

#### AGM - Chairman's and CEO's presentations

Attached is the Chairman's address together with the CEO's presentation to the Annual General Meeting of Starpharma Holdings Limited (ASX:SPL, USOTC:SPHRY), to be held at 4.00pm today.

An audio broadcast of the presentations may be heard from 4.30pm today on boardroomradio.com.

The presentation details are as follows:

- Annual General Meeting
- Presented by Mr Peter Bartels, Chairman and Dr Jackie Fairley, CEO
- 15 November 2006
- 4.30pm
- At http://www.brr.com.au/event/SPL/1305/17105/wmp/gt6aorkj5a

To listen, simply click on the Windows Media Player, QuickTime or MP3 icon.

Additionally, the presentation can be accessed at <u>www.boardroomradio.com</u> where it will also be archived for future on-demand listening – if you miss the live presentation, you can log on later to hear the news.

#### **About Starpharma:**

Starpharma Holdings Limited (ASX:SPL, USOTC:SPHRY) is a world leader in the development of dendrimer nanotechnology for pharmaceutical, life-science and other applications. SPL is principally composed of two operating companies, Starpharma Pty Ltd in Melbourne, Australia and Dendritic Nanotechnologies Inc in Michigan, USA. Products based on SPL's dendrimer technology are already on the market in the form of diagnostic elements and laboratory reagents.

The Company's lead pharmaceutical development product is VivaGel<sup>™</sup> (SPL7013 Gel), a vaginal microbicide designed to prevent the transmission of STIs, including HIV and genital herpes.

In the pharmaceutical field Starpharma has additional specific programs in the areas of Drug Delivery and ADME Engineering<sup>™</sup> (using dendrimers to control where and when drugs go when introduced to the body), Polyvalency (using the fact that dendrimers can activate multiple receptors simultaneously) and Targeted Diagnostics (using dendrimers as a scaffold to which both location-signalling and targeting groups are added to allow location of specific cell type, such as cancer cells).

More broadly the company is actively exploring dendrimer opportunities in materials science with applications as diverse as adhesives, lubricants and water remediation.

SPL has a comprehensive IP portfolio that comprises more than 180 patents/applications issued and pending across 32 patent families - a unique level of IP concentration among nanotechnology companies.

**Dendrimers:** A type of precisely-defined, branched nanoparticle. Dendrimers have applications in the medical, electronics, chemicals and materials industries.

**Microbicides:** A microbicide inactivates, kills or destroys microbes such as viruses and bacteria. Microbicides may be formulated as gels, creams, sponges, suppositories or films with the purpose of reducing significantly the incidence of STIs. They are intended for vaginal or rectal use to afford protection for varying periods, from several hours up to days. Microbicides may also be designed to have a contraceptive function.

**Genital herpes:** A recurrent, lifelong viral infection caused by the sexually transmitted herpes simplex virus type-2 (HSV-2). It is one of the most prevalent STIs, estimated to infect between 15% and 25% of male and female adults in developed countries. This figure is expected to rise to about 39% for males and 49% for females by 2025, unless effective preventive measures are found to reverse the trend. Herpes is estimated to affect one in six adults in America and new cases cost more than US\$1.5 billion each year. The figures for Australia are similar with an estimated one in six adults suffering from genital herpes (3.4 million people).

HSV-2 infection has a marked effect on a sufferer's quality of life. The virus is highly contagious and women appear to be at greater risk of infection than men. HSV-2 infection can make people more susceptible to infection by HIV and increase the transmission rate of HIV. If transmitted from mother to baby, the disease has very serious consequences.

**American Depositary Receipts (ADRs):** Starpharma's ADRs trade under the code **SPHRY** (CUSIP number 855563102). Each Starpharma ADR is equivalent to 10 ordinary shares of Starpharma as traded on the Australian Stock Exchange. The Bank of New York is the depositary bank.

#### For further information:

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|--|--|---|
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#### Chairman's Address

#### **Annual General Meeting**

of

#### Starpharma Holdings Limited, 15 November, 2006

Welcome to the Starpharma AGM for fiscal year 2005-2006.

When I was asked to give a talk on leadership a few years ago, one theme that I developed at the time was the ability of leaders to use change to their advantage.

Although I was directing my comments to individuals at the time, my words could just have easily been targeted to corporate entities.

Starpharma is not averse to change. If anything, we embrace change at every opportunity and recognise this as an important process in evolving and growing a business.

There have been some outstanding recent examples of strategic change that I believe have strengthened our business globally.

One of them was the appointment of Jackie Fairley to CEO. When our CEO of 10 years, John Raff, decided to retire, a succession plan was required. Jackie played a major role in that plan. She settled in as chief operating officer and worked with John until the time was right for him to step down.

It was almost a question of 'when is a change not a change?' John's departure and Jackie's appointment took place as a seamless transition and never looked like shaking the unquestionable stability of the company.

Happily, John's influence will continue to guide Starpharma's business as he remains on the Board as deputy chair. I'd like to take the opportunity to thank him for a decade of leadership and commitment to Starpharma – the successful company you see today is in many ways a testament to him.

The second change occurred last month, outside the reporting period of this AGM, but very much worthy of mention when we acquired US company Dendritic Nanotechnologies, or DNT.

You may remember that Starpharma was a Pooled Development Fund when DNT was established. This limited our ability to make offshore investments, and as a result we relinquished control of DNT.

That situation has now changed. DNT is once again a wholly owned subsidiary of Starpharma and for our part; we have acquired a well-known entity and consolidated our IP position in the dendrimer field.

With the DNT acquisition, Starpharma realises a number of important benefits – access to revenue from product sales, an impressive portfolio of IP, new areas of dendrimer application and a new major shareholder – the Dow Chemical Company.

Importantly, the acquisition has also given us a clear passage to expand Starpharma in the US. Jackie Fairley and I have spent much of last month investigating ways to fast track our profile there.

We have previously foreshadowed a desire of adding a US based director to the board, and following the acquisition of DNT we've invited the former CEO of a major US corporate to become a director of Starpharma. We expect to be able to make an announcement confirming that appointment in the near future.

In summary, we see the acquisition of DNT as a company-changing event that will firm the future of Starpharma with a much expanded product portfolio and access to the US capital markets.

This was not the only IP-strengthening activity that took place during the year. We undertook another strategic buy-back of dendrimer IP that returned complete ownership of three patent families to Starpharma and removed technology licence arrangements established about 10 years ago when Starpharma was spun out of the Biomolecular Research Institute.

John Raff summed up our view of this IP buy back last October when he said "This is the right deal at the right time and it is very much in the interests of our shareholders."

Clearly, management's ability to accommodate, initiate and implement change is bearing very good outcomes.

On the clinical front, VivaGel has cleared a number of obstacles on an unfamiliar road to market and has gained considerable high-level support on the way. Whilst we recently announced an extension to regulatory approval milestones, the factors involved are less of an issue in the conduct of genital herpes trials. We are increasingly confident that the genital herpes indication has significant commercial potential and can provide a faster route to market without many of the challenging factors inherent in HIV trials.

Many experts in world health believe that the empowerment of women is essential if we are ever to stem the spread in the developed and developing worlds of sexually transmitted infections such as HIV and the virus that causes genital herpes.

One such expert and one of Australia's leading scientists, Sir Gustav Nossal, published a paper in which he strongly endorsed products such as VivaGel and singled out Starpharma for its steps toward preventing the spread of HIV and genital herpes, particularly through empowering women.

Our recent discovery that the active ingredient in VivaGel also acts as a potent contraceptive in rabbits has met with a very positive response from both our scientific and commercial staff. An additional, contraceptive, action can only increase the value of our microbicidal product.

It is extremely pleasing to confirm that clinical trials of VivaGel for HIV infection and genital herpes have already commenced in Australia and the US and will soon extend into Kenya.

For many biotechs, the only options for funding clinical development are commercial licensing deals or the financial markets.

While we approached the market to raise \$15 million through a share placement and share purchase plan last November, we have been able to avoid 'selling the farm' as part of a commercial licensing deal.

The reason? Starpharma received 26 million Australian dollars from the National Institutes of Health in the US to develop VivaGel against the spread of HIV. We then received further funding for our genital herpes program.

A great thing about this substantial injection of funds is that it comes with no loss of product ownership, but has all the upside of short-term security for the project, validation of product concept and all-important access to US clinical expertise and influence.

VivaGel is the first microbicide to have received NIH funding for development against herpes and we are reasonably sure that it is the first microbicide with FDA investigational new drug status for prevention of herpes.

There is plenty of good news and also plenty of hard work ahead for the Board and management of Starpharma.

I'm confident that both are up to the challenges. I'd like to thank my fellow directors for their valuable counsel, and especially our retiring CEO John Raff, and our new CEO Jackie Fairley. I'd also like to thank all our staff for their continued hard work, absolute focus and commitment to the pursuit of excellence and to making Starpharma a clear leader in the global biotechnology industry.

I shall now bring to an end my fourth AGM presentation and hand over to Jackie for her first address as CEO.

Thank you.

Peter T Bartels Chairman



Starpharma Holdings Limited ASX:SPL USOTC:SPHRY

AGM Presentation 15 November 2006

Dr Jackie Fairley - CEO





This presentation contains forward-looking statements that involve risks and uncertainties. Although we believe that the expectations reflected in the forward-looking statements are reasonable at this time, Starpharma can give no assurance that these expectations will prove to be correct. Actual results could differ materially from those anticipated, because of various important factors, risks and uncertainties. These include risks associated with drug development and manufacture, risks inherent in the extensive regulatory approval processes mandated by regulatory authorities, delays in clinical trials, future capital needs and general economic uncertainty. Also, there can be no assurance that others will not independently develop similar products or processes or design around patents owned or licensed by the Company, or that patents owned or licensed by the Company will provide meaningful protection or competitive advantages.



- 1. Key Achievements
- 2. Company Overview
- 3. VivaGel<sup>™</sup>
- 4. DNT Acquisition
- 5. Pipeline
- 6. Conclusion

# 1. Key Achievements



## Key Achievements



- ✓ HIV Funded: US\$20.3M
- ✓ Genital Herpes Funded
- ✓ HIV Fast Tracked
- ✓ Herpes IND Cleared
- ✓ Contraceptive Activity
- ✓ ADRs exceed 10%
- ✓ A\$15M Funds Raised
- ✓ Patent Estate Expanded
- ✓ Priostar<sup>™</sup> Rolled Out
- ✓ Acquisition of DNT
- ✓ US Shareholding : c. 19%

- NIH funds VivaGel<sup>™</sup> HIV development with non-dilutive funding NIH funds VivaGel<sup>™</sup> Genital Herpes Development US regulator FDA designates VivaGel<sup>™</sup> a fast track product FDA clears VivaGel<sup>™</sup> Genital Herpes IND VivaGel<sup>™</sup> shown to be a potent contraceptive in animals US uptake of ADRs exceeded 10% of SPL issued capital Institutional and SPP capital raising Substantial program of patent filing completed
- \_\_\_\_\_
- DNT rolls out Priostar™ industrial dendrimer platform
- SPL acquires US company DNT
- Dow becomes SPL's largest holder

The past 12 months has been a period of significant achievement for Starpharma

# 2. Company Overview



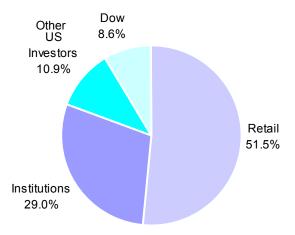
## Company Overview



- World leader in the development of dendrimer nanotechnology products for pharmaceutical and lifesciences
- Lead product VivaGel<sup>™</sup> is being developed (under IND) as a microbicide to prevent HIV and Genital Herpes
  - US\$20.3m NIH funding to develop VivaGeI<sup>™</sup> for HIV
  - FDA Fast Track Status for HIV
  - VivaGel<sup>™</sup> is the first microbicide with NIH funding support for Genital Herpes
- Two line extensions to VivaGel<sup>™</sup> in development in addition to a broad portfolio of other dendrimer projects
- Wholly-owned US subsidiary (DNT Inc.)
  - Leader in the development of advanced dendritic polymers
  - Significant dendrimer IP portfolio

| Starpharma Holdings Limited |             |  |  |
|-----------------------------|-------------|--|--|
| ASX Code                    | SPL         |  |  |
| Level 1 ADR Code            | SPHRY       |  |  |
| Share Price (14/11/06)      | 51 c        |  |  |
| 12 Month High/Low           | 64 c / 35 c |  |  |
| Shares on Issue             | 167.8M      |  |  |
| Market Capitalisation       | ~ \$86M     |  |  |
| Average Mthly Volume        | 4.5M shares |  |  |
| Cash on Hand (Oct 06)       | \$13.3M     |  |  |

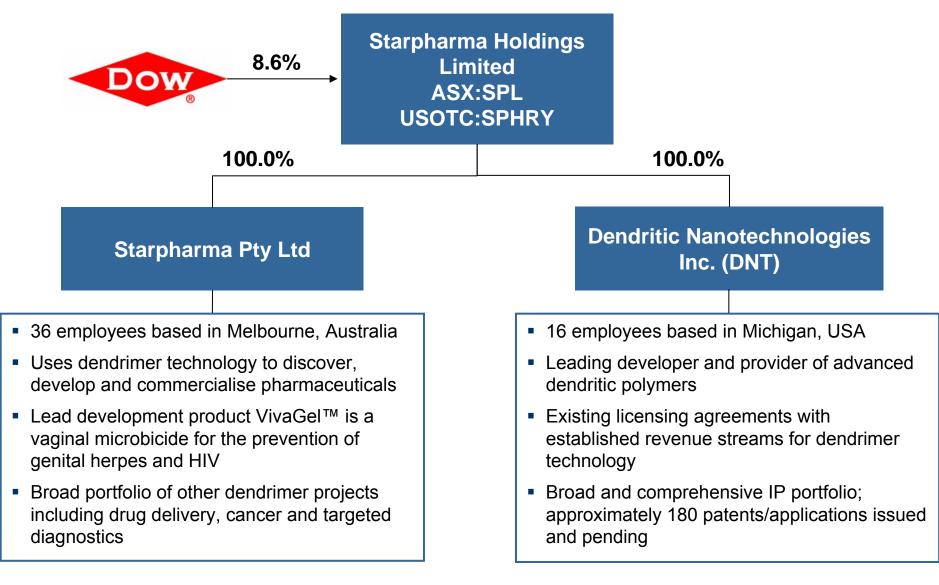
#### **Shareholder Composition**



Starpharma is the global leader in dendrimer based nanotechnology



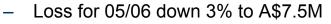
### **Company Structure**



## Financial Snapshot

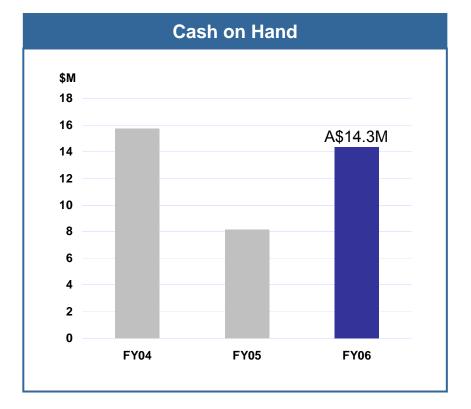


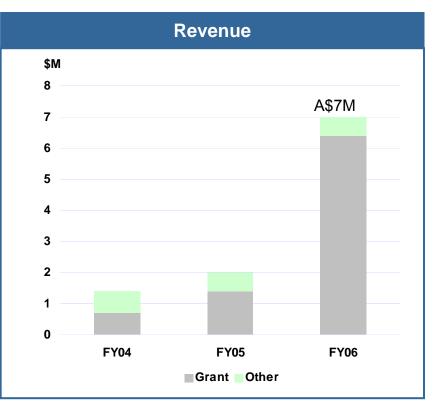
- Starpharma is in a strong financial position:
  - A\$13.3M in cash at Oct 06 (A\$14.3M Jun 06)
  - 12 month burn to Oct 06 of A\$6.6M (A\$8.2M 05/06)
  - NIH and P3 Funding > A\$30M



 Revenue<sup>1</sup> A\$7.0M in 05/06, a A\$5M increase over 04/05

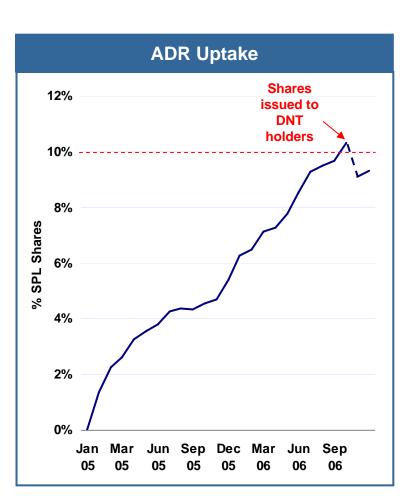
<sup>1</sup> Post DNT transaction : additional revenue ~ A\$1.25M pa





## ADR Program and US Shareholding

- Starparma's ADR program has been extremely successful since launch in January 2005
  - Growth of 137% in ADRs issued in the past 12 months
  - Average monthly growth of 7%
- Traded by major brokers including Merrill Lynch, Credit Lyonnais, Natexis Bleichroeder, and Pershing LLC
- ADR's exceeded 10% of SPL capital issued in October 2006
  - Currently at 9.3% following issue of shares for acquisition of DNT
- SPHRY compares favourably against other Australian biotech Level-1 ADR programmes
  - Most heavily traded by volume and price
- Active program initiated to build on US interest in SPL/SPHRY
  - US investors represent 19.5% of SPL total shareholding





## Enhanced Pipeline: Balanced for Risk



| Pharmaceutical & Medical Products  | Proof of<br>Concept | Lead         | Clinical Trials        | Sales |
|--|---------------------|--------------|------------------------|-------|
| <ul> <li>VivaGel™</li> <li>► HSV-2 prevention</li> <li>► HIV prevention</li> <li>► condoms coating &amp; other line extensions</li> </ul>  |                     |              |                        |       |
| <ul> <li>ADME Engineering™</li> <li>► Therapeutic protein PK optimisation</li> </ul>   |                     |              |                        |       |
| Drug Delivery - Small Molecules<br>► Cancer therapeutic  |                     |              |                        |       |
| Drug Optimisation<br>► Enhanced solublisation  |                     |              |                        |       |
| <ul> <li><i>in-vivo</i> and <i>in vitro</i> Diagnostics</li> <li>► Stratus CS® (Cardiac Diagnostic)</li> <li>► MRI imaging (Ovarian cancer &amp; cardiovascular disease)</li> </ul>                |                     |              |                        |       |
| Life-science Products  | Proof of<br>Concept | Prototype    | Pre-launch             | Sales |
| Gene Transfection Reagents<br>► SuperFect®   |                     |              |                        |       |
| siRNA Transfection Reagents<br>▶ PrioFect™   |                     |              |                        |       |
| Materials Sciences Products  | Early               | Intermediate | Advanced,<br>Partnered | Sales |
| <ul> <li>Specialty &amp; Fine Chemicals</li> <li>▶ Priostar<sup>™</sup> Dendrimers (multiple applications)</li> <li>▶ Starburst<sup>™</sup> Dendrimers (Catalogue of over 200 products)</li> </ul> |                     |              | >                      |       |

# 3. VivaGel™



VivaGel<sup>™</sup> packaged into pre-filled applicators.



- VivaGel<sup>™</sup> is a vaginal microbicide being developed to prevent sexually transmitted infections in women
  - Currently being developed under two INDs for the prevention of HIV and genital herpes
- Gel-based formulation with a nanotech active (SPL7013), delivered via an applicator
- Active ingredient inactivates HIV and HSV-2 (genital herpes) virus by binding with the virus preventing it attaching to the host
- Significant and growing recognition that microbicides offer the best alternative
  - "Prevention is better than cure"

### HIV

- Major health burden in both developed and developing countries
- 39 million people living with HIV; every day 7,000 women are newly infected
- No cure more than 50 HIV vaccines have failed and estimates are that an effective vaccine is many years away

#### **Genital Herpes**

- Recurrent, lifelong viral infection
- Estimated to infect between 15-25% of male and female adults in developed countries, growing to between 40-50% in the US by 2025
- Existing prevention methods have proven ineffective and developmental vaccines disappointing

VivaGel<sup>™</sup> offers an attractive first line defence against the spread of HIV and genital herpes



| Nov 04 | <ul> <li>Successfully completed Phase 1 trial in Humans</li> </ul>  |
|--------|---|
| Oct 05 | <ul> <li>Receives A\$26M non-dilutive NIH funding for development in HIV<br/>(without downstream commercial obligations)</li> </ul> |
| Jan 06 | <ul> <li>Granted FDA Fast Track Status for HIV</li> </ul>   |
| Apr 06 | <ul> <li>The only microbicide funded by the NIH for Genital Herpes (clinical development, undisclosed sum)</li> </ul>               |
| Jun 06 | <ul> <li>Exhibits a potent contraceptive effect in animal studies</li> </ul>  |
| Oct 06 | <ul> <li>Further clinical trials underway Australia/USA; others to commence<br/>shortly in Kenya</li> </ul>                         |



- Two clinical trials underway in the USA and Australia (Kenyan site to commence shortly)
- Good progress with Scale-up and toxicology programs
- Due to HIV Microbicide trial issues with recruitment, and retention in trials
   VivaGel<sup>™</sup> regulatory approval milestone revised from 2008 by 12-24 mo.
- Genital Herpes indications likely less impacted still anticipated to be first to market for Genital Herpes
- Issues not applicable to contraception indication and condom coating opportunity
- Opportunities for mitigation being actively pursued: choice of trial site, trial design, sample size etc.
- Market Outlook continues to be very good and strengthening:
  - Genital Herpes prevalence in US women: 26%
  - 30-40% female college students would buy a microbicide, ~70% if contraceptive
  - US Opinion leaders calling for a national herpes prevention program
- Negligible impact on cumulative development costs; NIH funding not impacted



### Large, addressable markets

- HIV primarily in developing countries
- HSV-2 in both developing and developed countries

### Increasing market support for products

- US government firmly committed to development of safe and effective microbicides
- US opinion leaders now calling for National Herpes
   Control Program
- Several industry surveys have confirmed strong consumer demand
  - Over 20 million women in US would use a microbicide
  - 30-40% female US college students would buy a microbicide increasing to 70% with contraceptive properties
  - Strong market demand at 5x local condom price in various countries
  - Microbicide market estimates >\$1.5Billion

#### Source: World Bank; UNAIDs; EC AIDS survey; BCG analysis and various microbicide publications

#### Estimated Market for microbicides in <u>Developed</u> Countries

| Market      | Average Frequency of Use Per Annu |              |               |
|-------------|-----------------------------------|--------------|---------------|
| Penetration | 25x<br>US\$M                      | 50x<br>US\$M | 100x<br>US\$M |
| 2.5%        | 365                               | 730          | 1,460         |
| 5.0%        | 725                               | 1,450        | 2,900         |
| 10.0%       | 1,450                             | 2,900        | 5,800         |

Key assumptions

- 291m women of reproductive age (15-49) in developed countries
- Unit sale price circa US\$2
- Usage rates according to published data

"If I had a magic bullet to accelerate something it would be the microbicide..." Bill Gates, July 2006

# 4. DNT Acquisition







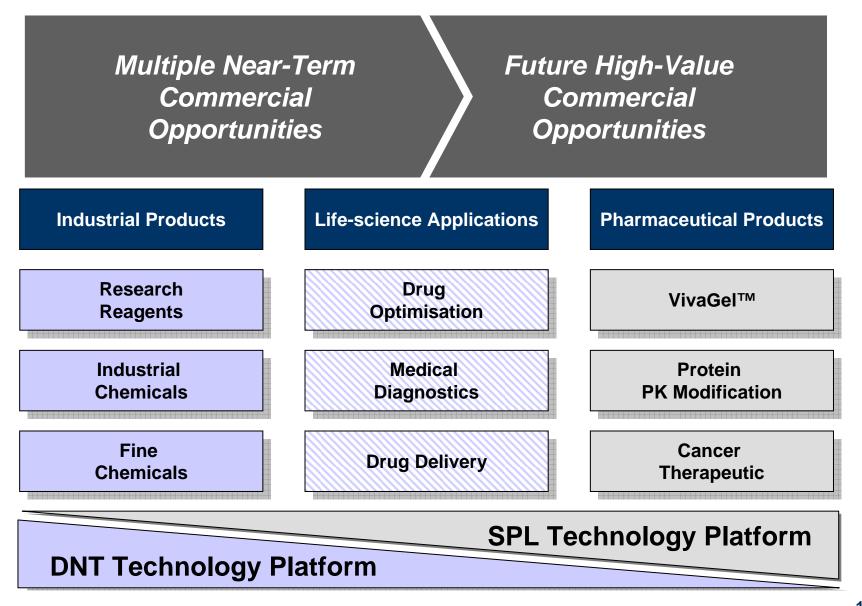
## Significant Acquisition Benefits



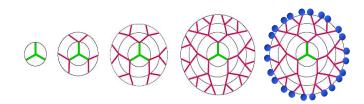
Marketed products, near-term revenues 1. Diversified Product Portfolio Diversified risk: pharma, life-science and industrial Optimal leverage of internal resources including 2. Significant Development and commercial, regulatory, scale-up and discovery **Commercialisation Synergies** Better value from expenditures Enhanced competitive position and higher profile for 3. Extensive IP Portfolio: commercial development Leaders in the Field Greater access and profile in the US nanotech sector industry partners 4. Increased US Presence financial markets funding partners The Dow Chemical Company (Dow) is Starpharma's largest 5. Ongoing Dow Involvement shareholder Enhances Starpharma's profile with industry and funding partners Minimal dilution for Starpharma shareholders 6. Attractive Acquisition Terms Simplifies structure and puts in place platform for creating significant additional shareholder value

## **Enhanced Portfolio**





# 5. Pipeline





## Enhanced Pipeline: Balanced for Risk



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#### Marketed Dendrimer Products

- Existing product sales and licensed dendrimer royalty agreements
  - Stratus CS® : Cardiac marker diagnostic licensed to Dade Behring
  - SuperFect® : Gene transfection technology licensed to Qiagen
  - STARBURST® dendrimers commercially available



# PrioFect<sup>™</sup> siRNA transfection agents

- Transfection reagent market: \$120M growing by 15-18% pa
- PrioFect<sup>™</sup> siRNA Transfection Reagents provide:
  - Precise size control: allows optimisation according to cell type
  - Highly functionalised surface: allows targeting to specific cell types i.e. cell-specific delivery
  - Pharmaceutical Quality: Low toxicity

### Materials Science / Industrial Applications

| Sector         | Discussions with                                | Application                               |
|----------------|---|---|
| Oil            | "Top 5" US Oil<br>Company                       | Lubricant<br>additives                    |
| Plastics       | Large Automotive<br>Components<br>Manufacturer  | Plastics<br>additive                      |
| Manufacturing  | Major Technology<br>Company                     | Dental resins                             |
|                | Multiple avenues of exploration                 | Adhesives                                 |
|                | "Top 5" European<br>electronics<br>manufacturer | Printed circuit<br>board<br>manufacturing |
| Pharmaceutical | Global Healthcare<br>Company                    | Solublisation                             |
| Cosmetics      | Cosmetic Company                                | Adhesive                                  |
| Fine Chemicals | Major fine chemical<br>manufacturer             | Laboratory<br>reagents                    |
| Resources      | Water quality<br>specialists                    | Water filtering/<br>remediation           |

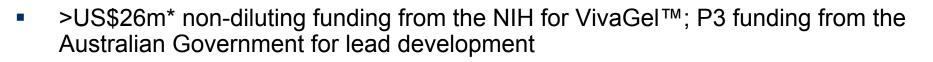
Current Revenues

Estimated market entry: Early 2007

Value capture horizon : 2007 / 08

## 6. Conclusion





- VivaGel<sup>™</sup> the only microbicide with NIH funding for genital herpes
- Significant commercial opportunities for microbicides
- Significant US shareholder base and profile:
  - Dow is the largest shareholder (8.6%)
  - c.20% shares held by US shareholders
  - Successful ADR program ~ 9.3% shares on issue
  - US subsidiary with marketed products and extensive commercial relationships
  - US based ex. CEO/Chairman of major corporate to join SPL Board shortly
- Diversified dendrimer product and application pipeline:
  - Marketed products offering near-term revenues
  - Diversified risk: pharma, life-science and industrial
- Comprehensive dendrimer IP portfolio for a broad spectrum of products and applications

Starpharma represents a significant value proposition given its pipeline, cash position and NIH support



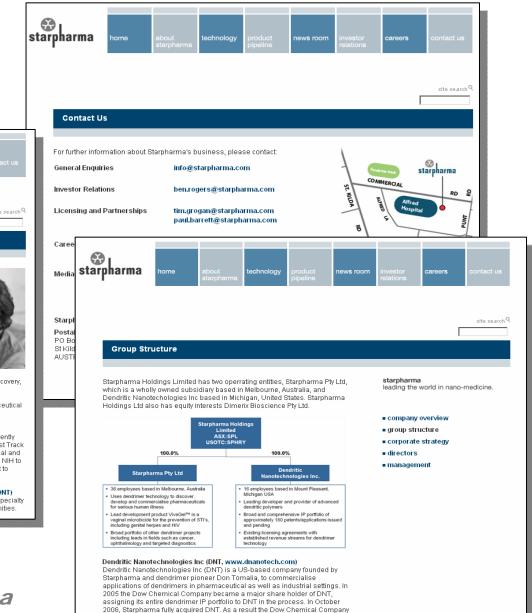


### *Preview: New website in preparation*

#### www.starpharma.com



### Further information: info@starpharma



became a major shareholder



# Supplementary Material

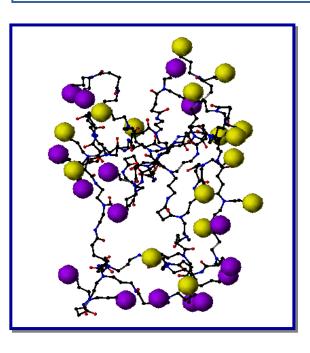


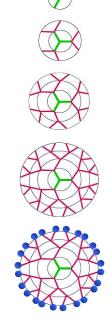




#### **Unique Characteristics of Dendrimers**

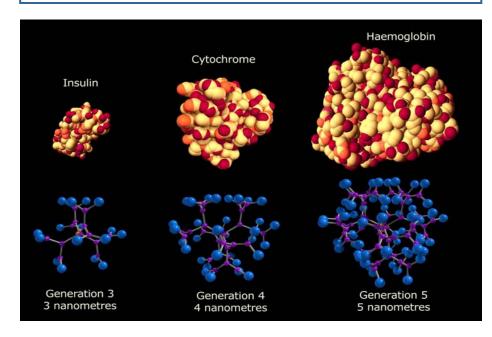
- Precisely defined, synthetic macromolecules
- Precisely defined surface topology
- Can be designed to optimize potency, pharmacokinetics and localisation
- Different species can be heat stable or biodegradable
- High multivalent binding affinity





#### **Commercial Applications of Dendrimers**

- Key enabling nanoscale technology
- Diverse range of pharma, diagnostic & materials applications
- In the clinic VivaGel<sup>™</sup> ( the first dendrimer IND)
- Scalable chemical manufacturing process with competitive COGs
- Well tolerated





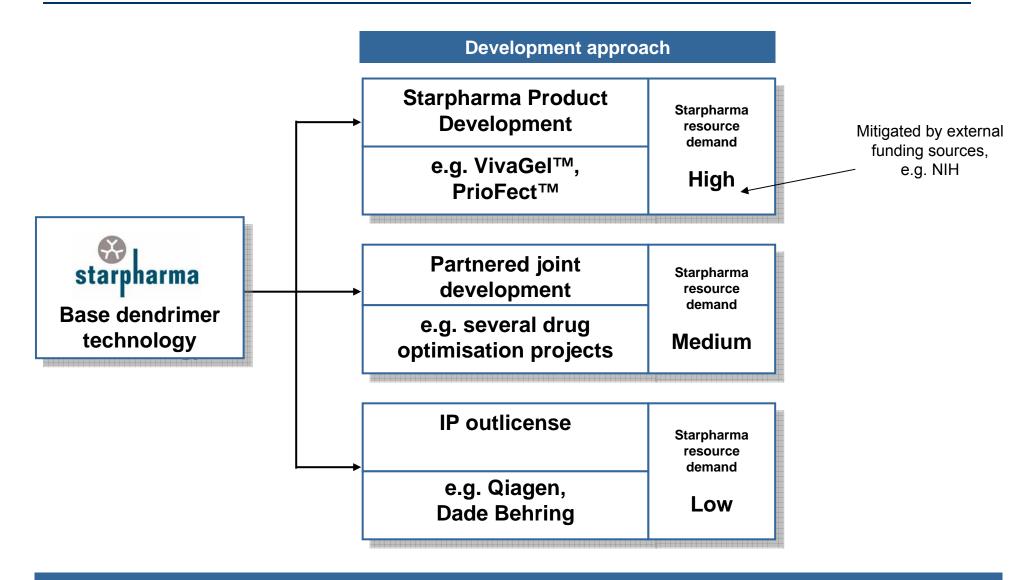
| Product Offers<br>Several Key<br>Advantages                        | <ul> <li>Market research indicates microbicide gels will have good uptake</li> <li>Female controlled, discreet and convenient</li> <li>Compelling competitive advantages: efficacy; non-irritant; broad activity</li> <li>Contraceptive activity (in animals)</li> </ul>                                      |
|--|---|
| Excellent<br>Clinical<br>Results in<br>Human and<br>Primate Trials | <ul> <li>Human trials (IND): VivaGel<sup>TM</sup> is non-toxic and non-irritating</li> <li>Potent activity in relevant HIV strains in very tough primate trials</li> <li>Potent activity against herpes in animal trials</li> <li>Viruses appear not to develop resistance to VivaGel<sup>TM</sup></li> </ul> |
| Excellent Drug<br>Characteristics                                  | <ul> <li>Lower risk development – Topical gel, external to body</li> <li>Affordable – Low manufacturing costs</li> <li>Excellent IP position</li> <li>Passes key FDA hurdle – Well defined chemical entity</li> </ul>   |
| Product<br>Extensions  | <ul><li>Condom coating</li><li>In combination (ComboGel)</li></ul>  |

## *VivaGel<sup>TM</sup> – Significant Advantages Over Competitors*



|  | Competitor Category   | Key Disadvantages   | VivaGel <sup>™</sup> Advantages  |  |  |
|--|---|---|--|--|--|
| HSV -2                                   | VivaGel™ is the only microbicide with an FDA IND for genital herpes |   |  |  |  |
|  | Surfactants/<br>Detergents  | <ul> <li>Ulceration possible; potential incr. risk of HIV infection</li> </ul>  | <ul> <li>No surfactant properties;<br/>non-irritant; does not increase<br/>infection risk</li> </ul>   |  |  |
| HIV                                      | Sulphated carbohydrates   | <ul> <li>Not active against clinical HIV strains</li> </ul>   | Highly active against all HIV strains tested   |  |  |
| Significant<br>Advantages                | Reverse Transcript.<br>Inhibitors and other<br>anti-viral drugs     | <ul> <li>Drug resistance is an issue</li> <li>Primary mode of action<br/>requires infection process to<br/>have begun</li> <li>Not active against herpes</li> </ul> | <ul> <li>Very high barrier to development<br/>of viral resistance</li> <li>Primary mode of action is<br/>prevention of virus attachment</li> <li>Potent activity against herpes</li> </ul> |  |  |
| over Other<br>Products in<br>Development | Sulphated Polymers  | <ul> <li>High cost of synthesis</li> <li>Poor characterisation of the drug substance likely to present regulatory issues</li> </ul>                                 | <ul> <li>Excellent drug characteristics:</li> <li>Low manufacturing costs</li> <li>Stable, well defined entity</li> </ul>  |  |  |
|  | Acidity Control<br>Agents   | <ul> <li>Acidity control: sufficient<br/>protection as mono-therapy?</li> </ul>   | <ul> <li>Potent activity against HIV and<br/>HSV-2 in animal models; non-<br/>irritant</li> </ul>  |  |  |





Combination of "in house", partnered and 3<sup>rd</sup> party development maximises IP exploitation

### **Partners**



