starpharma

SHAREHOLDER Update

JULY 2011

IN THIS ISSUE

›› Okamoto deal secures world's second largest condom market for the VivaGel®–coated condom

A licence agreement announced in May with Japan's condom market leader Okamoto Industries has secured the second largest condom market for the VivaGel®–coated condom.

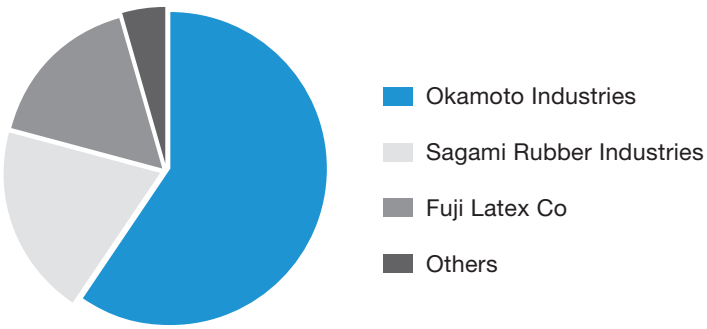
The Japanese market is second to the United States, generating an estimated US$500m in condom sales annually. Okamoto has approximately 60% of the market in Japan and is by far the dominant player there, while also maintaining a very strong market position in Asia overall.

Starpharma will receive royalty and milestone payments and Okamoto will undertake registration and launch of the product in Japan. The coated condoms marketed by Okamoto will carry the VivaGel® brand.

CONDOM SHIPMENTS BY MAJOR COMPANY IN JAPAN (2005)

COMPANY	MARKET SHARE
Okamoto Industries	60%
Sagami Rubber Industries	20%
Fuji Latex Co	16%
Others	4%
TOTAL	**100%**

Condoms – A World Market Review 11/09



›› VivaGel® demonstrates efficacy in bacterial vaginosis

Starpharma recently announced successful results of a major Phase 2 clinical trial that demonstrated efficacy of its lead product, VivaGel®, for the treatment of bacterial vaginosis (BV), adding to the substantial body of evidence suggesting the benefits of VivaGel® for a range of indications.

In the trial, women diagnosed with BV were treated with VivaGel® (containing 1% of the active, SPL7013) once daily over seven days. Following completion of treatment, 74% of patients were cured of BV compared with just 22% in a placebo group. Two to three weeks after end of treatment, the cure rate was still 46% compared with just 12% in the placebo group. These results were highly statistically significant.

The clinical trial was conducted in 132 women who were diagnosed with BV across six sites in the US. Starpharma is now engaged in discussions with regulatory authorities, with a view to initiating Phase 3 registration trials of VivaGel® for the treatment of BV in late 2011 or early 2012.

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VIVAGEL®

›› VivaGel® demonstrates efficacy in bacterial vaginosis

(continued from page 1)

BV is a condition in which the delicate balance of the normal vaginal bacteria is disrupted, so that the bacteria that help maintain a normal healthy vagina (lactobacilli) are reduced and harmful bacteria overgrow. The symptoms of BV include vaginal irritation, discharge and odour that are unpleasant and disrupt and interfere with a woman's relationships and general quality of life.

BV is normally treated with oral or vaginal broad spectrum antibiotics which aim to eliminate the harmful bacteria. However, these antibiotics also commonly result in the elimination of good bacteria, meaning yeast infections are a common side effect. There are also other potential side effects and drawbacks. Relapse, or recurrence, of BV is also common following treatment with antibiotics, and long-term use of these existing products is not recommended.

Treatment with VivaGel® resulted in BV cure rates comparable with existing antibiotics, but without the other drawbacks and potential side effects associated with these treatments (see table).

Equally exciting is the potential for VivaGel® to be used for an extended period of time to prevent recurrence of BV where few other options currently exist. The efficacy of VivaGel® in the treatment of BV and the lack of side effects supports this additional application of VivaGel®. Starpharma expects to commence a second BV trial in Q3 2011 to determine the efficacy of VivaGel® for this second indication, the prevention of BV recurrence.

ADVANTAGES OF VIVAGEL® OVER EXISTING BV TREATMENTS

ADVANTAGES	VIVAGEL®	METRONIDAZOLE TABLETS	IMETRONIDAZOLE GEL, 0.75%	CLINDAMYCIN CREAM, 2%
Active Ingredient Not Carcinogenic†	✓	×	×	?
Compatible with Condoms	✓	✓	✓	×
No Systemic Absorption	✓	×	×	×
Sexual Intercourse permitted during use	✓	✓	×	×
Compatible with Alcohol Consumption	✓	×	×	✓
No Other Significant Warnings / Side Effects‡	✓	×	×	×
Antiviral Activity	✓	×	×	×

† Metronidazole has been shown to be carcinogenic in mice and rats. SPL7013, the active ingredient of VivaGel®, was shown to be not carcinogenic in similar studies. Clindamycin has not been tested for carcinogenicity in long-term studies in animals but is not genotoxic or mutagenic in other nonclinical studies.
‡ Central and peripheral nervous system effects, such as convulsive seizures and peripheral neuropathy, have been reported in patients treated with metronidazole. Use of clindamycin phosphate is associated with *Clostridium difficile*-Associated Diarrhoea. No other significant warnings or side effects with SPL7013 are known or anticipated given it is not absorbed systemically following vaginal administration.
Sources: Flagyl® Oral Tablet (metronidazole) Label Information, LAB-0162-5.0, revised August 2010; Vandazole® Vaginal Gel (metronidazole) Label Information, Rev. C 12/2010; Clindesse® Vaginal Cream (clindamycin) Label Information, Revised 12/2010.

BV is the most common vaginal infection worldwide, affecting an estimated 30% of the adult female population in the US, and more than 50% in some US populations. Starpharma estimates the addressable global market for treatment and prevention of recurrence of BV is in excess of US$1bn, given the potential for long term use of such a product.

What are the risks for BV suffers?

As well as the unpleasant symptoms of BV, the condition poses more serious risks:

- Pelvic inflammatory disease
- Pre-term birth
- Acquisition of sexually transmitted infections, including HIV.

›› Independent study identifies connection between HIV and BV

New international research was released this month showing that men were three times more likely to contract HIV from their female partners if the women also had bacterial vaginosis (BV) in the three months before the men became infected.

The findings were reported at the International HIV/AIDS Conference in Rome by researchers led by Professor Craig Cohen from the Department of Obstetrics, Gynecology and Reproductive Sciences, University of California, San Francisco.

This study is the first to demonstrate an association between BV in HIV infected female partners and the risk of HIV transmission to their male partners.

Several previous studies have demonstrated an increased risk of HIV acquisition in females with BV, including one study that indicated more than 30% of HIV infections in women could be prevented if BV was successfully treated.

The research abstract is available on the IAS Conference website at http://pag.ias2011.org/abstractsaspx?aid=1862

AGROCHEMICALS

›› Priostar® dendrimers result in improved performance of glyphosate (Roundup®)

In addition to its successful partnering program which now involves a number of leading agrochemical companies, Starpharma will expand its internal agrochemical program following successful studies that showed significant improvement of leading agrochemicals when reformulated with Priostar® dendrimers. These included the herbicide glyphosate, more famous as Roundup®, the most widely used herbicide in the world.

In the past year Starpharma's internal agrochemical program has explored a number of key off-patent agrochemical agents in combination with the company's proprietary dendrimer technology. These included glyphosate (annual sales of US$5bn), major insecticide imidacloprid[1] (annual sales of US$1bn) and the herbicide trifluralin (annual sales of US$300m)[2].

"We are very pleased to report the company's progress in the agrochemical program. The selection of commercially-significant lead candidates by Starpharma gives us a clear focus for future work." said Starpharma CEO Dr Jackie Fairley.

Based on initial studies, the company believes that Starpharma's Priostar® dendrimers are well placed to capture several opportunities in the US$40bn global agrochemical sector (refer to table right) as the market continues to seek new technologies to improve efficiency and enhance performance.

Key results arising from the studies found that Starpharma's Priostar® dendrimers offered benefits including:

- solubility enhancement for more concentrated formulations
- improved herbicidal activity as measured by brownout
- modification of soil penetration properties

As illustrated in the graph below, the addition of Starpharma dendrimers to the glyphosate solution showed a 160-320% increase in brownout (rate of vegetation dying off) compared to the control. This suggests that the dendrimer was significantly increasing the activity of the glyphosate.

Key patents have already been allowed or granted for broad protection of Priostar® dendrimer technology, relevant to both agrochemical and industrial applications. Additionally Starpharma has filed for protection for specific agrochemical applications, which if granted would provide patent coverage to 2029.

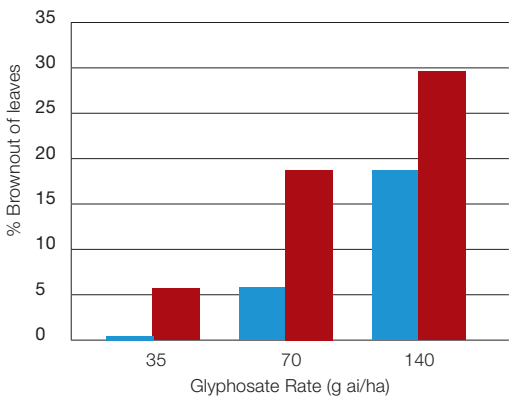
Fertilisers and agrochemicals – and their application – represent a significant cost for farmers. More effective chemical formulations could reduce the expense of a crop treatment cycle and the need for reapplication, potentially improving the environmental profile of such products.

These trends are reflected in the United Nations Food and Agriculture Organization's report *World agriculture: towards 2030/2050* which determined that much of future food production growth will come from higher productivity. The report also identifies the promise of biotechnology as a means of achieving this goal.

GLOBAL AGROCHEMICAL SECTOR

TRADE NAME	ACTIVE INGREDIENT	ACTIVITY	MARKET VALUE US$MIL	INNOVATOR
Roundup	Glyphosate	Herbicide	5000	Monsanto
Confidor	Imidacloprid	Insecticide	1000	Bayer CropScience
Regent	Fipronil	Insecticide	420	BASF
Fastac	Alpha-cypermethrin	Insecticide	400	FMC
Allegro	Kresoxim-Methyl	Fungicide	400	BASF
Maldison	Malathion	Insecticide	400	Cheminova
Gramoxone	Paraquat	Herbicide	380	Syngenta
Cruiser	Thiamethoxam	Insecticide	375	Syngenta
Orthene	Acephate	Insecticide	360	Sumitomo, Arysta
Stomp	Pendimethalin	Herbicide	350	BASF
Treflan	Trifluralin	Herbicide	300	Dow

An example of brownout following treatment with Glyphosate



Graph: *% Brownout of oatleaves 10 days after treatment with Glyphosate only (blue) or Glyphosate with Starpharma Priostar® dendrimer (red).*

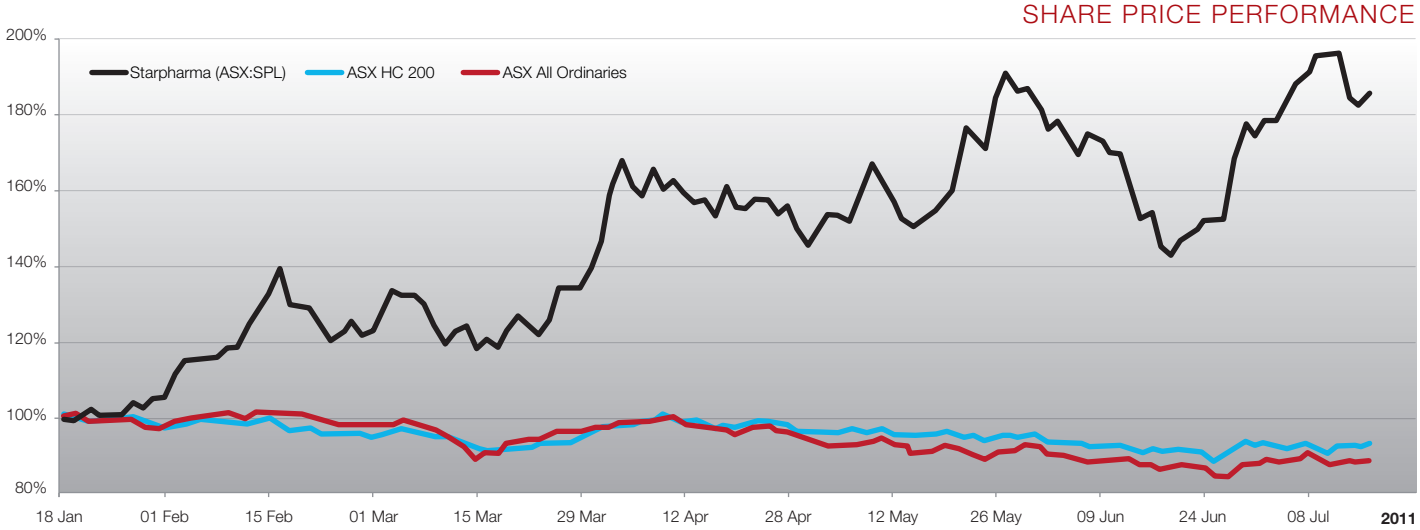
Glyphosate only

Glyphosate + dendrimer

›› Financial market responds strongly to internal progress

Starpharma continues to outperform the broader market as a result of significant progress in all its internal programs, including VivaGel®, agrochemical and drug delivery. As reflected in the graph below where Starpharma is compared to the ASX All Ordinaries and ASX Healthcare 200 Indices, the company share price has increased by as much as 190% in the last six months.

SHARE PRICE PERFORMANCE

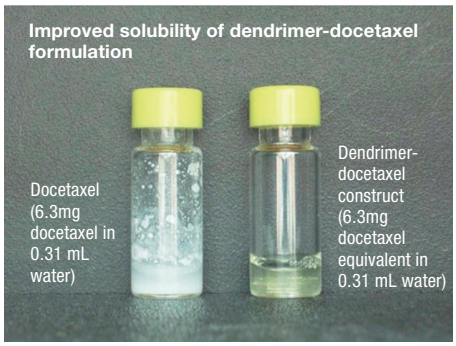


DRUG DELIVERY

›› Market leading Cancer drug reformulated with dendrimers

Positive initial data generated in the drug delivery program has demonstrated the potential benefits of Starpharma's dendrimer technology to significantly improve known cancer drugs. Following these initial results, Starpharma has nominated docetaxel as a key research candidate. Docetaxel is an important chemotherapy drug used to treat breast cancer, lung cancer and prostate cancer, and last year generated sales of approx. US$3bn.

Starpharma has reformulated docetaxel with a suite of its proprietary dendrimers and demonstrated a 2,000 to 8,000-fold improvement in water solubility, potentially allowing for the development of a novel, improved formulation of this important cancer drug. It is hoped that the increased water solubility provided by Starpharma's dendrimer technology will allow the development of a docetaxel formulation which would not require pre-medication with high doses of cortisone, and would avoid the need for inclusion of formulation components thought to cause the severe allergic reactions and fluid retention experienced by some patients.



Many cancer treatments have severe side effects, which can lead to life threatening complications or other shortcomings which hinder successful treatment. Combining dendrimers with important anti-cancer drugs can counteract these shortcomings, and Starpharma's earlier work with drugs closely related to docetaxel has demonstrated similar solubility improvements and other benefits including markedly reduced toxicities and lengthened half-life. Starpharma has an opportunity to apply its dendrimer technology to a range of chemotherapy drugs.

Starpharma has recently filed a new patent application recently with the United States Patent and Trademark Office, incorporating recent docetaxel data. This patent builds on extensive filings Starpharma currently holds and captures the potential uses of a class of dendrimers in a range of applications related to drug delivery, laying the groundwork to secure further intellectual property in this area.

Starpharma Holdings Limited
(ASX:SPL; OTCQX:SPHRY)
ABN 20 078 532 180
Baker IDI Building
75 Commercial Road
Melbourne Vic 3004
+61 3 8532 2700

www.starpharma.com

Company
Ben Rogers
Company Secretary
+61 3 8532 2704
ben.rogers@starpharma.com

Media Relations
Rebecca Wilson
Buchan Consulting
Mob: +61 417 382 391
rwilson@bcg.com.au