



# Biotech Daily

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*Daily news on ASX-listed biotechnology companies*

## Dr Boreham's Crucible: Starpharma

By TIM BOREHAM

**ASX Code:** SPL

**Market cap:** \$269.4 million; **Share price:** 73 cents; **Shares on issue:** 369.1 million

**Chief executive officer:** Dr Jacinth (Jackie) Fairley

**Board:** Rob Thomas (chairman), Dr Jackie Fairley, Richard Hazleton, Peter Turvey, Zita Peach

**Financials (March quarter):** revenue \$17,000 (\$641,000 year to date), cash used \$5.768 million (\$15.65 million year to date), cash on hand \$29.7 million\*, expected June quarter outflows \$5.9m.

\* Does not include \$US2 million milestone payment from Astrazeneca and \$35 million proceeds from sale of agrichemical division.

**Major shareholders:** Allan Gray 13.3%, M+G Investment Funds 13%, FIL Ltd 7.9%, Peter Colman 1%.

Sometimes an early-stage company is best judged on what it decides not to do, rather than what it decides to continue to do.

Hence the positive investor reaction to the sale of Starpharma's agrichemicals business to the global seed and crop protection giant Agrium, for \$35 million in cash.

The assets to be sold are based on Starpharma's Priostar (dendrimer) patents and know-how.

The sale was accompanied by a prezo and investor dial-in that highlighted Agrium's \$US13 billion and how the Starpharma assets will suit the business. For Agrium, \$35 million is chickenfeed (which it sells through its local ag supplies business, Landmark).

Given SPL has banked the cash and there are no further ongoing links, we suspect most investors don't give a hoot about Agrium's prospects.

But hats off to Starpharma for achieving four times book value for the asset. According to Dr Fairley, the portfolio would have to generate revenue of \$1 billion for Starpharma to earn \$35 million in royalties.

The divestment tidies up the sprawling Starpharma portfolio, based on the use of its dendrimer intellectual property for cancer drug development coated condoms and as a topical microbicide for preventing bacterial vaginosis (BV).

Dendrimers are nanoscale polymers that have wide uses in the pharmaceutical sector. It's hoped that when combined with the magic molecule, existing cancer drugs will target tumors in a more patient-friendly manner.

Starpharma's drug delivery platform is known as dendrimer enhanced products (DEP) and unlike with Johnny Depp's name it's always accompanied by a trademark logo so it can't be pirated.

In collaboration with drug giant Astrazeneca, Starpharma's early-stage program is based on three drugs: docetaxel for numerous indications including breast, head and gastric cancers, cabazitaxel for prostate cancer and irinotecan for colorectal cancer.

The company cites sales for docetaxel (brand name Taxotere) at \$US3.1 billion (\$A4.06 billion), cabazitaxel (Jevtana) at \$US426 million and irinotecan (Campostar) at \$US1.1 billion.

(By the way, whoever invents these drug names should be kept away from the experimental pharmacy cabinet).

On June 6, Starpharma said DEP irinotecan "significantly outperformed [Campostar in] multiple human colon cancer models".

Just to be clear, these did not involve real-life people but mice grafted with human cancer cells. But this is established practice and one has to start somewhere.

The US Food and Drug Administration recently warned about irinotecan in relation to diarrhoea and immune suppression, so there's obviously room for improvement.

The Astrazeneca tie-up also covers Starpharma's antiviral Vivagel coating, which has been adopted by condom maker Ansell and Japan's Okamoto to prevent sexually transmitted nasties including HIV, genital herpes and human papillomavirus.

In May, Ansell said it would sell its 'sexual wellness' (condom) arm to China's Humanwell Healthcare and venture capital fund Citic for \$US600 million.

Vivagel condoms were recently launched in Canada, the first North American jurisdiction.

In July last year, Starpharma signed a deal with Shenyang Sky and Land Latex to provide condoms under a government program, with an annual requirement of three billion condoms.

The company has also inked an Iranian deal.

"The strong Asian market presence of Humanwell will add additional strategic opportunities for the continued market penetration of the Vivagel condom in this fast growing region," Dr Fairley says.

Guffaws abounded after our Olympic athletes left for Rio last year armed with a generous supply of Dualprotect Vivagel dingers.

The undisclosed quantity of prophylactics was over and above the 450,000 generally available at the village, which casts a new light on the ideals of stamina and performance.

But at least none of our bronzed athletes returned with the Zika virus.

Starpharma estimates the bacterial vaginosis treatment market at \$US750 million, the bacterial vaginosis preventative market at \$US1 billion and the global condom market at \$US51 billion.

But so far, Starpharma has been unable to show statistical significance for Vivagel for bacterial vaginosis, while claiming clinical significance for both cure at two to three weeks in 2012 and for recurrence in 2013, with further trials underway and expected to report imminently.

### **What's next?**

There's a busy slate of news coming up, with Starpharma expected to release top-line data from its phase I docetaxel trial this year.

The company will also start a phase I clinical trial of DEP-cabazitaxel and is preparing for a phase II trial of DEP-docetaxel in the current half.

In the near future, Starpharma should also release the results of a phase III trial for Vivagel in preventing recurring bacterial vaginosis.

"The trials have completed and the extensive data set from the trials are currently undergoing data collection, routine blinded quality control review and bio-statistical programming," Dr Fairley says.

Other events to watch for are further commercial deals for Vivagel BV and a new drug application to the FDA.

Dr Fairley says there are several term sheets under discussion for commercial rights to Vivagel, a process helped along by the FDA granting coveted Qualified Infectious Disease Product status.

“In fact, Starpharma is the only Australian company ever to have been granted the QIDP designation,” says a proud Dr Fairley.

While Starpharma funds its own trial candidates, Astrazeneca pays milestones and royalties for the use of DEP in its own portfolio, with three programs currently underway.

### **Dr Boreham’s diagnosis:**

Starpharma shares have traded between 61 cents and 86 cents in the last 12 months, having peaked at \$1.68 in late 2012.

Starpharma listed in 2000, having been spun off from the Biomolecular Research Institute in 1996.

Is there a statute of limitations for reaching the Promised Land?

While the condoms generate some revenue, meaningful returns remain elusive even though the company inked its first coated condom deal in 2008 (with Durex owner SSL, which was taken over by Reckitt Benckiser).

The drug stuff is a wait-and-see proposition, although the company has enough cash to last four years.

Starpharma last month received a \$2.6 million milestone from Astrazeneca, in relation to a preclinical milestone relating to one of Astrazeneca’s “highly novel” oncology molecules.

Starpharma could receive up to \$US124 million in payments (as well as tiered royalties) if this secret drug is formalised. More broadly, it’s hoped the Astrazeneca collaboration blossoms into big-ticket licencing deals.

***Disclosure: Dr Boreham is not a qualified medical practitioner and does not possess a doctorate of any sort. He ponders whether Ansell and Starpharma would have won saturation headlines if they had provided free antiviral gloves to the athletes, rather than free condoms.***