many copies of itself and each copy must wrap itself in a coat made from the host cell surface membrane to form a new virus that can infect other cells. This process in which a new virus "buds" off from the surface of the host cell is called "budding". Biotron's Virion Project is aimed at developing novel antiviral agents that will depress budding of HIV-1 and so prevent a rise in virus titre and development of AIDS.

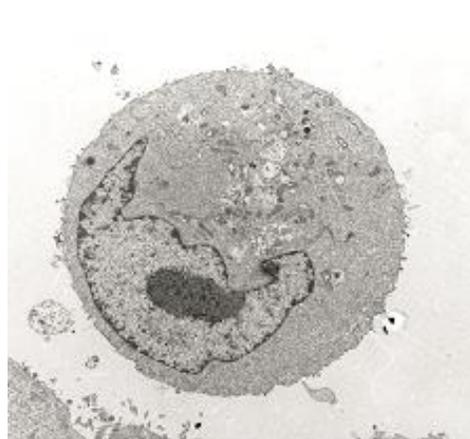
Existing AIDS drugs do not target the budding process and it is believed that a new drug that does this may provide an important new way of treating AIDS, adding another type of drug that can be used in multi-drug therapy.

**Abstract**

As reported in the European Biophysics Journal, Biotron research has shown that Vpu ion channel activity is inhibited by some amiloride derivatives (Biotron drugs BIT008 and BIT009) and that these drugs also depress budding and release of virus like particles enhanced by Vpu. These results confirm the link between Vpu ion channel activity and the budding process and indicate that the amiloride derivatives might be useful new anti-HIV-1 drugs.



**Figure A.**



**Figure B.**

**The effect of BIT009 on budding of virus-like particles.**

**The figures represent the budding process that occurs during the replication of HIV1. Figure A demonstrates the budding process in the absence of the Company's Virion Project lead compound, BIT009, whilst the reduced number of new particles surrounding cells in the presence of BIT009 at 10 $\mu$ M is shown in Figure B.**

The full publication is available in the European Biophysics Journal and can be accessed at <http://link.springer.de/search.htm>.

**Future Work**

Biotron is now developing a valuable high-throughput screen to optimise the scale and efficiency of the anti-HIV-1 drug assay to detect other drugs that depress the budding process.

Biotron has also outsourced assays of HIV-1 replication to determine the activity of a number of amiloride analogues.

For further information, please contact Professor Peter Gage on (02) 61258001.

Yours sincerely

Peter J. Nightingale  
Company Secretary

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