

Starpharma Holdings Limited Market Update



Dr John Raff
Chief Executive Officer

Who is Starpharma?



- Business:** Globally pre-eminent in the Development and commercialisation of new pharmaceuticals using 'dendrimers' (highly defined nano-scale structures)
- Competitive Advantage:** First and only pharmaceutical development company to have had the US Food & Drug Administration ("FDA") approve trials in humans of a dendrimer nanotech engineered pharmaceutical - VivaGel™ (a vaginal microbicide with protective properties against the transmission of HIV & sexually transmitted diseases).
- Securities Listed:** Australian Stock Exchange (ASX: SPL)
IPO September 2000
- Level 1 American Depositary Receipts Program (USOTC:SPHRY - CUSIP number 855563102)
Depository bank : The Bank of New York
January 2005
- Established:** 1996 - Melbourne, Australia



Starpharma's Melbourne
Head Office & Laboratories (level 6)

Recent Announcements

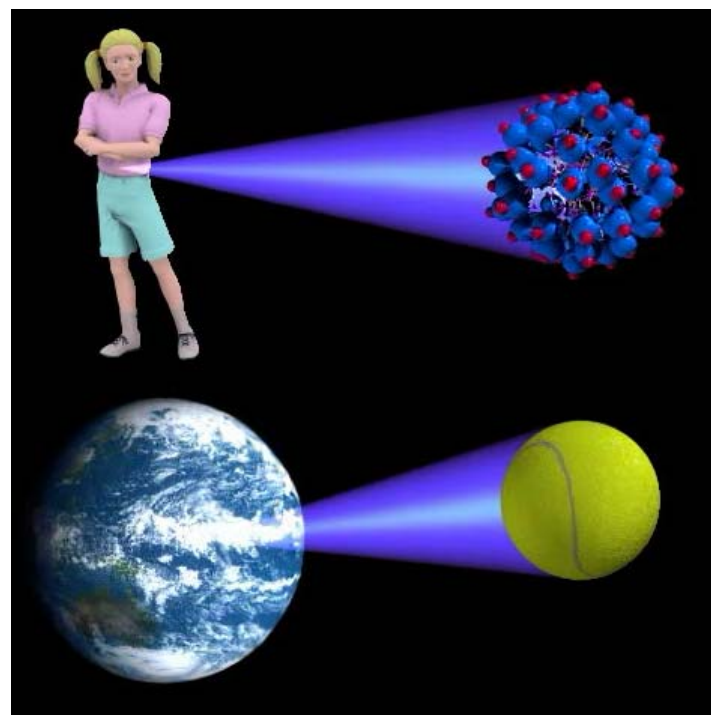


- September 2004** US National Institutes of Health (“NIH”) grants US\$6m to SPL for further development of microbicide pipeline.
- December 2004** Results of Phase I human clinical trials indicate that VivaGel™ is safe, well tolerated and suitable to be developed as a vaginal microbicide for the prevention of HIV.
- December 2004** VivaGel™ is rated in the Top 5 Nanotech breakthroughs, world-wide, in 2004 and SPL in the Top 5 Nanotech stock picks for 2005. (Ref: Forbes Wolfe Nanotech Reports)
- January 2005** ADR Level 1 program successfully launched and enjoying rapid take-up.
- January 2005** The Dow Chemical Co transferred entire dendrimer nanotech portfolio of patents (196 patents/ 41 patent families) to Dendritic NanoTechnologies, Inc. (“DNT”). (Owned - 33%: SPL; 30% Dow Chemical.)
- March 2005** SPL management team strengthened by appointment of Dr Jackie Fairley.
- April 2005** SPL offered \$5.6M grant under Australian Government Pharmaceutical Partnerships Program to develop new products to fight cancer, HIV/AIDS, diabetes and viral respiratory conditions.

Other announcements include establishment of Dimerix Bioscience Pty Ltd, joint venture with Anadis Limited, and further New Zealand Government funding via IRL.

Nanotechnology

- Purposeful manipulation of matter smaller than 100 nanometres (“nm”).
- One nm is one billionth of a metre, or $1/75,000^{\text{th}}$ the width of a human hair .
- Nanotechnology will revolutionise manufacturing and pharmaceutical compounds. New types of molecular interactions are observed, leading to new solutions with previously unobtainable properties, eg. rubber that conducts electricity, flexible ceramic jet engine parts.
- Current manufacturing methods are unsophisticated at the molecular level. Matter is being moved en masse.
- Nano techniques are being developed to place every atom and molecule in a desired place.
- Nanotechnology is the largest US Federally funded science initiative since it decided to put a man on the moon. (In 2004, US Government invested USD1.6B)

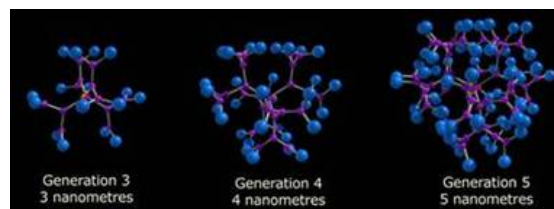


Using Dendrimers to Create New Polyvalent Products

SPL is the world leader in the discovery and development of pharmaceutical products using dendrimers and the multi-binding phenomenon of polyvalence and has a dominant world patent position in dendrimer nanotechnology.

- **Dendrimers ('dendri' = tree / 'mer' = branch)**

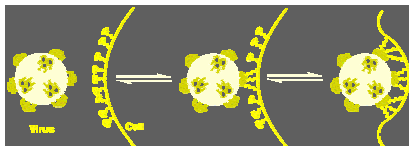
- Uniform and defined building blocks that allow nanoscale objects to be designed, produced and functionalised across broad fields of application.
- The major platform for producing synthetic nanostructures compatible with biological systems.



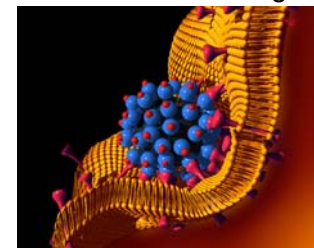
Illustrations of dendrimer structures

- **Polyvalence**

- Polyvalent (i.e. multiple simultaneous) binding mimics nature (e.g. protein-protein & protein-membrane binding), resulting in significantly enhanced activity compared with traditional small 'single-binding' molecules – like "molecular velcro"
- Precise control of surface functionality compared to polymers



Whitesides *et al*, *Angew. Chem. Int. Ed.* **1998**, 37(20), 2754



VivaGel™ – The First Product of the Pipeline

VivaGel™ is the world's first defined nano-scale drug to be tested in human clinical trials. The results set an important precedent with the US FDA.

- Description:** A vaginal microbicide for the prevention of HIV, genital herpes and other sexually transmitted diseases – applied to the vagina privately before sexual activity.
- Significance:** A new product concept – the first ‘female controlled’ product.
The condom is a ‘male controlled’ product.
- Target Market:** Over 40 million people are infected worldwide with HIV. VivaGel™ is aimed at all women who desire to remain HIV-negative. Significant market in the developed world (over US\$2 Billion).
- Development Stage:** Completed initial dose-ranging phase I safety & tolerability study in December 2004. Planning expanded clinical program in 2005.
- Commercialisation Progress:** Further trials in 2005/6, initially applied to outside of condoms (estimated market USD500M).



VivaGel™ packaged into pre-filled applicators.

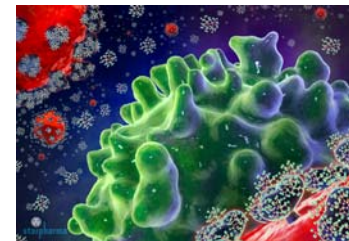


Illustration of dendrimers binding to the gp-120 receptors on the surface of the HIV virus, blocking its attachment to the CD-4 receptors on the cell surface.

VivaGel™'s Dendrimer Composition offers competitive advantages in product safety, efficacy, HIV & HSV activity resistance profile and regulatory development for FDA



Competing Product (Company)	How they work
Savvy (Biosyn)	Surfactant/detergent
<ul style="list-style-type: none">• Pro2000 (Indevus)• Carraguard (Pop. Council)	Negatively charged polymers
Tenofovir (Gilead)	Inhibits virus replication enzyme
<ul style="list-style-type: none">• BufferGel (Reprotect)• Acidform (Instead)	Vaginal acidification

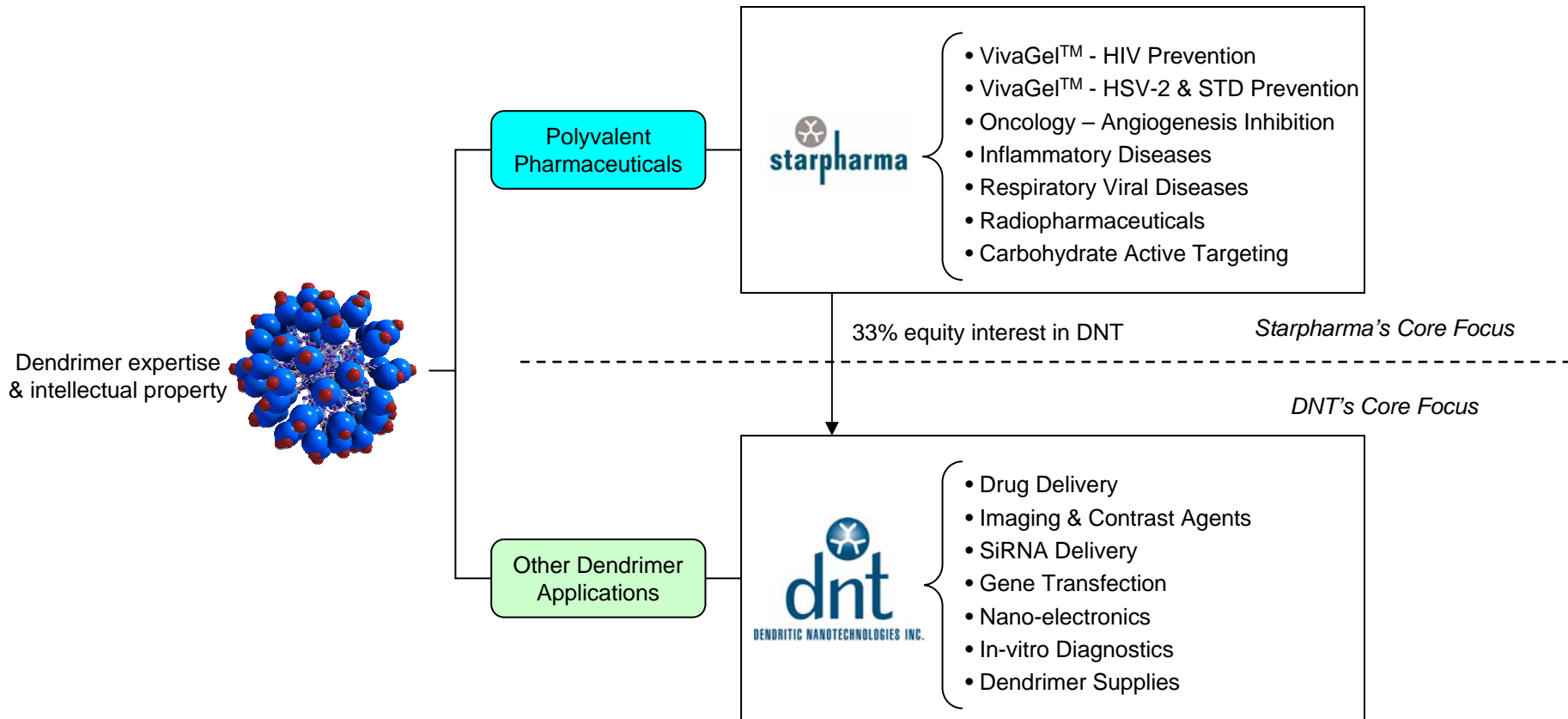
Key Development Issues

- Safety/Efficacy:** Progressive expansion of clinical trials, internationally, into larger population groups for both HIV and HSV indications.
- Activity:** Topical microbicides are increasingly being recognised as the best and quickest opportunity for HIV prevention. *Ref: New England Journal of Medicine.*
(Major difficulties with vaccine strategies.)
- Scale Up:** SPL has made substantial progress in scale up manufacturing, with a network of international groups, eg. IRL NZ, IDT Victoria
- Funding:** Working toward full financial support of ongoing clinical trials from Government and world agencies, thereby enabling SPL to retain its full equity in the project.

Platform Technology With Broad Applications



Starpharma's focus on polyvalent pharmaceuticals has many high value applications.



Product Development In-house, followed by licensing with a partner for marketing & distribution:

VivaGel™

- Condom Market
- HIV Prevention – Vaginal Microbicide
- Genital herpes & STD market
- Combination Microbicide

Generate up-front, milestone payments & royalties on sales of product.

Multiple Early Stage Development Partnerships to 'Seed the Technology' with Companies:

- Combination Microbicide
 - **ReProtect, Inc.**
- Radiopharmaceuticals
 - **Producer of radioisotopes**
- Carbohydrate Active Targeting
 - **Industrial Research Limited**
- Diabetes
 - **Chemgenex, Inc**
- Biodefense
 - **Anadis Ltd**

Generate up-front, milestone payments & royalties on sales of product.

Formation of Spin-out Companies and Joint Ventures:

- **Dendritic NanoTechnologies, Inc.**
 - 33% SPL - Michigan, US
 - Commercialisation and supply of dendrimers
- **Dimerix Bioscience Pty Ltd**
 - 30% SPL - Receptor coupling
 - Mechanism of polyvalence
- **Several other initiatives in progress**



Generate capital value through equity holdings and commercialisation rights.

Exposure to Other Opportunities Through U.S. JV



SPL holds a 33% interest in privately owned company Dendritic NanoTechnologies, Inc (based in Michigan).

www.dnanotech.com



DNT's Business:

Supply and development of dendrimers in life sciences, materials and electronics applications

Globally dominant patent position:

In January 2005, **The Dow Chemical Company** transferred its 'foundational' (i.e. 1984-2004) portfolio of 196 patents (41 patent families) to DNT, with SPL granted exclusive worldwide rights to any applications in polyvalent pharmaceuticals.

Significance:

- Dow has entrusted commercialisation of its substantial portfolio to DNT & SPL, in return for a significant equity stake in DNT.
- SPL and DNT control the world's broadest dendrimer patent portfolio.
- SPL is the clear 'partner of choice' for big pharmaceutical & biotech companies interested in polyvalence.

Partnerships:

The Dow Chemical Company, Pfizer, Inc., Sigma Aldrich, Dharmacon, MIT's Institute for Soldier Nanotechnologies, Central Michigan University, Precision Detectors

Management Expertise and Depth



Name	Position	Experience
Peter Bartels, <i>AO</i>	Chairman of the Board	Formerly CEO and Managing Director of Fosters Brewing Company Limited and Coles Myer Limited
John Raff, <i>Ph.D.</i>	CEO	Founder and experienced entrepreneur
Jackie Fairley, <i>BSc MBA</i>	COO (announced)	Business Development and senior management in large Pharma
Tim Grogan	V.P. Commercial Development & Licensing	Corporate/IP law. Previous experience with Monsanto and Freehill, Hollingdale and Page, Australia's leading law firm
Guy Krippner, <i>Ph.D.</i>	Head of Chemistry	10 years industry experience. Management positions with Biota and Prana
Ben Rogers	Company Secretary	Extensive experience in finance and administration
Tom McCarthy, <i>Ph.D.</i>	Development Manager	Successfully led IND application for VivaGel™. Organic chemist trained at Oxford.
Jeremy Paull, <i>Ph.D.</i>	Regulatory Affairs Manager	Norwood Abbey, transdermal drug delivery, and pharmacology
Key Scientific Advisors		
Prof. Peter Colman	Non-executive Director – Starpharma	Head, Structural Biology Division, Walter & Eliza Hall Institute of Medical Research
Dr. Peter Jenkins	Non-executive Director - Starpharma	Consultant physician and gastroenterologist
Prof. Jean Fréchet	Professor of Chemistry, University of California Berkeley	Most published dendrimer chemist
Larry Stanberry <i>M.D.</i>	Professor, University of Texas Medical Branch	Virology, genital herpes and microbicides

Cash Resources & Capital Structure



Cash:

- \$10m in the bank
- Sufficient cash in the bank for more than two years operation, at current burn rate
- Expenditure is on budget

Capital Structure:

- 111,235,000 ordinary stock on issue (no listed options)
- ADR-I Program: 334,779 on issue (ratio 10:1)
- 2,189 shareholders
- 20% issued stock held by directors
- 30-35% of issued stock held by Institutional Investors

SPL: Investment highlights



Forbes /
Wolfe

Nanotech
Report

December 2004: Top 5 Nanotech Breakthroughs of 2004
Melbourne, Australia-based Starpharma's product VivaGel.

January 2005: Top Nanotech Buys for 2005

"We expect great things to come from [Starpharma] and its significant ownership in U.S.-based Dendritic Nanotechnologies, Inc."

- Establishing partnerships for increasing investor awareness in Australia and internationally – future ADR 3 - eg. rapid take-up of ADR Level I program
- Dendrimers – a leading Nanotechnology platform for life sciences applications
- SPL - unparalleled strength and expertise in the science of dendrimers for use as polyvalent pharmaceuticals
- SPL dominates the field's IP landscape
- VivaGel™ - significant market opportunity and development with no equity loss to Starpharma
- Partner of choice in dendrimer technology and world class development and commercialisation capabilities
- Strong and focused management
- Ongoing demonstration of the value of DNT

SPL represents the opportunity to participate in a company that is at the forefront of the application of nanotechnology to the development of new types of pharmaceuticals and the value that will be created.



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