
Starpharma Holdings Limited

ASX:SPL
USOTC:SPHRY

Lux Executive Summit
Cambridge, MA
16 October 2006

Dr Jackie Fairley – CEO

“Top Nanotech Buys for 2005”

“We expect great things to come from the company and its significant ownership in U.S.-based Dendritic Nanotechnologies, Inc.”

Forbes/Wolfe 2005

“Growth Strategy Leadership Award in the World Nanobiotechnology Market”

Frost and Sullivan July 2005

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. Introduction and Company Overview
2. VivaGel™ – Product Overview and Market Opportunities
3. The Acquisition of DNT
4. Integrated Pipeline
5. Conclusion

1. Company Overview

Announced October 4, 2006



Starpharma to Acquire Dendritic Nanotechnologies, Inc.

Melbourne, Australia, 4 October 2006 – Starpharma Holdings Limited (ASX:SPL, USOTC:SPHRY) today announced the signing of an agreement to acquire US-based Dendritic Nanotechnologies, Inc. (DNT) for US\$6.97m (A\$9.36m) through the issue of Starpharma shares. This attractively priced transaction offers significant benefits to Starpharma including:

- the provision of diversified product pipeline with near-term cash-flow opportunities, and a more balanced risk profile;
- an increased US presence;
- The Dow Chemical Company will become a substantial shareholder in Starpharma (approximately 8.6%);
- significant development, commercialisation and other business synergies; and
- an extensive IP portfolio with existing royalty streams.

This presentation describes the combined company, in anticipation of the completion of the transaction (expected approx 20 October.)

Starpharma Holdings Ltd: Company Overview

- Headquartered in Melbourne, Australia
- ASX Listed **ASX:SPL** ; **USOTC:SPHRY**
- World leader in the development of dendrimer nanotechnology products for pharmaceutical and life-sciences
- Starpharma's lead product, **VivaGel™** is being developed (under IND) as a microbicide to prevent *HIV* and *Genital Herpes*
 - *US\$20.3m NIH funding to develop VivaGel™ for HIV*
 - *FDA Fast Track Status for HIV*
 - *VivaGel™ the first microbicide with NIH funding support for Genital Herpes*
- Broad portfolio of other dendrimer projects
- Successful Level 1 ADR Program : 9.7% issued capital (Sept. 2006)
- Cash position (June 2006) A\$14.3 M (US\$10.7M)
- Acquisition of US-based company *DNT Inc.* (October 4, 2006)

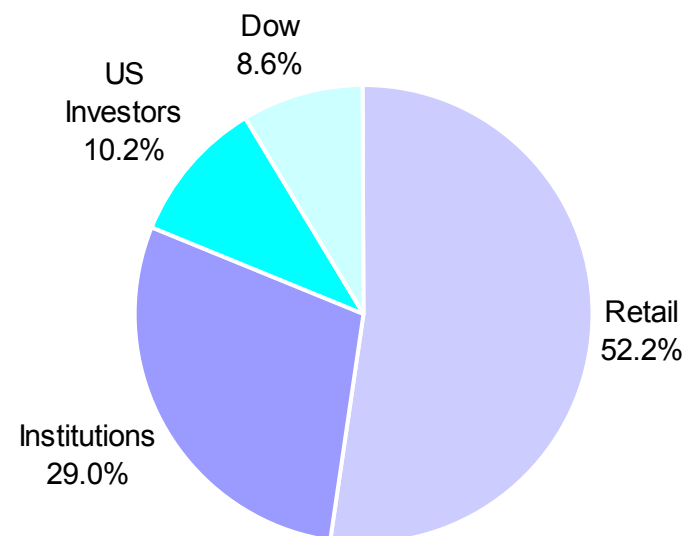
HIV Funded: A\$26 million	NIH funds VivaGel™ HIV development with non-dilutive funding
Genital Herpes Funded	NIH funds VivaGel™ Genital Herpes Development
HIV Fast Tracked	US regulator FDA designated VivaGel™ a fast track product
Herpes IND Cleared	FDA clears VivaGel™ genital herpes IND
Contraceptive Activity	VivaGel™ shown to be a potent contraceptive in animals
Future Revenues Improved	Royalty for stock swap with BRI, future revenues enhanced
ADRs Nearing 10%	US uptake of ADRs nears 10% of SPL issued capital
A\$15m Funds Raised	Institutional and SPP capital raising
Patent Estate Expanded	Substantial program of patent filing completed
Priostar™ Rolled Out	DNT rolls out Priostar™ industrial dendrimer platform
Acquisition of DNT	SPL acquires US company DNT; Dow becomes SPL's largest holder

Shareholder composition (post DNT transaction)

Starpharma Holdings Limited Post DNT Transaction

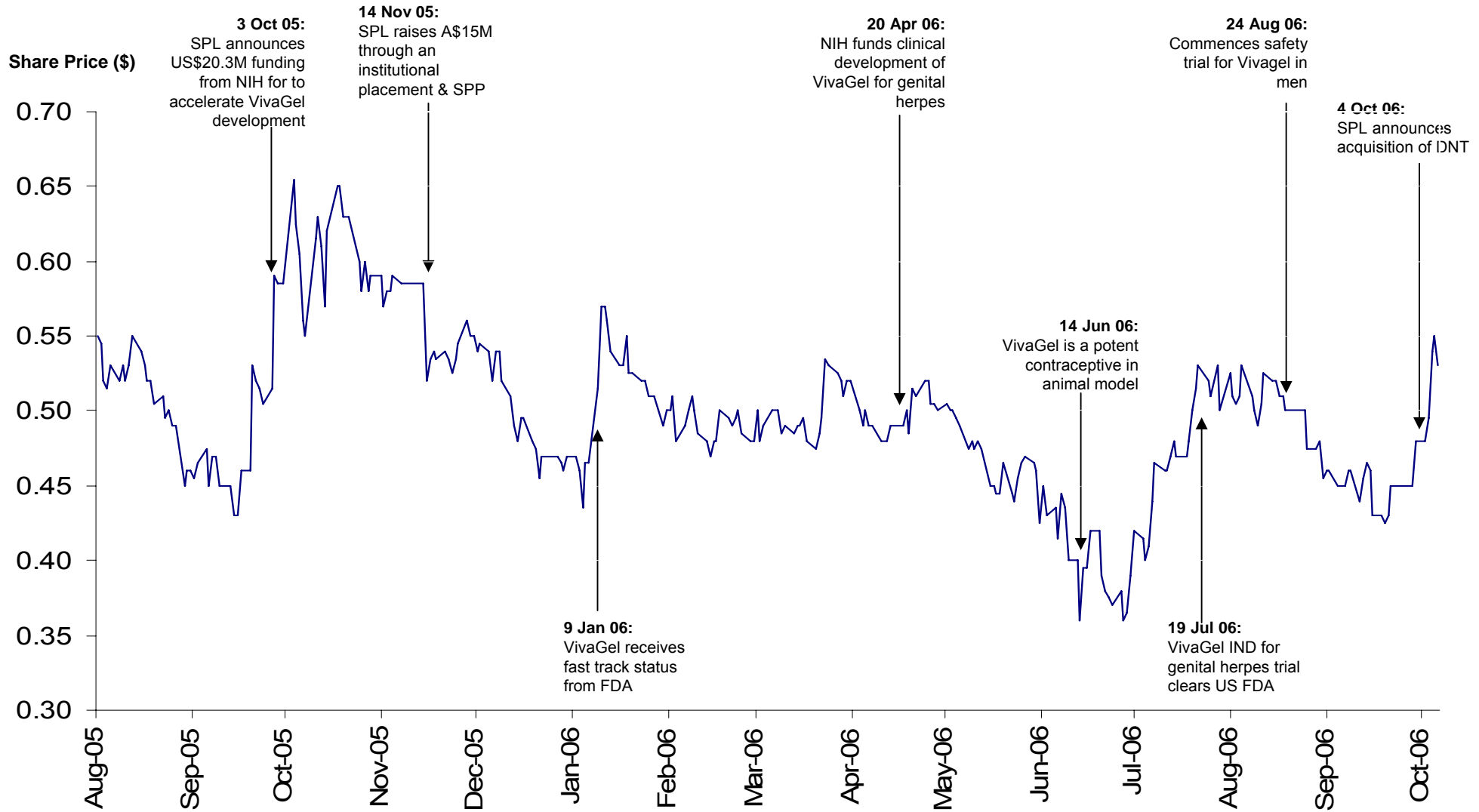
ASX Code:	SPL
Level 1 ADR Code:	SPHRY
Shares on Issue:	167.8M
Market Cap:	~ A\$85M (US\$65M)
Share Price:	A\$0.51
12 Month High/Low:	A\$0.67 / A\$0.35
Average Volume:	4.4M shares per month
Major Shareholders:	Dow: 8.6% Acorn: 6.1%
% SPL held in ADR:	8.5%

Shareholder Register



Following the DNT transaction Starpharma will have a significant US shareholder base

Starpharma: Share Price History



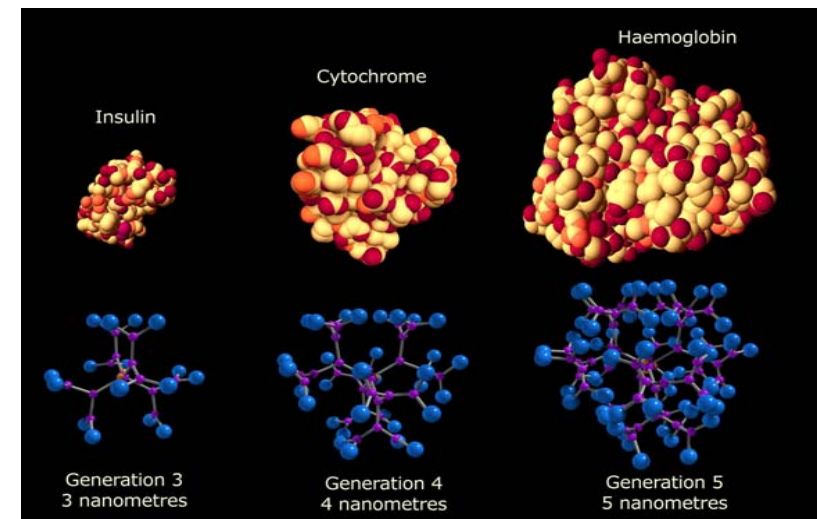
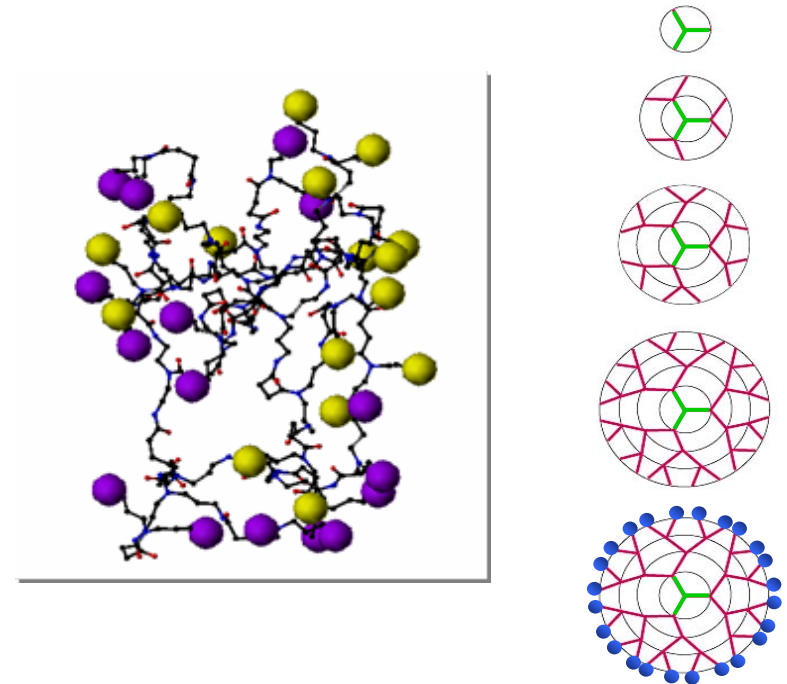
Conclusion: SPL share price does not reflect value of underlying achievements in the past 12 months

Unique Characteristics of Dendrimers:

- Well defined, synthetic macromolecules (1-10nm, 5-50kD)
- Precisely defined surface topology
- Designed to optimize potency, pharmacokinetics and localization
- Different species can be heat stable or biodegradable
- High multivalent binding affinity
 - Ability to disrupt protein-protein interactions

Commercial Advantages of Dendrimers:

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



2. VivaGel™

Product Overview

VivaGel™ – Lead Product for Prevention of STIs

VivaGel™ packaged into pre-filled applicators.



- VivaGel™ is a microbicide being developed to prevent sexually transmitted infections (STIs) in women
- VivaGel™ is a gel-based formulation with a nanotech active, delivered privately via an applicator prior to sexual activity
- The active ingredient of VivaGel™ (SPL7013) inactivates HIV and HSV-2 (genital herpes) virus by binding with the virus preventing it attaching to the host
- Vaccines against HIV and genital herpes have thus far failed and there is a significant and growing recognition that microbicides offer the best alternative

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

HIV – A Preventable, Life Threatening Disease

- Human Immunodeficiency Virus (HIV) is the virus that causes AIDS (Acquired Immune Deficiency Syndrome)
- No cure for HIV/AIDS and may be transmitted by individuals that are asymptomatic
- 39 million people living with HIV; every day 7,000 women are newly infected
- The predominant route of transmission is via heterosexual contact
- More than 50 HIV vaccines have failed and estimates are that an effective vaccine is many years away
- Although when used condoms are effective in preventing HIV, in practice they are not used consistently or correctly

HIV and AIDS (in the US): *“Direct medical costs of up to \$15.5 billion per annum”*
“AIDS is the number one cause of death in African-American women aged 25-34”

““HIV prevention options as of 2005 are not enough”
best option...technologies like microbicides which women can initiate and control”

Source: Microbicide Development Act 2005: US Senate

Genital Herpes – Nasty, Incurable Disease

- Genital herpes is the “un-recognised pandemic” of the industrialised world
 - **22%** of the US adult population has genital herpes; Est. cost (US) >\$1.5B pa
 - Without intervention the prevalence of genital herpes in the US is expected to increase to **39%** of men and **49%** of women by 2025
- Infection is life-long, drugs do not cure
- Results in painful blisters/ulcers
 - Ulcers last 3-4 weeks; 4-5 ulcerative episodes p.a
 - Increases affected individuals’ risk of HIV infection by 4-8x
- May be transmitted by individuals who have no visible ulcers
- Transmissible at birth:
 - Ocular, neurological and respiratory disease
 - Long term complications in 40%; death in 14%
- Existing prevention methods have proven ineffective and developmental vaccines disappointing



VivaGel™ – Product Features and Performance

Product Offers Several Key Advantages

Market research indicates microbicide gels will have good uptake
Female controlled, discreet and convenient
Compelling competitive advantages: efficacy; non-irritant; broad activity*
Contraceptive activity in animals

Excellent Clinical Results in Human and Primate Trials

Human trials (IND): VivaGel™ is non-toxic and non-irritating
Potent activity in relevant HIV strains in very tough primate trials
Potent activity against herpes in animal trials
Viruses appear not to develop resistance to VivaGel™

Excellent Drug Characteristics

Lower risk development – Topical gel, external to body
Affordable – Low manufacturing costs
Excellent IP position
Passes key FDA hurdle – Well defined chemical entity

VivaGel™: NIH support (HIV and HSV-2) & FDA Fast Track

> US\$20.3m of non-dilutive funding from NIH

- Funding is provided without downstream commercial obligations
- Funding will allow Starpharma to do a late-stage licensing deal and thus secure advantageous terms

Significantly 'de-risks' VivaGel™

- NIH funding will support VivaGel's development including:
 - Clinical (HIV and now HSV-2) and non-clinical trials,
 - Scale-up of manufacturing
 - Access to world class clinical development expertise.

- FDA **Fast-Track for VivaGel™ for HIV** means:
 - Faster review of the NDA application and
 - Greater access to and input from the FDA into development program

Strong Endorsement of VivaGel™

- NIH selected VivaGel™ following a 12+ month evaluation period
- VivaGel™ is the **only microbicide funded** by the **NIH** for **Herpes**

NIH support enhances probability that VivaGel™ will be successfully developed and commercialised

Commercial Opportunity for Microbicides

- **Large, addressable markets:**

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

- **Increasing market “pull” for products**

- US government firmly committed to development of safe and effective microbicides (Microbicides Development Act 2005)
- US Opinion Leaders now calling for National Herpes Control Program

- **Several industry surveys have confirmed strong consumer demand:**

- Over 20m women in US would use microbicide
- 30-40% female US college students would buy microbicide; 70% with contraceptive properties
- Strong market demand at 5x local condom price in various countries

“If I had a magic bullet to accelerate something ‘it would be the microbicide.....”

*Bill Gates,
July 2006*

VivaGel™ – Excellent Market Opportunities

Estimated Market for microbicides in Developed Countries:

Market Penetration	Average Frequency of Use per Annum		
	25x	50x	100x
2.5%	US\$365m	US\$730m	US\$1460m
5.0%	US\$725m	US\$1450m	US\$2900m
10.0%	US\$1450m	US\$2900m	US\$5800m

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

3. The Acquisition of DNT

Transaction Overview

- Prior to transaction:
- Starpharma had a 33% equity holding in the Michigan based private company Dendritic Nanotechnologies Inc (DNT)
- Transaction:
- Starpharma is acquiring the remaining 67% of DNT for ~US\$6.97 million worth of SPL shares
 - DNT is a leader in the development of dendrimers which have a broad range of life-science and industrial uses
 - The acquisition confirms Starpharma as the global leader in dendrimer-based nanotechnology
 - diverse pipeline in pharma and industrial applications
 - near-term revenue opportunities
 - comprehensive IP portfolio

“The majority of dendrimer IP is pooled in one company, DNT, which was assigned Dow’s dendrimer portfolio of 196 patents in 2005”

Lux Research Inc. 2006

Overview of DNT Inc.

- DNT is a leading developer and provider of advanced dendritic polymers
 - headquartered in Michigan and currently employs 16 (13 Ph.Ds)
- DNT has existing revenues streams from deals with leading pharmaceutical and biotechnology companies including Dade Behring Inc and Qiagen GmbH (Germany)
- The company also has funding from the U.S. NCI and Small Business Administration for Priostar™ based ovarian cancer diagnostic delivery development
- DNT has developed a new family of scalable, precision dendrimer nanostructures called Priostar™, which breaks through cost barriers and addresses industry needs for nanostructures that can be manufactured in high volumes at costs attractive for a wide variety of uses
- The company has an active development portfolio:
 - PrioFect™: Transfection reagents for siRNA
 - Targeted Ovarian Cancer Diagnostic technology based on Priostar™ dendrimers (NCI funded)
 - Specialty commercial applications

DNT's Current Commercialisation Opportunities

Sector	Discussions with...	Application
Pharmaceutical and Medical Applications	Major Pharmaceutical Company "A"	Drug solubility / optimisation
	Major Pharmaceutical Company "B"	Medical diagnostics
	Major Pharmaceutical Company "C"	siRNA transfection
	Major Technology Company	Dental resins
Oil	"Top 5" US Oil Company	Lubricant additives
Plastics	Large Automotive Components Manufacturer	Plastics additive
Manufacturing	Multiple avenues of exploration	Adhesives
	"Top 5" European electronics manufacturer	Printed circuit board manufacturing
Cosmetics	Global Healthcare Company	Solubilisation
	Cosmetic Company	Adhesive
Fine Chemicals	Major fine chemical manufacturer	Laboratory reagents
Resources	Water quality specialists	Water filtering / remediation

Significant Acquisition Benefits

1. Diversified Product Portfolio

- **Marketed products, near-term revenues**
- **Diversified risk: “more shots on goal”**

2. Significant Development and Commercialisation Synergies

- **Optimal leverage of internal resources including commercial, regulatory, scale-up and discovery**
- **Better value from expenditures**

3. Extensive IP Portfolio: Leaders in the Field

- **Enhanced competitive position and higher profile for commercial development**

4. Increased US Presence

- **Greater access and profile in the US nanotech sector:**
 - **industry partners**
 - **financial markets**
 - **funding partners**

5. Ongoing Dow Involvement

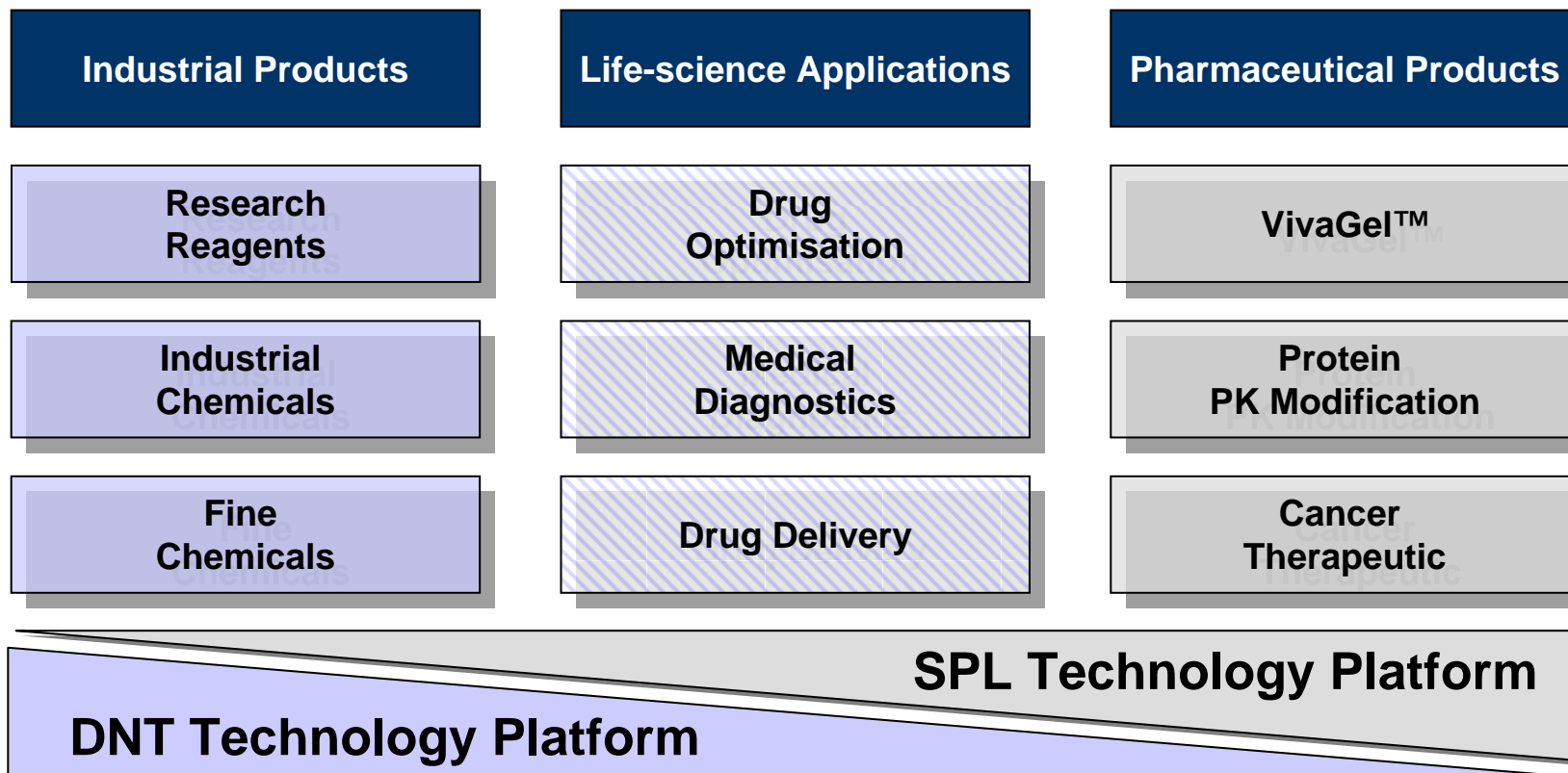
- **The Dow Chemical Company (Dow) will become Starpharma’s largest shareholder; enhances Starpharma’s profile with industry and funding partners**

6. Attractive Acquisition Terms

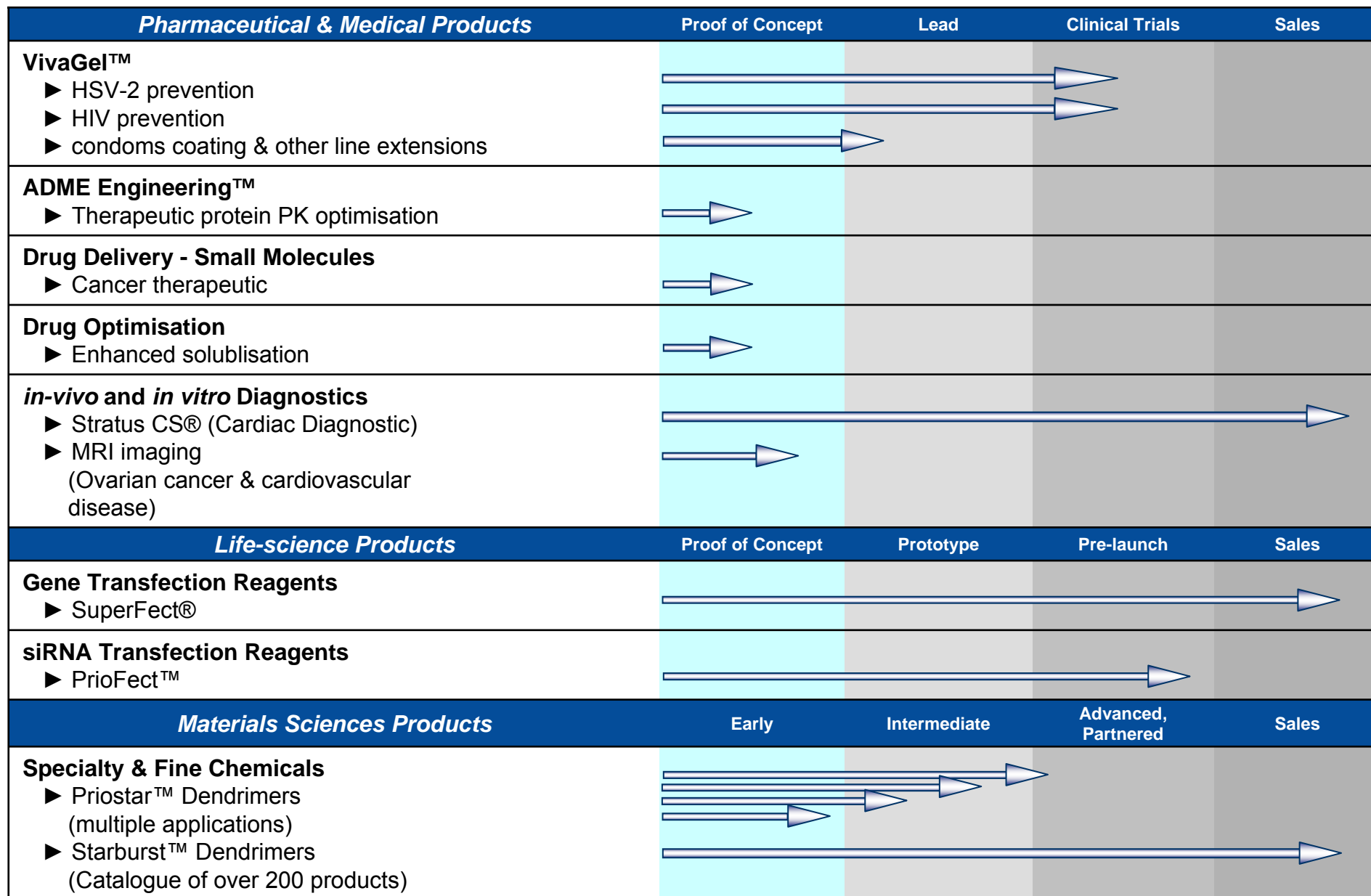
- **Minimal dilution for Starpharma shareholders**
- **Simplifies structure and puts in place platform for creating significant additional shareholder value**

4. *Integrated Pipeline*

Integrated Pipeline: Balanced for Risk



Integrated Pipeline: Balanced for Risk



Integrated Pipeline: Marketed Products

DNT has product sales and licensed STARBURST® dendrimer royalty agreements that generate revenues:

- Stratus CS® : Cardiac marker diagnostic licensed to Dade Behring, leading diagnostic company

DADE BEHRING

- SuperFect® : Gene transfection technology licensed to Qiagen, #1 supplier of niche molecular biology reagents to the life sciences sector

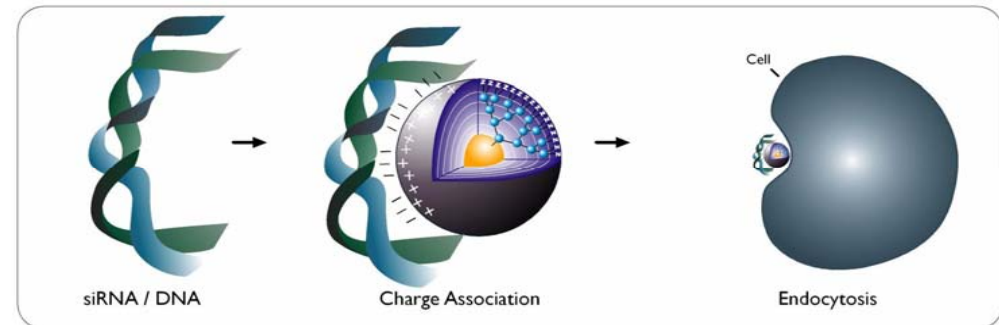


- Priostar™ and STARBURST® dendrimers commercially available

Integrated Pipeline: PrioFect™



**Estimated market entry:
Early 2007**



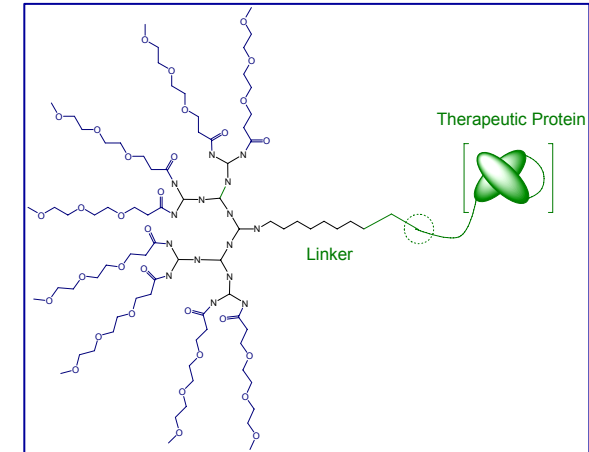
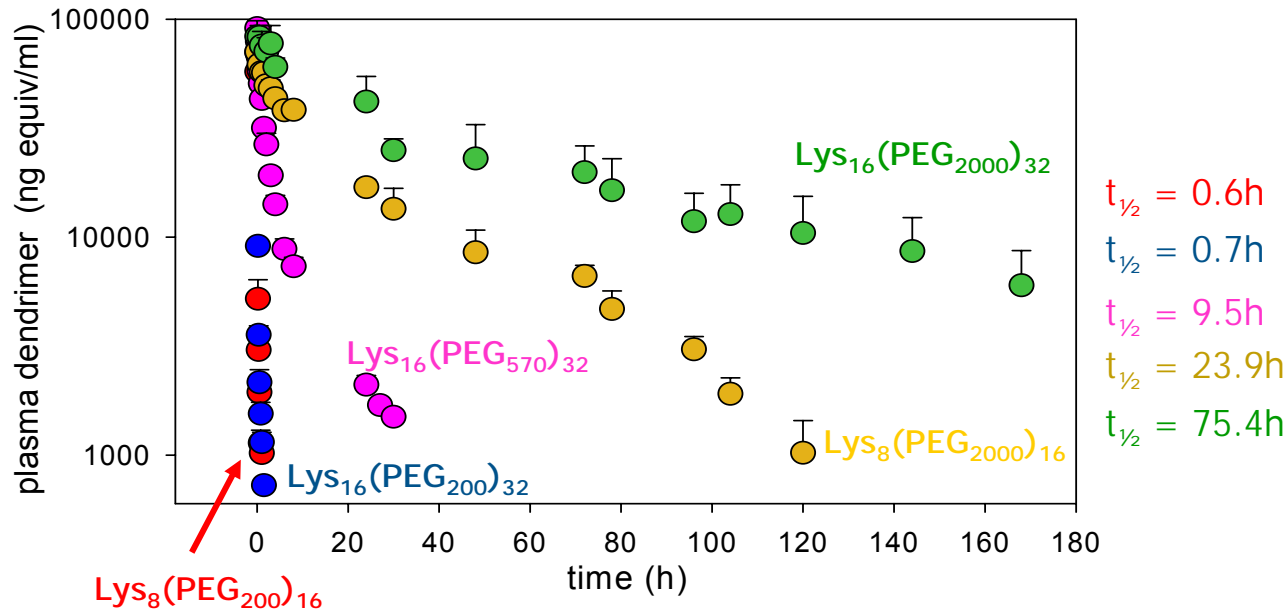
- PrioFect™ siRNA Transfection Reagents provide:
 - Precise size control: allows optimisation according to cell type
 - Highly functionalised surface: allows targeting to specific cell types i.e. cell-specific delivery
 - Pharmaceutical Quality: Low toxicity



- Transfection reagent sales : \$120 million in 2004, growing by 15-18% pa¹

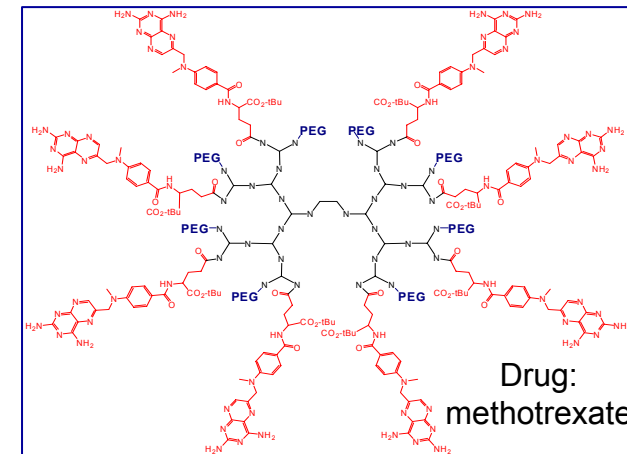
¹(Jain PharmaBiotech Market Report: RNAi-Technologies, Markets, and Companies, 2004)

Plasma concentration-time profile in male SD rats for PEGylated poly-L-lysine dendrimers

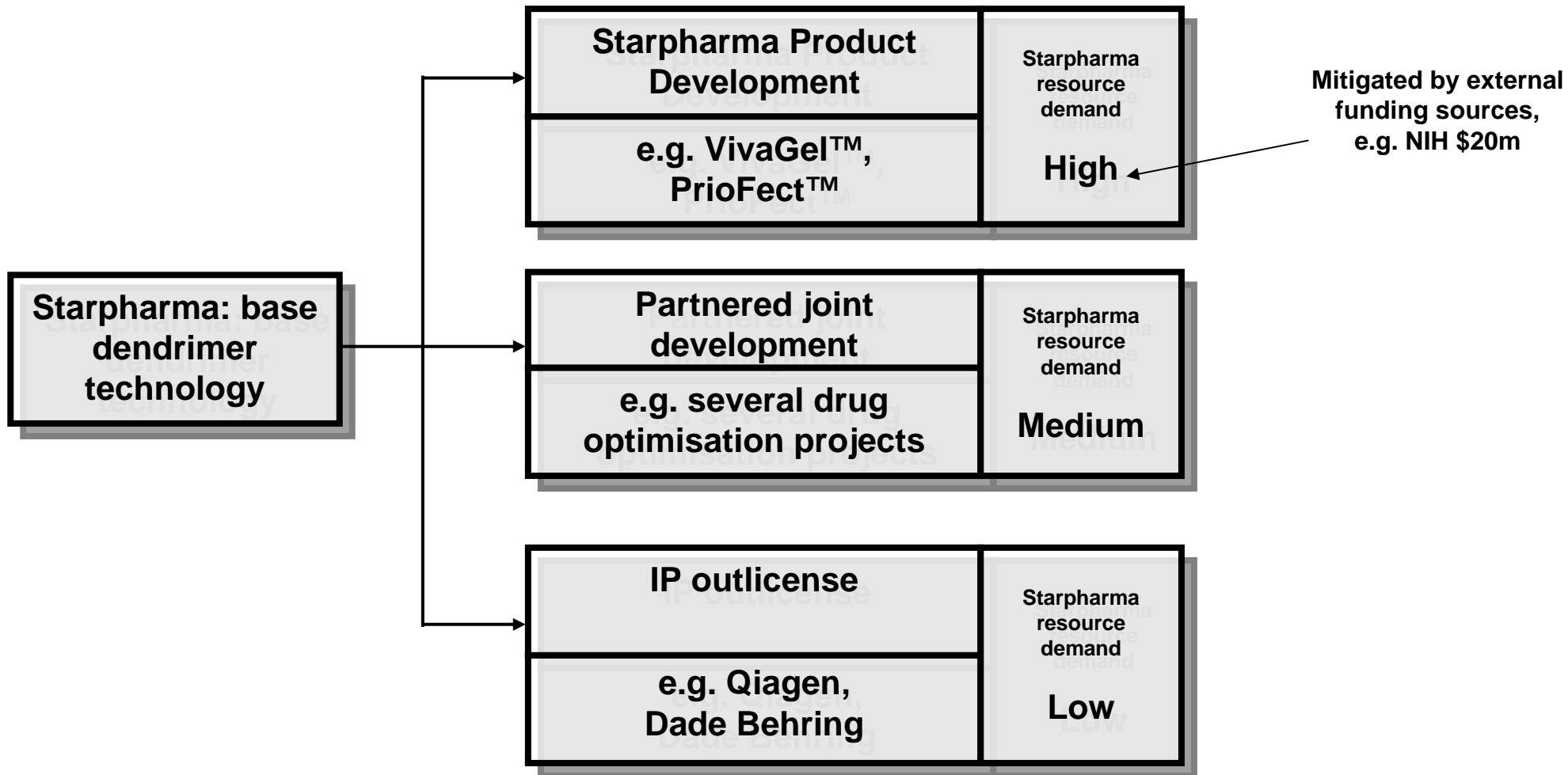


Starpharma's dendrimers can be designed to optimize the Pharmacokinetics (PK) of:

- Small molecule drugs
- Therapeutic proteins
- Peptides
- Plasma residence time increases with dendrimer size, but:
 - PEG MW alone not the main determinant of $t_{1/2}$



Development approach



Combination of “in house”, partnered and 3rd party development maximises IP exploitation

Industry Collaborators



DADE BEHRING



Research/Uni. Collaborators



INSTITUTE FOR SOLDIER NANOTECHNOLOGIES



CALTECH



5. *Conclusion*

- >US\$26m* non-diluting funding from the NIH for lead development
- VivaGel™ - the only microbicide with NIH funding for genital herpes
- Significant US shareholder base and profile through:
 - The Dow Chemical Company largest shareholder (8.6%)
 - Successful ADR program ~ 9.7% shares on issue pre-transaction (Sept 06)
 - US subsidiary with marketed products and extensive commercial relationships
- Diversified dendrimer product and application pipeline:
 - Marketed products; near-term revenues
 - Diversified risk: pharma, life-science and industrial
 - Comprehensive IP portfolio in dendrimer-based nanotechnology



* Two HIV grants: US\$20.3m contract + US\$5.4m grant (2004)

Supplementary Material

VivaGel™ – Significant Advantages Over Competitors

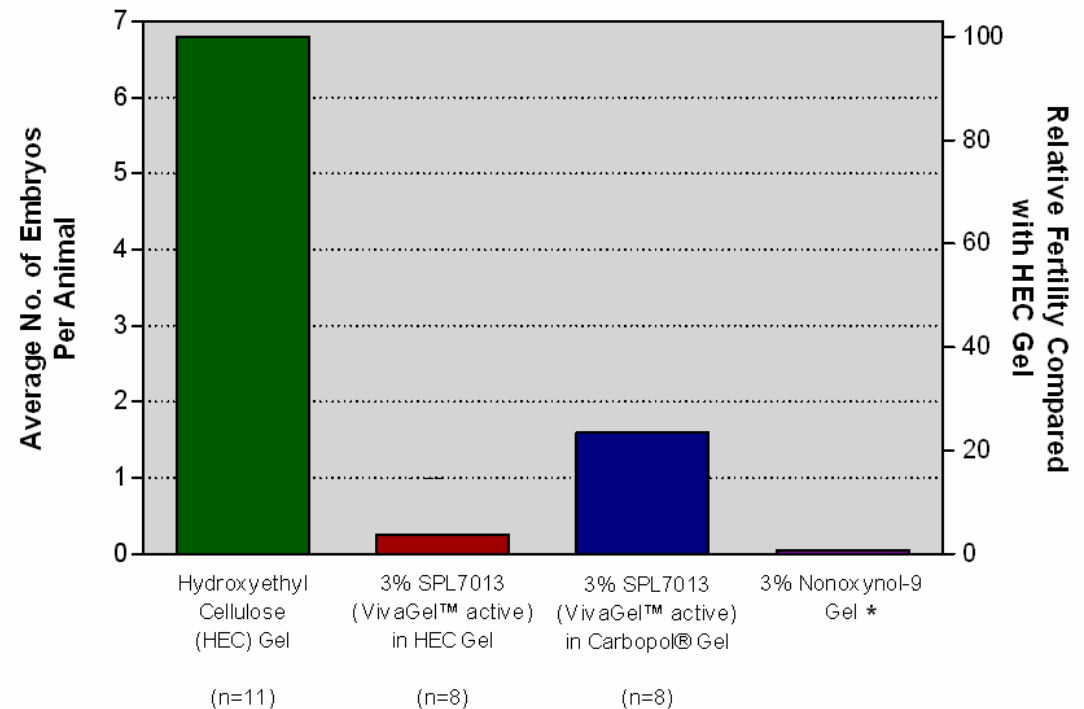


	Competitor Category	Key Disadvantages	VivaGel™ Advantages
HSV -2	VivaGel™ is the only microbicide being developed to prevent genital herpes		
HIV Significant Advantages over Other Products in Development	Surfactants/ Detergents	<ul style="list-style-type: none"> ▪ Ulceration possible; potential incr. risk of HIV infection 	<ul style="list-style-type: none"> ▪ No surfactant properties; non-irritant; does not increase infection risk
	Sulphated carbohydrates	<ul style="list-style-type: none"> ▪ Not active against clinical HIV strains 	<ul style="list-style-type: none"> ♦ Highly active against all HIV strains tested
	Reverse Transcript. Inhibitors and other anti-viral drugs	<ul style="list-style-type: none"> ▪ Drug resistance is an issue ▪ Primary mode of action requires infection process to have begun ▪ Not active against herpes 	<ul style="list-style-type: none"> ▪ Very high barrier to development of viral resistance ▪ Primary mode of action is prevention of virus attachment ▪ Potent activity against herpes
	Sulphated Polymers	<ul style="list-style-type: none"> ▪ High cost of synthesis ▪ Poor characterisation of the drug substance likely to present regulatory issues 	<ul style="list-style-type: none"> ▪ Excellent drug characteristics: <ul style="list-style-type: none"> ▪ Low manufacturing costs ▪ Stable, well defined entity
	Acidity Control Agents	<ul style="list-style-type: none"> ▪ Acidity control: sufficient protection as mono-therapy? 	<ul style="list-style-type: none"> ▪ Potent activity against HIV and HSV-2 in animal models; non-irritant

VivaGel™ : Potent Contraceptive Activity in Rabbits

- Recent study has shown that SPL7013, the active ingredient in its VivaGel™, exhibits a potent contraceptive effect in rabbits
- Independent study undertaken at Johns Hopkins University under an NIH grant
- Fertility was reduced by more than 75% by SPL7013 in a VivaGel™ formulation and 95% in a HEC gel compared with an inactive gel
- If contraceptive activity is confirmed in humans it would allow for development with contraception as an additional claim
- Findings relevant to both the stand-alone gel and condom coating opportunities

Average No. of Embryos Conceived Per Animal Following Application of Vaginal Gels, and % Relative Fertility in Active Gel-Treated Rabbits Compared with HEC Control



* N-9 figure based on published historical data, Castle et al, Contraception 1998;58:51-60, and Zeitlin et al, Sexually Transmitted Diseases, 2001;28:417-23

VivaGel™'s active ingredient is a potent contraceptive in animals

Transaction Details

- **Starpharma to acquire the remaining 67% equity in DNT that it does not already own for new shares in Starpharma valued to ~US\$6.97 million**
- **Transaction is subject to shareholder approval in majority of each DNT share class**
 - Between then Dow and SPL hold the majority in each class of shares
 - Estimated closure date: October 20, 2006
- **Consideration shares issued by Starpharma will be 20.097M (13.6% of shares on issue)**
- **Starpharma has agreed an arrangement with Dow for existing royalty streams - for up to 5 years - providing Dow maintains its shareholding in Starpharma**
- **Dow has agreed to enter into a tiered escrow arrangement over its holding in Starpharma**
 - Release of escrowed shares : 25% after 12 months, 25% after 24 months and 50% after 36 months
- **Other shareholder escrow arrangements:**
 - 12 months for DNT shareholders with more than 5% of the total share capital of DNT
 - 6 months for all other DNT shareholders

Extensive IP Portfolio

- **DNT owns the most significant dendrimer IP portfolio as a result of the assignment of Dow's dendrimer IP portfolio in 2005**

“When it comes to pharmaceutical applications, many relevant patents are under the exclusive control of one company, DNT... it presents DNT as a clearinghouse for licensing core building block and manufacturing claims needed to put dendrimers to work”

Lux Research 2005

- **With the acquisition of DNT, Starpharma will have the most comprehensive dendrimer IP portfolio for a broad spectrum of products and applications:**
 - VivaGel™ (Composition and Application)
 - Drug delivery (Applications)
 - Priostar™ dendrimers (Composition)
 - Poly-lysine dendrimers (Applications)
- **Consolidation of the combined IP portfolio will significantly enhance the company's offering and profile to potential commercialisation partners**

Increased US Presence

- **Starpharma intends to expand its US activities and bring additional US investors on to the register**
 - Access to business partners
 - Access to capital
 - Ongoing US based M&A/corporate opportunities

- **Before Transaction: Starpharma has previously established initial awareness in the US**
 - Investment in DNT
 - Significant NIH support
 - Highly successful ADR program (nearly 10% of pre-deal capital)

- **DNT acquisition: will provide additional profile for Starpharma in the US**
 - DNT will remain US based
 - DNT has established relationships with leading US companies
 - Presence of Dow as largest shareholder in Starpharma
 - 2 US board members with capital markets / industrial experience

Starpharma rated : “Top Nanotech Buys for 2005”

“We expect great things to come from the company and its significant ownership in U.S.-based Dendritic Nanotechnologies, Inc.” US based Forbes/Wolfe 2005

Dow Becomes Starpharma's largest Shareholder

- **The Dow Chemical Company will become Starpharma's largest (and a substantial) shareholder post transaction with approximately 8.6% of SPL issued capital**

- **Dow is a leading chemicals and plastics manufacturer with a market capitalisation of over US\$35 billion**

- **Dow will have an ongoing involvement with Starpharma**
 - Tiered escrow arrangement for 36 months, with incentive for 5 years
 - Dow requested and was granted a right to participate in any future capital raisings

- **Presence of Dow as a shareholder likely to enhance Starpharma's profile in the US**



- **DNT is developing a Priostar™ dendrimer-based , receptor-targeted diagnostic and therapeutic technology for the early detection and treatment of ovarian cancer**

- **Unique technology:**
 - **Priostar™ dendrimer targeted delivery system will be combined with a magnetic resonance imaging agent to create an improved product for detection and monitoring of cancerous tissue**
 - **Potential for Priostar™ dendrimer targeted delivery system to be combined with known oncology agents to improve delivery of the therapy**

- **Funded by the National Cancer Institute**

- **Significant synergies with Starpharma’s diagnostic and oncology programs**

Specialty Commercial Products

- **Priostar™ and STARBURST® dendrimers commercially available**
- **Priostar™ family of dendrimers have advantageous properties over other nanostructures**
- **Attractive Product Characteristics:**
 - **New Functionality and Improved Properties**
 - **Efficient & Scalable Manufacturing - Lower Costs**
 - **Versatile Platform for Customizing**

Available Priostar™ Products

Product	Size	Number of Functional Groups	Surface Functionality
DNT-2200	G1	8	Amine
DNT-2201	G2	24	Amine
DNT-2202	G3	72	Amine
DNT-2210	G1	8	Hydroxy
DNT-2211	G2	24	Hydroxy
DNT-2212	G3	72	Hydroxy
DNT-2220	G1	8	Sodium Carboxylate
DNT-2221	G2	24	Sodium Carboxylate
DNT-2222	G3	72	Sodium Carboxylate



Extract from DNT Catalogue