

Shareholder Update: May 2009

Welcome to the latest edition of Starpharma's Shareholder Update, a periodic newsletter designed to keep our shareholders informed of recent company developments.

This issue is particularly relevant given our active share purchase plan and provides an update on Starpharma's recent capital raising, development in the *in vitro* diagnostics application of dendrimers, Starpharma's drug delivery program, VivaGel[®], and dendrimer water remediation technology.

Starpharma raises additional capital via institutional placement

Early in April, Starpharma announced a successful raising of up to A\$4.6 million through a private placement to existing and new institutional and professional investors.

Starpharma's management team was delighted by the calibre of the participants in the placement and the mix of existing and new institutional investors. These new funds will take the company's cash reserves to more than A\$10 million. The placement resulted in long term investor Acorn Capital increasing its shareholding, and one of Australia's leading institutions becoming a major shareholder in Starpharma.

The funds will support Starpharma's activities to commercialise the VivaGel[®]-coated condom with partner SSL International plc, advance the program for the development of VivaGel[®] as a stand-alone product, and support the broader product pipeline.

Share purchase plan

In addition to the private placement, Starpharma is also offering eligible shareholders the opportunity to subscribe for shares in Starpharma Holdings Limited through a share purchase plan (SPP) without incurring brokerage or transaction costs.

The offer price under the SPP is A\$0.26 per share – the same price as offered in the private placement. Eligible shareholders can buy up to A\$10,000 worth of new Starpharma ordinary shares.



Australian and New Zealand registered shareholders who held shares at 7pm AEST on the record date of 7 April 2009 are eligible to participate in the SPP. For the latest updates on the SPP visit: www.starpharma.com

If you have not received documentation for the SPP please contact the Company Secretary Ben Rogers either by email: ben.rogers@starpharma.com or by phone (03 8532 2704).

About Starpharma

Starpharma Holdings Limited (ASX:SPL, OTCQX:SPHRY) is a world leader in the development of dendrimer nanotechnology for pharmaceutical, life science and other applications. SPL has two operating companies, Starpharma Pty Ltd in Melbourne, Australia and DNT Inc. in the USA. For further information please visit the company website: www.starpharma.com or contact the office on 03 8532 2704.

VivaGel® update

Starpharma completes patient testing in retention of activity study

Starpharma announced in March that it had completed patient testing in a human trial to determine the duration of antiviral activity following the application of VivaGel®.

This study will show how long after application of the microbicide women will be protected from HIV and HSV-2 (genital herpes). The data from this human trial is also considered valuable in providing a surrogate for the antiviral efficacy of VivaGel® ahead of Phase 3 studies.

The study, conducted at Nucleus Network in Melbourne and in collaboration with the Burnet Institute, enrolled 12 healthy women and involved sampling of vaginal contents at different intervals within 24 hours after the use of VivaGel®. The samples are currently being analysed for anti-HIV and HSV-2 activity.

Starpharma expects the final study report that will follow analysis of all samples to be delivered in the near future.

Starpharma's partner SSL International goes from strength to strength

Starpharma's partner for the VivaGel®-coated condom is SSL International plc (LSE: SSL), owner of the world's leading condom brand, Durex®. SSL continues to outperform its peers with the company recently reporting growth in annual sales of 20% and anticipated growth in profit for the year ending 31 March 2009 of more than 30%.

SSL's CEO Garry Watts recently commented that innovation is key to SSL's strategy to keep sales growing and consumers interested. This comment provides insight into SSL's growth plans and highlights the natural "strategic fit" of the VivaGel®-coated condom in their business.



Water remediation

As noted in a previous update (December 2008) Starpharma's US subsidiary DNT is working to develop dendrimers for water remediation, as part of the US Department of Defense's (DoD's) environmental science and technology program. Starpharma and DNT retain the rights to commercialise with third parties technology arising from the program.

Recently DNT has reached a key milestone in the program, showing that its dendrimer-based product has substantially higher capacity to absorb perchlorate, a water contaminant, than the commercial resins currently used for the purpose. This result enhances the ability of the company to advance commercialisation of the technology, and provides a positive basis on which further development of the technology can proceed.

Starpharma's dendrimers reduce cancer drug side-effects

Drug delivery

Many pharmaceuticals used today would be improved if they lasted longer in the body, or if side-effects were reduced. Pharmaceutical companies spend millions of dollars each year trying to achieve such improvements through application of techniques known broadly as "Drug Delivery" or "Controlled Release".

Key milestones achieved

For some time it has been clear that Starpharma's dendrimers have significant commercial potential in this area and Starpharma is pleased to have a growing list of partners who seek to enhance their pharmaceutical products using dendrimers, including Stiefel Laboratories Inc. and others not yet in the public domain. Since the last Shareholder Update, key technical development milestones have been achieved for Starpharma's drug delivery technology including demonstration of reduction of drug side effects.

Side effects reduced

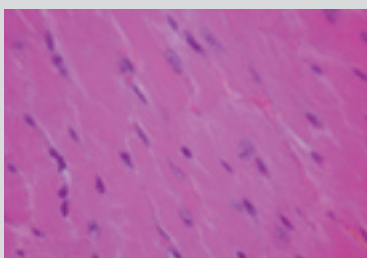
Doxorubicin is a widely used cancer drug. It is very effective, but has serious side effects which can include irreversible damage to heart muscle. Starpharma, in collaboration with the Victorian College of Pharmacy and a major cancer centre, evaluated whether dendrimers could reduce this toxicity in animals, whilst retaining the drug's potent anti-cancer effect.

In the experiments conducted it was found that Doxorubicin's toxicity to the heart muscle in treated animals was greatly reduced by the presence of the Starpharma dendrimers (see figure 1). Importantly the potent anticancer effect of the drug was not diminished and its duration of action was increased. Overall the performance of the drug had been substantially improved. The reduction in toxicity is believed to occur because the drug is retained in an inert form until it is released at the tumour site. This reduces the exposure of the other healthy organs (heart, liver, kidney etc) to the otherwise toxic doxorubicin, minimizing damage to these organs.

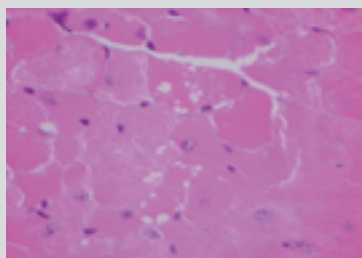
Broad drug delivery applicability

This finding further confirms the potential for dendrimers to improve the performance of existing drugs. Starpharma is already conducting programs and is in discussions with a number of well known pharmaceutical companies in relation to broader applicability of dendrimers to their own drug programs. The company anticipates the possibility of the announcement of positive progress in this endeavour in coming months.

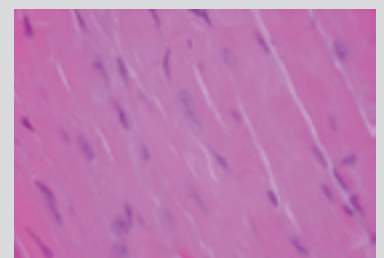
Figure 1: Starpharma's experimental results show that dendrimers can be used to reduce toxic side effects of cancer drugs in a mouse model.



(a) healthy heart tissue from control animal



(b) conventional doxorubicin has damaged heart tissue during treatment in the experiment



(c) dendrimer has protected heart tissue from the otherwise damaging action of the doxorubicin

Starpharma deepens its *in vitro* diagnostics pipeline

What are *in vitro* diagnostic tests?

In order for health professionals to be able to deliver the best medical treatment, they need a clear idea of what condition a patient is suffering from. Sometimes the most reliable way to distinguish between possibilities is by testing for the presence of certain molecules (in the patient's blood for example). This is called *in vitro* diagnostic (IVD) testing and the technology involved is similar in some ways to that in home pregnancy test kits.

Dendrimers improve the performance of IVD tests

Dendrimers can be used to improve the reliability of IVD tests. They reduce the numbers of incorrect diagnoses by correctly orienting key detection molecules in the test kit, enhancing performance. This effect has been shown in studies to lead to a significant improvement in patient outcomes and Starpharma's dendrimer technology is already under license in this way.

The IVD business opportunity

In the US alone the IVD industry is valued¹ at US\$17.6B. The regulatory environment relating to IVD is such that a new product can reach the market quickly, requiring as little as 1-2 years of development.

Enhancing Starpharma's position

Starpharma already receives royalties in this field through a licence agreement with Dade Behring, and it is in the process of developing its IVD business further. Additionally, Starpharma is strengthening its portfolio of patents that relate to the area. Starpharma hopes to be able to announce specific developments in this business area in coming months.



¹In Vitro Diagnostics to 2013 - Demand and Sales Forecasts, Market Share, Market Size, Market Leaders; Freedonia Group

Nanotechnology's promise in drug delivery featured on CNBC's Squawk Box

The benefits of nanotechnology were highlighted recently on a segment from CNBC's Squawk Box.

Prominent US businessman and entrepreneur, Bernie Marcus, cited nanotechnology as the way of the future and believes strongly that the way out of the current economic downturn is to commit to the development of nanotechnology which will ultimately bring about the creation of jobs, and important breakthroughs in medical research, including in drug delivery and cancer (see "Starpharma's dendrimers reduce cancer drug side-effects" on page 3).

Marcus told CNBC reporters of the potential for nanotechnology to re-define everyday living, affecting everything from energy to products to medicines and technology.

To view the segment please type the following address into the navigation panel of your web browser:
<http://www.cnbc.com/id/15840232?play=1&video=1093680576>

