## Starpharma Holdings Limited SPL (\$0.52) S&P/ASX 300 =

### **SPECULATIVE BUY**

### Capital Raising Positions SPL for Growth

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### **Investment Highlights**

- ▲ SPL has completed a \$15m capital raising which should provide sufficient cash reserves for the next two years.
- ▲ The funds will be used to preserve the company's current 33% equity holding in the USbased company Dendrimer Nanotechnologies Inc. (DNT) as well as build the company's product pipeline through collaborative projects with DNT and its internal R&D projects.
- ▲ With A\$26m funding secured for the company's lead product VivaGel<sup>™</sup> for HIV infection in women and potential additional funding for the HSV-2 application for VivaGel<sup>™</sup> likely, the current capital raising will take to a position where it will have two products close to market entry, currently schedule for mid-late 2008.
- ▲ Our analysis supports a valuation of \$0.89 for SPL taking into account both the equity issued to BRI in exchange for cancellation of BRI's royalty rights and the additional shares issued in this capital raising.
- ▲ We consider SPL to be undervalued at its current market price of \$0.52 and believe there are significant near term opportunities for SPL to be re-rated including:
  - securing of additional funding to support the development of VivaGel<sup>™</sup> for HSV-2
  - securing a deal with one or more commercial parties to develop VivaGel<sup>™</sup> as a coating for premium condoms
- With a fundamentally sound cash position, strong near term news flow and solid product pipeline, we believe that SPL offers an attractive buying opportunity in the biotechnology sector.



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### Capital Raising Provides Cash For Next Two Years

- ▲ SPL has completed a \$15m capital raising including a \$12m institutional placement at \$0.51 and an underwritten Share Purchase Plan (SPP) to raise an additional \$3m.
- ▲ The issue price of \$0.51 represents a 12.8% discount to the closing price and a 17.3% discount to the 30-day VWAP.
- ▲ A total of 29.5m new shares have be issued which will constitute 19.9% of the post-raising issued capital. The placement will be completed in two stages with 9.6m shares issued immediately and the remaining 15.9m shares subject to shareholder approval which will be sought in mid-December. The SPP is expected to run from 22 November to 15 December 2005.
- ▲ SPL reported a cash balance of \$5.5m on 30 September 2005. While the cash burn for Q1 FY06 was \$2.6m, this reflected higher than usual expenditure from establishing scale-up of raw materials for VivaGel<sup>™</sup> in anticipation of forthcoming HIV trials.
- ▲ Going forward, the costs associated with the development of VivaGel<sup>™</sup> for prevention of HIV infection will be covered by the A\$26m development contract awarded by the NIH in October 2005.
- ▲ We estimate that the underlying cash burn rate, which will now exclude the future development costs for VivaGel<sup>™</sup> for HIV, to be in the order of \$5m-\$6m per annum. Following the recent capital raising, we estimate that SPL will have approximately \$19m in cash reserves.
- ▲ Approximately \$3m of the cash has been budgeted for future equity investments in DNT and an additional \$2m for investment in collaborative projects with DNT.
- ▲ The remaining \$14m cash is sufficient to cover SPL's operations for at least the next two years including R&D support for the company's discovery projects.
- ▲ These cash reserves will provide shareholders and investors with greater comfort regarding the financial position of SPL.

# VivaGel<sup>™</sup> Should Provide Good Near-Term News Flow

- ▲ We believe that the development of the VivaGel<sup>™</sup> product will provide significant news-flow in the near future:
  - additional external funding to support the development of VivaGel<sup>™</sup> for the prevention of infection by HSV-2; the cause of genital herpes
  - securing a deal with one or more commercial parties to develop VivaGel<sup>™</sup> as a coating for premium condoms
- ▲ The US government has made a very clear commitment to support the development of safe and effective microbides which prevent the spread of the HSV-2 virus. This virus has already reached epidemic proportions in the US and other developed countries as well as in the developing world.
- ▲ Currently it is estimated that 22% of the US adult population (26% of females and 18% of males) are infected with HSV-2 and that this will increase 49% females and 39% of males unless steps are taken.





- ▲ Recently, results from HSV-2 vaccine trials have become available and shown that the vaccines under development are not effective in the majority of the population. As a consequence, it is now believed that the development of an effective vaccine is many years away and microbicides, such as VivaGel<sup>™</sup>, will offer the best opportunity to reduce the spread of infection.
- ▲ The success of SPL in securing funding from the prestigious National Institute of Health (NIH) in the US for the HIV application for VivaGel<sup>™</sup> has provided a strong endorsement of SPL's technological approach for the development of safe and effective microbicides.
- ▲ We believe that this, combined with the clear commitment of the US government to combat the spread of HSV-2 place SPL in a very strong position to receive additional financial support for the development of VivaGel<sup>™</sup> for HSV-2.
- ▲ SPL has a number of applications for development funding for VivaGel<sup>™</sup> for HSV-2 currently under consideration and we believe that the outcome of these applications will be known in the near future.
- ▲ We believe that the company is also in discussions with commercial partners for the use of the active ingredient from VivaGel<sup>™</sup> as a coating for premium condoms.
- The current coating for premium condoms is a surfactant (detergent) called nonoxynol-9 (N-9) which is supposed to provide spermicidal activity as well and render viral particles ineffective by disrupting the viral membranes.
- ▲ It has recently become evident that surfactants such as N-9 actually increase, rather than reduce, the rate of infection by viral particles by disrupting the human cellular membranes which act as a barrier to infection.
- ▲ The premium market is the most profitable for condom manufacturers and these companies are actively seeking new agents that offer some additional protective benefits and are safe.
- ▲ As condoms are considered a device, rather than a therapeutic, we believe that the regulatory approval route for this application is likely to be less onerous and potentially could result in market introduction by 2H CY07.
- ▲ We believe that the interest expressed by various commercial partners of condoms has been high and there is the potential that some form of partnering arrangement could be announced within the next 3-6 months.

### Value Of Current NIH Funding Not Yet Fully Recognised

- ▲ In October 2005, SPL was awarded a development contract of US\$20.3m (approximately A\$26.4m) to support the development of VivaGel<sup>™</sup> as a microbicide to prevent infection by the HIV (AIDS) virus in women.
- ▲ As this funding was awarded to SPL by the NIH, one of the most prestigious research institutions in the world, in a competitive process against other groups who are also developing microbicidal technology, it provides a very strong endorsement of the SPL's technology.
- ▲ From a financial perspective, the funding is specifically provided to the company for an agreed development program for VivaGel<sup>™</sup> for HIV. While the funds are fully committed, they are provided by the NIH to SPL as the development program progresses and do not constitute free working capital that the company can use for other applications.





- ▲ The funding has been provided with no downstream commercial obligations or dilution of SPL's interests in commercial returns that will be generated from VivaGeI™.
- ▲ We estimate that the funding provided by the NIH is sufficient to establish the scale-up manufacture of the product, progress it through all of the additional safety testing and support a significant proportion (70-80%) of the clinical efficacy trials.
- ▲ On our numbers, the removal of \$26m in development costs from this program has increased the risk adjusted NPV of VivaGel<sup>™</sup> from \$45m (\$0.30 post capital raising) to \$62m (\$0.42).
- ▲ Furthermore, the development of the scale-up manufacturing for VivaGel<sup>™</sup> and some of the additional safety data that will be generated under the program supported by the NIH funding can be used for the development of VivaGel<sup>™</sup> for other applications such as HSV-2.
- ▲ We believe that SPL's current price has not fully factored in the economic benefits of the significant, non-dilutive funding from the NIH let alone the significant endorsement of the technology or access to opinion leaders that it provides.

### Cancellation of BRI License Provides Greater Upside For SPL

- ▲ In October 2005, SPL announced that it had reached an agreement with the Biomedical Research Institute (BRI) to cancel its 25% royalty obligation to BRI in exchange for 7.1m newly issued shares which will be held in voluntary escrow for 12 months.
- ▲ The technology licensing agreement which contained this 25% royalty obligation on SPL's VivaGel<sup>™</sup> family of products dates back to 1996 when SPL was spun-out of the BRI.
- ▲ By negotiating the cancellation of this royalty obligation, SPL has now secured full ownership of its core technology and is able to receive the full economic benefit of any commercialisation arrangements it establishes.
- ▲ We believe that this arrangement is very favourable for SPL's shareholders and the relative dilution from the issue of shares (approximately 6%) is not significant given the greater commercial benefit that will be received by SPL shareholders.

# Equity Holding In DNT Will Provide Upside For Shareholders

- ▲ SPL currently holds a 33% equity stake in the private US-based nanotechnology company Dendrimer Nanotechnologies Inc. (DNT).
- ▲ DNT is a private company that has not received any external funding to provide an independent valuation point. In our initiation of coverage report (6 October 2005), we estimated that SPL's equity stake in DNT is worth between A\$35m-A\$45m based on comparable US listed nanotechnology companies.
- ▲ DNT is developing dendrimers for a range of applications including drug delivery and imaging agents for diagnostics. The company recently developed a proprietary manufacturing process called Priostar<sup>™</sup> that significantly lowers the cost of product of dendrimers as well as generates dendrimers with enhanced thermostability properties. By changing the economics of dendrimer production, the Priostar<sup>™</sup> technology opens up applications for dendrimers in electronics and surface coatings.



- ▲ DNT already has licensed two products to major partners (Dade Behring and Quiagen) and has two other products that should be licensed in the next 12-24 months. Most recently, the company has established research agreements with the National Cancer Institute (US) for the development of cancer diagnostics and with the US biotechnology company Lumera Corp. (LMRA, MCap US\$71m) for the development of proteomic diagnostics. DNT was recently awarded the "Advanced Medical Applications Technology Innovation of the Year" Award by Frost & Sullivan for its Priostar™ technology.
- We believe that in the near future, DNT is likely to undertake an internal round of private funding. The valuation that this round will be undertaken will be determined by existing shareholders and not provide an independent valuation event.
- ▲ SPL has budgeted A\$3m to participate in a potential future internal fund raising in DNT in order to preserve its current 33% equity stake. Given that the internal round will be internally priced and may not reflect the full potential market value of the company, we believe that preservation of SPL's current equity stake will represent a sound investment.
- ▲ SPL has also budgeted A\$2m of the raised cash for investment in collaborative projects with DNT. SPL has an exclusive right to any intellectual property using dendrimers for therapeutic applications. We understand that there are a number of projects currently in development in DNT that could yield new therapeutic applications for dendrimers which would directly enhance SPL's product pipeline.

### Current Technology And Assets Support \$0.89 Shareprice

▲ Our analysis supports a valuation for Starpharma of \$0.89 following the capital raising and the issue of 7.1m new shares to BRI resulting in a total of 147.8m shares.

Asset	Basis of Valuation	Value (A\$m)	Per Share (A\$)	
VivaGel™	DCF	\$62.1	\$0.42	
33% Equity in DNT	Comparables	\$40.0	\$0.27	
Other Technology & IP	Estimate	\$15.0	\$0.10	
Cash (ex DNT Investment)	Cash Raised	\$14.7	\$0.10	
Total		\$131.8	\$0.89	

#### Table 1: Breakdown of Valuation of SPL Post Capital Raising

Source: Paterson estimates

- ▲ We have used a probability adjusted DCF to value VivaGel<sup>™</sup> for both HIV and HSV-2. Our model assumes a 50% chance of VivaGel<sup>™</sup> reaching market and a net royalty to SPL of \$0.75 for each unit of VivaGel<sup>™</sup> sold. Our market projection is based on 1-1.5% market penetration for women of reproductive age in developed countries (295m women) and developing countries (435m women) with a frequency of use of 25-50 times per year. We have assumed that VivaGel<sup>™</sup> will be on market for HIV and HSV-2 in mid and late CY08 respectively.
- ▲ Our valuation of DNT is based on a number of listed nanomaterials companies in the US which had a range of market caps of US\$80m to US\$190m. Our assessment of DNT's products, corporate partnerships and intellectual property portfolio supported an estimate of potential market value of US\$100m.



### **Recommendation And Outlook**

- ▲ The recent \$15m capital raising by SPL will provide with sufficient funds for the next two years by which time the company's lead product, VivaGel<sup>™</sup>, will be in advanced clinical testing for both the prevention of HIV infection and HSV-2 infection in women.
- ▲ If there is a need to raise additional capital at the end of 2007, with the VivaGel<sup>™</sup> product close to market for both indications, a capital raising undertaken at this time will be at a significant premium to the current price.
- ▲ We believe that SPL is undervalued given its current portfolio of assets. Furthermore, there is likely to be news flow in the near term that should support a re-rating of the stock including:
  - additional funding to support the development of VivaGel<sup>™</sup> for the prevention of HSV-2 infection
  - securing a deal with one or more commercial parties to develop VivaGel<sup>™</sup> as a coating for premium condoms
- ▲ As condoms are considered a medical device, it is likely that this will provide a shorter route to market which could generate sales revenue by late 2007.
- ▲ We consider that SPL's 33% equity holding in DNT is a valuable asset for the company from both a strategic and economic perspective. We believe that maintaining its current equity position by participating in any further internal funding rounds, which have the potential to be significantly dilutive, it an astute move by SPL's management.
- ▲ With the additional cash reserves generated by the recent capital raising, SPL is now in a strong position to continue developing its lead product, VivaGel<sup>™</sup>, for different applications as well as build up its pipeline of new nanopharmaceuticals.

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