



7 February 2006

MARKET UPDATE

The attached investor presentation was prepared for a series of presentations to Australian fund managers and is based on the Market Update released to the ASX on 14 October 2005. The presentation has been updated to include some additional information regarding the VivaGel™ development program and the commercial opportunities for microbicides.

About Starpharma:

Starpharma Holdings Limited (ASX:SPL, USOTC:SPHRY) leads the world in the application of nanotechnology to pharmaceuticals. The Company's lead development product is VivaGel™, a vaginal microbicide designed to prevent the transmission of STIs, including HIV and genital herpes.

VivaGel™ is the first example of a product to come from Starpharma's dendrimer-based discovery pipeline, which also includes specific programs in the fields of ADME Engineering™ (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).

Starpharma also has equity interests in two companies:

- *Dendritic NanoTechnologies, Inc. (DNT)* – a US company established with the pioneer of dendrimer nanotechnology Dr Donald A. Tomalia and in which the Dow Chemical Company holds 30% equity ; and
- *Dimerix Bioscience Pty Ltd* – a specialist drug development company established to commercialise unique technology developed at the Western Australian Institute for Medical Research in the new field of receptor coupling, specifically G-Protein coupled receptors (“GPCRs”).

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.

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.

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Starpharma Holdings Limited

(ASX:SPL)

February 2006

“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. Company Overview
2. VivaGel™ – Indications and Clinical Development
3. VivaGel™ – Excellent Market Opportunities
4. Product Pipeline
5. Equity Holding in Dendritic Nanotechnologies Inc
6. Conclusion

1. *Company Overview*

Company Overview

- Starpharma Holdings Limited (**'Starpharma'**) (ASX:SPL) is a world leader in the development of nanotechnology based pharmaceuticals (dendrimers)
- Starpharma's lead product, **VivaGel™** is being developed as a microbicide to prevent the sexual transmission of **HIV** and **Genital Herpes**
- SPL recently awarded **A\$26.4m NIH funding** to develop VivaGel™
- Two **line extensions** to VivaGel™ also in development
- Broad **portfolio** of other dendrimer projects
- **Valuable equity stake** (SPL:33%, DOW: 30%) in US company **DNT**

Financial Snapshot

Market Cap:	~ \$70-80M
Institutional Investors:	~ 30%
Level 1 ADR:	~ 6% (12% total international shareholders)
Cash:	\$15.5M (as at 31 Dec 2005)*

* Further \$2.1m received Jan 2006; \$26M for development of VivaGel™ will be reimbursed by NIH

2. *VivaGel™*

Indications and Clinical Development

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
- Products include
 - VivaGel™ for HIV and HSV-2,
 - VivaGel/Condom coating
 - ComboGel
- 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
- HIV may be transmitted by individuals that are asymptomatic
- 39,000,000 people living with HIV; every day 7,000 women are newly infected
- The predominate route of transmission worldwide 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

Microbicide Development Act 2005: US Senate

- The Microbicide Development Act 2005 introduced by H Clinton et al.

“It is estimated that by age 25 half of all sexually active people in the United States can expect to be infected with a sexually transmitted disease (STD) ”

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”

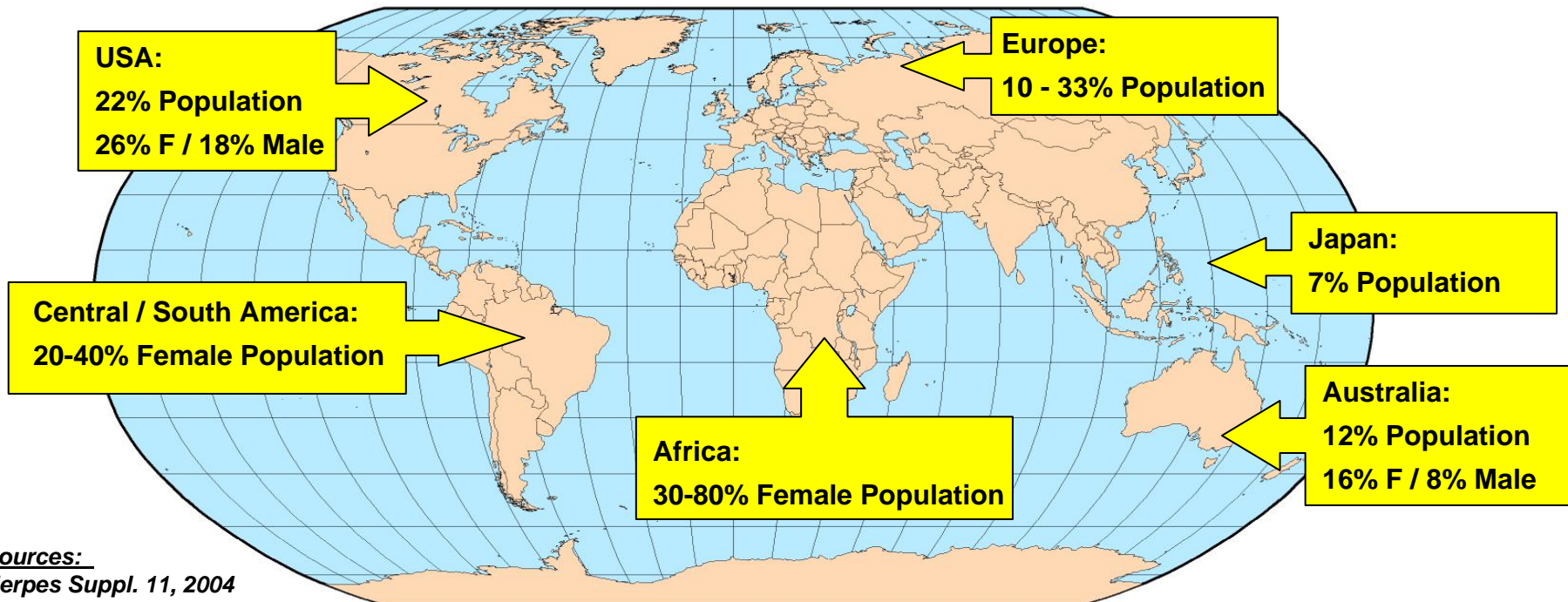
***““HIV prevention options as of 2005 are not enough”
best option...technologies like microbicides which women can initiate and control”***

“The US Government is firmly committed to the development of safe and effective microbicides”

Genital Herpes – Large and Growing Market

- **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

Prevalence of Genital Herpes



Genital herpes is the “un-recognised pandemic” of the industrialised world

Genital Herpes – Nasty, Incurable Disease

- Infection is life-long, drugs do not cure
- Results in painful blisters/ulcers
 - Ulcers last 3-4 weeks; 4-5 ulcerative episodes p.a
- Frequently causes anxiety and depression in affected individuals
- Increases affected individuals' risk of HIV infection by 4-8x
- May be transmitted by individuals who have no visible ulcers
- Transmissible at birth:
 - Occular, neurological and respiratory disease
 - Long term complications in 40%; death in 14%
- Existing prevention methods (condoms and vaccines) to reduce the risk of infection have proven relatively ineffective



Genital herpes is an incurable, life long condition that can be transmitted unknowingly

VivaGel™ – Product Features and Performance

Product Offers Several Key Advantages

Research indicates gel applications will have good uptake
Female controlled, discreet and convenient
Compelling competitive advantages: efficacy; non-irritant; broad activity
Compatible with condoms

Excellent Clinical Results in Human and Primate Trials

Human trials: VivaGel™ is non-toxic and non-irritating
Potent activity in relevant HIV strains in very tough primate trials
Potent activity against other STIs including 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

<p style="text-align: center;">Significant Advantages over Other Products in Development*</p> <p style="text-align: center;">*As demonstrated by NIH selecting VivaGel™</p>	Competitor Products	Key Disadvantages	VivaGel™ Advantages
	Surfactants/ Detergents	<ul style="list-style-type: none"> ♦ Irritation, ulceration, discomfort, Incr. risk of infection by STIs 	<ul style="list-style-type: none"> ♦ No surfactant properties: Does not increase infection risk (non-irritant)
	Sulphated CHO's	<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 Tenofovir, CCR5-inhibitors	<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	<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™ – Phase 1 Clinical Trial Results

- Trial conducted with 36 healthy female volunteers aged between 18 – 43 years
- No SAEs - Gel is safe and well tolerated
 - No vulval, vaginal or cervical inflammation or other pathology related to exposure to the gel
(Colposcopic assessment)
 - No changes of clinical significance in vaginal flora
(Quantitative microbiology analysis)
- The only adverse events occurred in volunteers who received the placebo
 - One AE of severe intensity (tension headache) experienced by subject receiving placebo gel
 - One AE of moderate intensity (rash) experienced by subject receiving placebo gel

VivaGel™ – Significance of NIH \$26m & Fast Track Status



A\$26m+ of non-dilutive funding from US-based NIH

- Funding is provided without any downstream commercial obligations on future revenues generated from VivaGel™
- Funding will allow Starpharma to take product to market itself or secure a late-stage licensing deal

Significantly 'de-risks' VivaGel™

- NIH funding will support VivaGel's development including:
 - Clinical and non-clinical trials,
 - Scale-up of manufacturing through to the final large-scale population study and
 - Access to world class clinical development expertise.

- FDA *Fast-Track* means:
 - Faster review of the NDA application for VivaGel™ (~6 months rather than 13)
 - Greater access to and input from the FDA into VivaGel™ development program

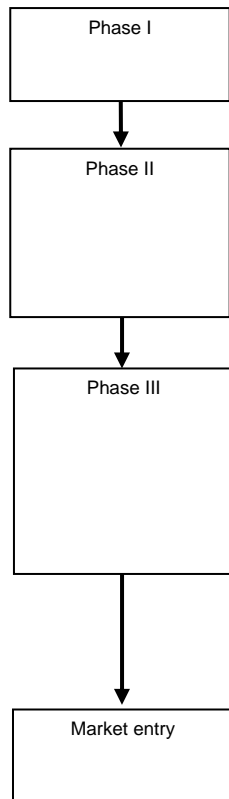
Strong Endorsement of VivaGel™

- The NIH selected VivaGel™ as the candidate for development support following a 12+ month evaluation period

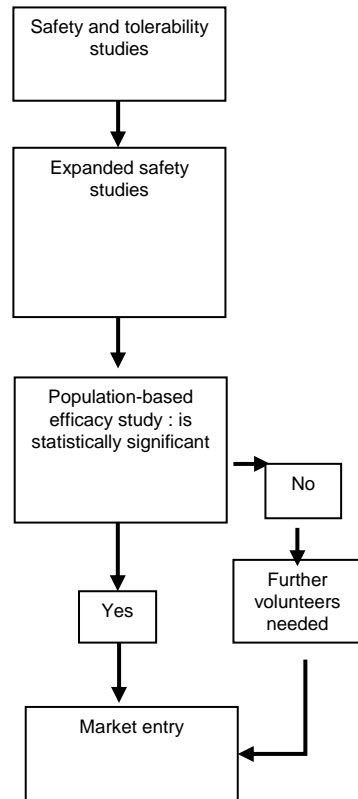
Significantly enhances probability that VivaGel™ will be successfully developed and commercialised

VivaGel™ – Development Path

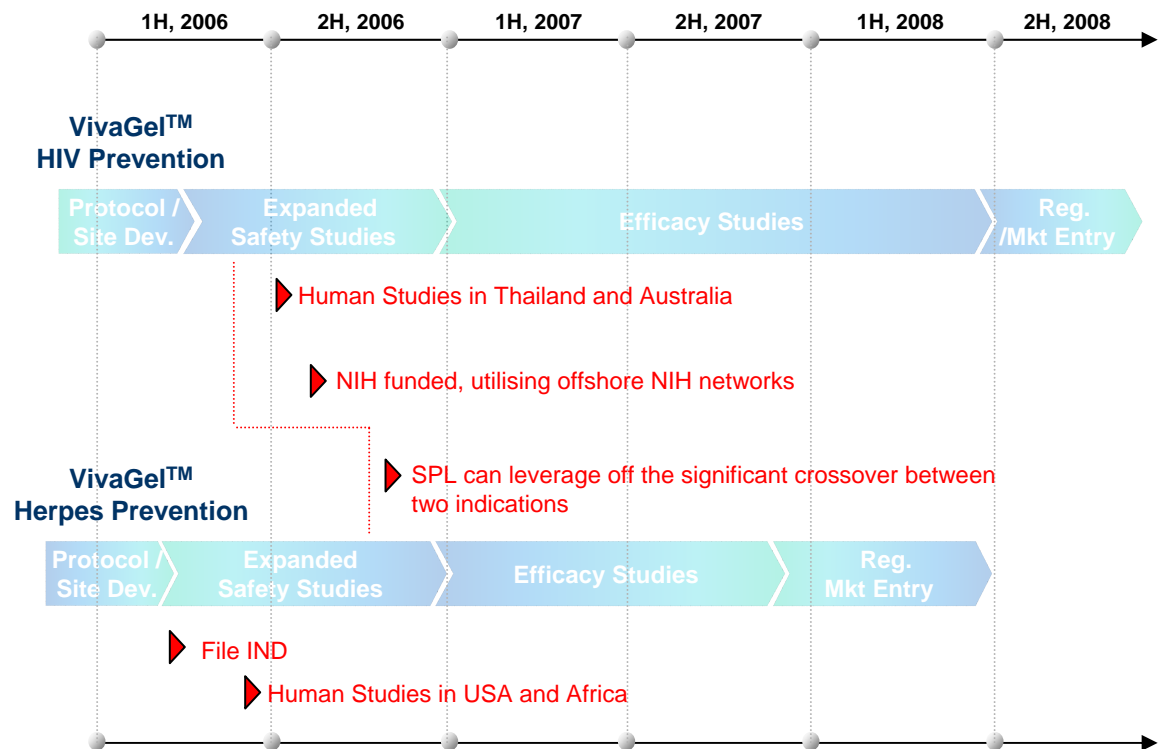
THERAPEUTICS DEVELOPMENT PATH (Treatment)



MICROBICIDES DEVELOPMENT PATH (Prevention)



SPL LEAD PRODUCTS DEVELOPMENT PLAN



Lead products are entering significant clinical development phases in next 6 months

HIV Prevention

- Recently awarded FDA Fast Track Status
- Significant external funding, NIH Grant (A\$26m)
- Non-clinical Development includes:
 - API/scale up
 - CMC
 - Pharmacology
 - Toxicology
- Clinical Development (as per previous slide) includes:
 - Male Study (N=36) (Australia)
 - Female Study (N=60 to 80, sexually active HIV-ve) (Australia/Thailand)
 - Female Study (N=24, HIV+ve) (Thailand)
 - Efficacy study (N = Up to 3200, HIV-ve placebo gel cf. active) (Several centres)

These items are all applicable to the Genital Herpes indication

Herpes Prevention

- Non-clinical completed as per HIV
- Clinical Development (as per previous slide) includes
 - Female Study (N=60, sexually abstinent) (USA, Kenya)
 - Efficacy study (N= Up to 1600 HSV-2-ve women, placebo gel cf. active) (Several centres)

3. *VivaGel™*
Excellent Market Opportunities

VivaGel™ – Excellent Market Opportunities

- Starpharma is currently focused on four commercial applications of VivaGel™

Product	VivaGel™ HIV Prevention ----- Topical Microbicide	VivaGel™ Genital Herpes Prevention ----- Topical Microbicide	Premium Condoms ----- Microbicide Condom Coating	‘ComboGel’ ----- Combination Microbicide & Contraceptive
Est. Market Size	> US\$1bn	> US\$1bn ¹	\$US300-500M	> US\$1.5bn
Path to Market	IND ----- De-risked via NIH funding	IND ----- Costs reduced and de-risked by utilising HIV safety studies	Device ----- Already in discussions Likely less onerous regulatory path	IND ----- De-risked via NIH funding
Est. Market Entry	~ 2H 2008	~ 1-2H 2008	2H 2007 Depends on Partner	> 1H 2009

Starpharma is targeting several significant market opportunities

Consumer Demand for Microbicides

- Increasing market “pull’ for products
 - Microbicides Development Act
- Strong market demand at 5x local condom price

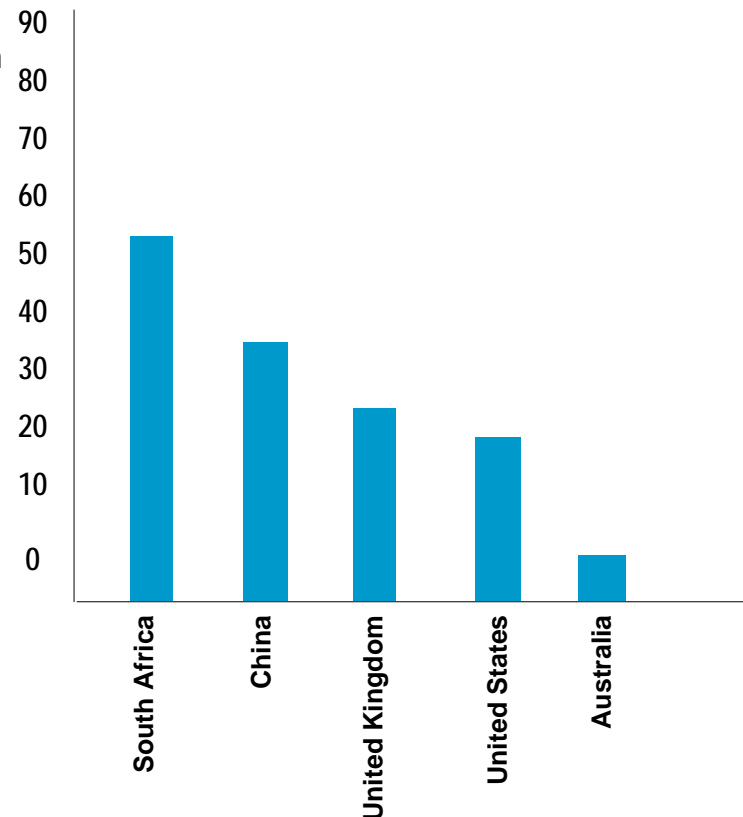
Industrialised World (Willingness to pay)	2007-2012
	US\$3.00*

* Single Application

- 20m women in the US would use a microbicide
- 30-40% of female students surveyed would buy a microbicide

Percentage Interest at 5x local condom Price

Consumer Demand for Microbicides



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

VivaGel™ – Excellent Market Opportunities

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

Condom Coatings

The most common coating in premium condoms is nonxynol-9 (N-9) that is meant to provide spermicidal protection and act as a microbicide

Recent studies have shown that the detergent N-9 actually results in a **significant increase in the rate of infection by HIV** and other viruses (HSV-2)

Starpharma is already in discussions with a number of potential commercial partners who are exploring replacing N-9 with VivaGel™ as a coating for their premium condoms

Likely less onerous regulatory path for VivaGel™ as a condom coating thereby offering a shorter route to market.

ComboGel

Starpharma **received US\$5.4 funding from the NIH** to develop the 'ComboGel' in partnership with a US company, ReProtect

The 'ComboGel' will combine the active agents in ReProtect's BufferGel with VivaGel™ to generate a combination microbicide and contraceptive gel. Potential to extend spectrum of activity.

4. *Product Pipeline*

■ Pharmaceuticals

- Polyvalent = multivalent presentation of covalently bound surface groups; activity due to multiple presentation of surface groups

■ Drug Delivery

- Small molecules occluded (non covalently) within the dendrimer architecture; alternative to liposomes
- Molecules attached to the dendrimer which are metabolically released; single molecule alternative to traditional polymer-drug conjugates

■ In vitro Diagnostics

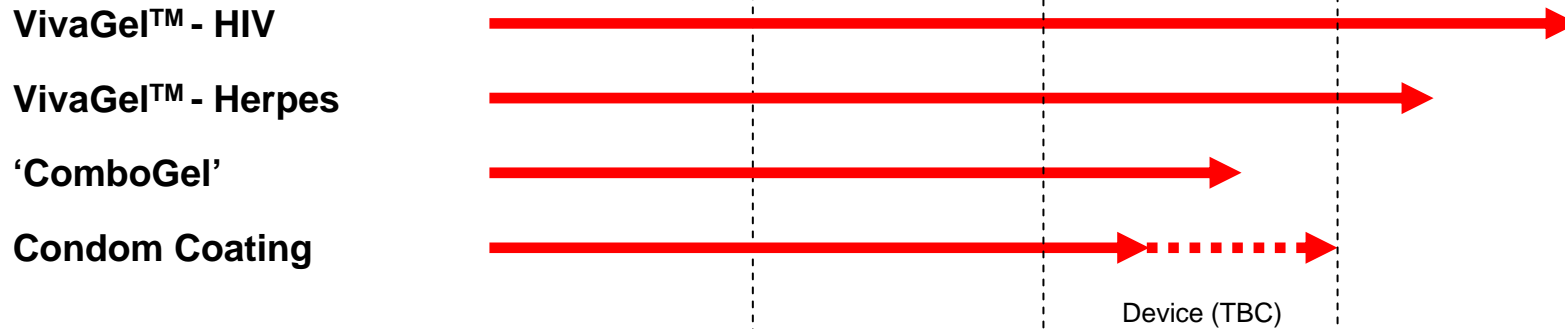
- A dendrimer is a key component of the Stratus CS instrument by Dade Behring [FDA - 510(k)]; detects certain protein biomarkers released in the blood stream as a result of heart muscle damage

■ In vivo Diagnostics

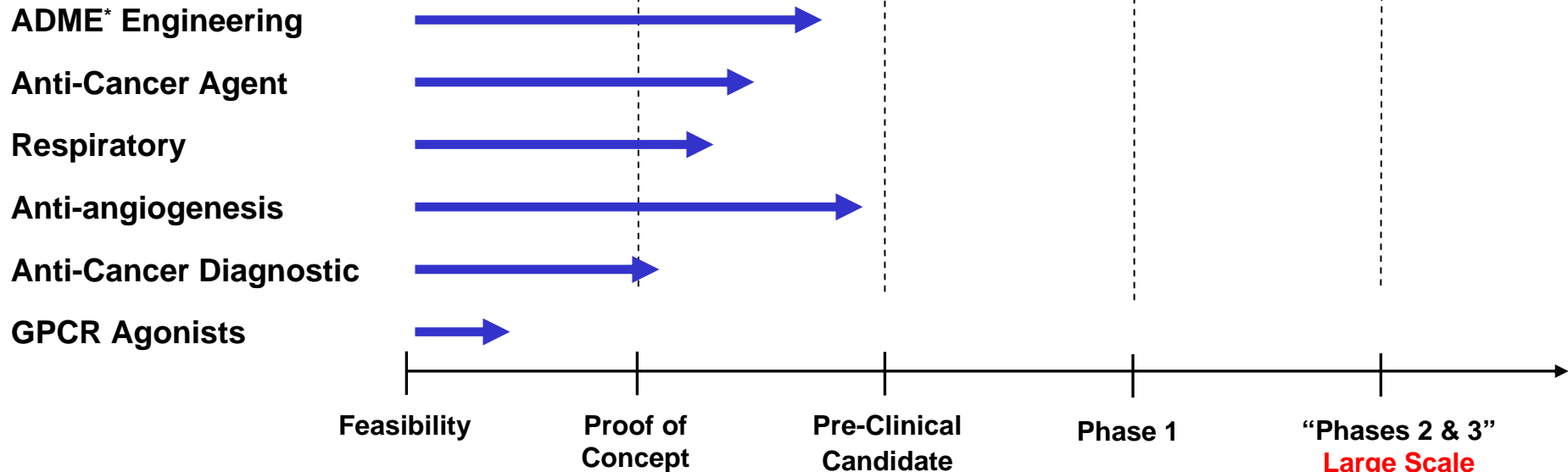
- MRI contrast agents e.g. Gadomer-17: Schering AG (24 gadolinium chelates covalently attached)
- Enhanced organ, tissue and/or tumor detection and resolution; optimized PK profile

Starpharma's Pipeline

Development Pipeline



Discovery Pipeline



*ADME: Absorption Distribution Metabolism Excretion

5. Equity Holding in DNT

DNT: A Valuable and Strategic Asset

- SPL has a 33% holding in a private US company Dendritic Nanotechnologies Inc (DNT)
- DNT is a valuable, but as yet not externally priced, company
 - Existing revenues streams from deals with leading pharmaceutical and biotechnology companies including Pfizer Inc; Sigma Aldrich; General Dynamics Corporation, US Dept. Defense, Lumera etc
 - NCI to fund its ovarian cancer diagnostic dev't.
 - Valuable new synthetic methodology (Priostar™) for generating dendrimers cheaper and faster
 - Active development portfolio:
 - Ovarian Cancer Diagnostic
 - MRI contrast agent
 - Transfection for siRNA
- The DOW Chemical Company holds 30% DNT equity
- SPL has exclusive commercialisation rights to DNT's technology for nanopharmaceuticals
- Listed companies on Nasdaq developing nanomaterials
US\$80m – US\$190m

MCaps of Listed US Nanomaterials Companies

COMPANY	MCap (US\$m)
Orthovita	190
Altair	168
Nanogen	157
Nanophase	106
Lumera	81
Isonics	79

6. *Conclusion*

Starpharma: Value Highlights

Strong Financial Position

- Successful institutional placement/SPP \$15M (~2 years cash)

NIH Funding

- US\$20.3m of non-diluting funding; de-risks development
- Significant validation of the technology

Strong Anticipated News Flow

- Fast Track Status for VivaGel™
- International and domestic human trials of VivaGel™ (incl. new IND for HSV-2)
- Strong probability of additional non-dilutive funding from international health organisations and commercial announcements (Starpharma and DNT)

Market Opportunities

- Initial applications target HIV and genital herpes: significant markets

Valuable Assets

- Equity stake in Dendrimer Nanotechnologies (DNT) and Dimerix
- Breadth and quality of dendrimer pipeline

For Further Information

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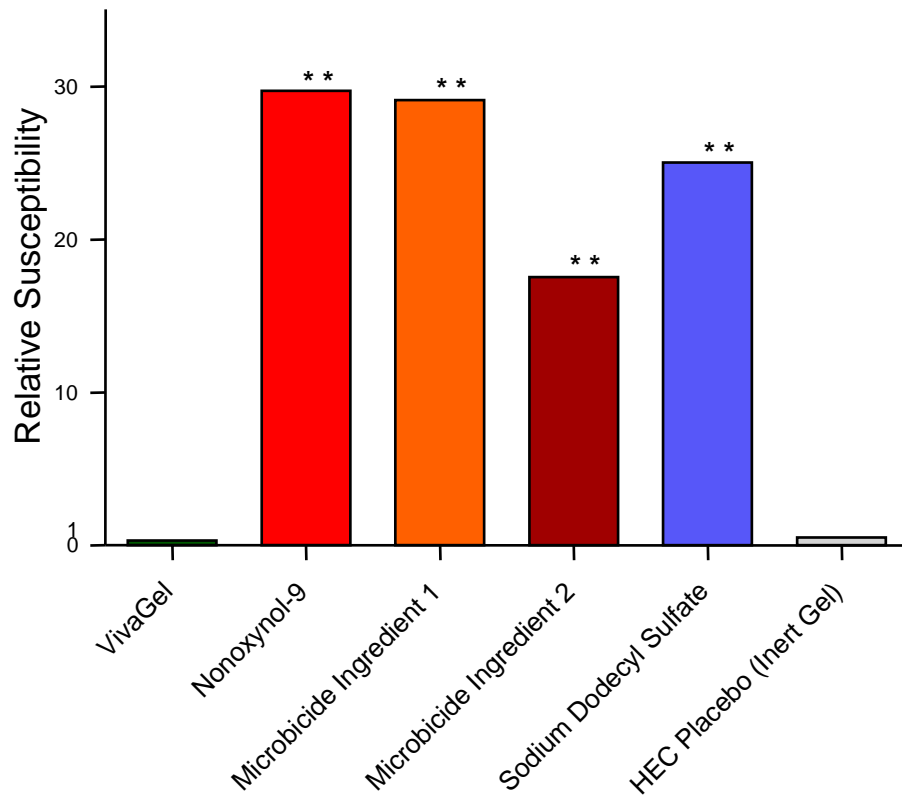
Mobile: +614 0771 6887



Appendices

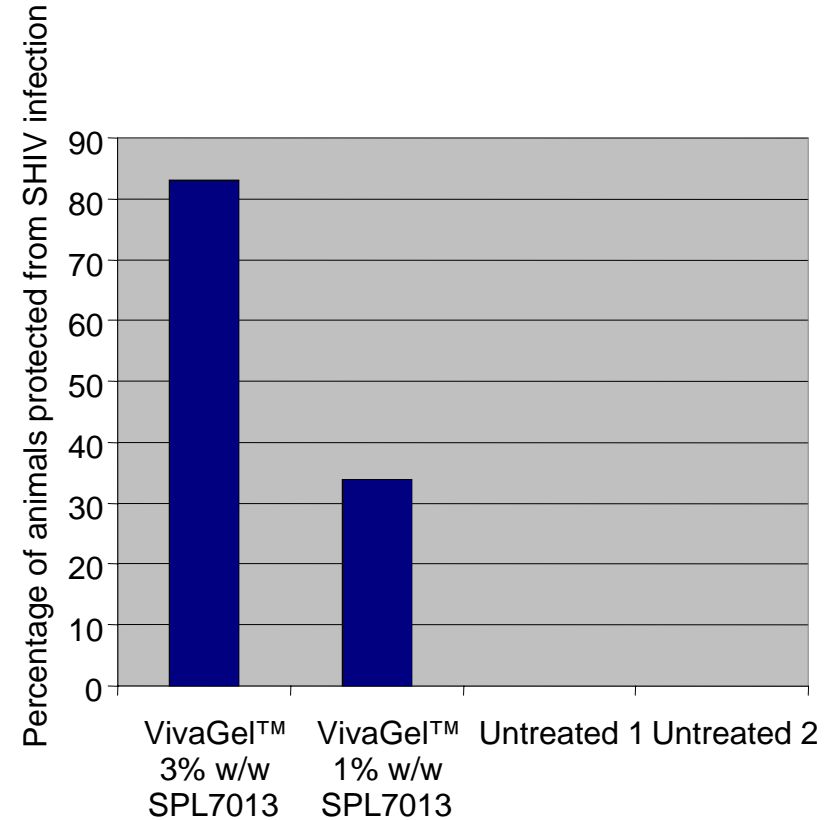
VivaGel™ - Excellent Safety and Efficacy Profile

Relative susceptibility to HSV-2 infection 12 hr after a single application of candidate microbicide in female mice



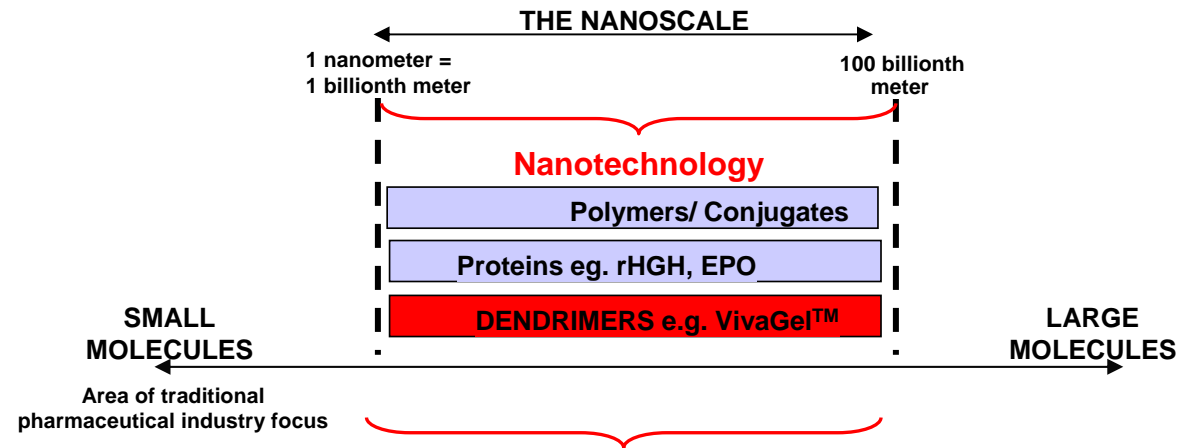
** = P<0.001 compared with saline

Combined Results of Pivotal Non-Human Efficacy Studies



Starpharma is a Leader in Nanopharmaceuticals

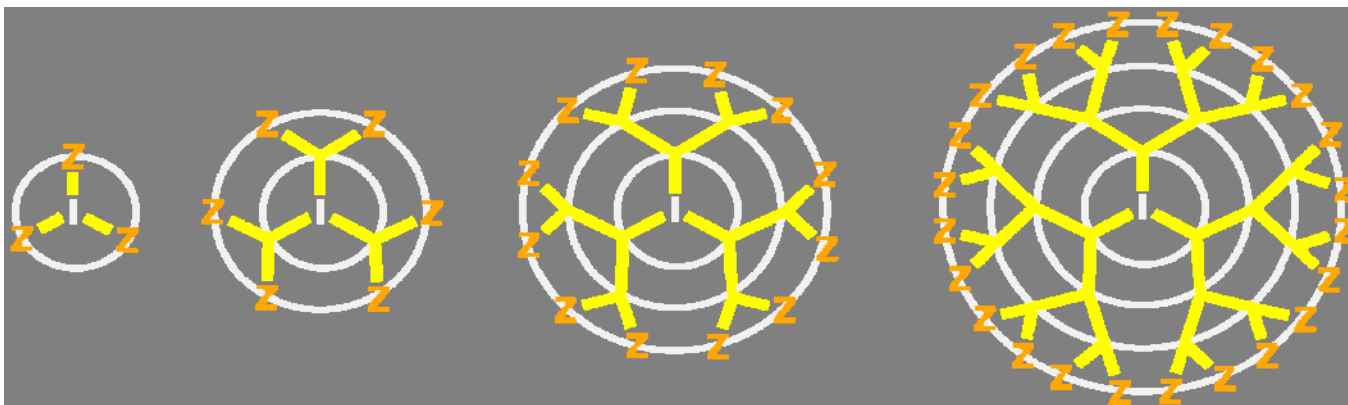
- Nanotechnology is the manipulation of matter smaller than 100 nanometres ('nm')
- Starpharma is a leader in developing a particular class of nanostructures called dendrimers for drug development
- Dendrimers are formed by adding successive layers of branching molecules to a central core
 - Multiple binding sites: polyvalency
 - Precise manufacture: consistency of composition



“In 2014 16% of goods in healthcare and life sciences by revenue will incorporate emerging nanotechnology”

Lux Research, October 2004

- Dendrimers also have life science applications in drug delivery (liposome-like), diagnostics and contrast agents (Schering)
- SPL and DNT have a comprehensive IP position covering the use of dendrimers



- I = Initiator or core
- Y = Branching unit
- L = Linker between Y and Z
- Z = Surface group

Size

- Molecular weight
- Distance of span or volume

Surface group/s

- Number
- Type

Discovery Projects Overview

- **ADME Engineering™**
 - Use of dendrimers to improve pharmacokinetics of existing molecules, improved dose efficiency
- **Anticancer Agent**
 - Specific example of ADME engineering of existing anticancer drug to modify the pharmacokinetic and safety profile
- **Respiratory**
 - Dendrimers for the treatment/prevention of RSV and other respiratory pathogens eg. influenza, exotic viruses
- **Anti-angiogenesis Agent**
 - In vivo efficacy demonstrated; Potential for local delivery reducing dosing load and frequency
 - Non-cancer applications including AMD, diabetic retinopathy, macular oedema.
- **Anti-cancer Diagnostic**
 - Targetted imaging of tumours
- **GPCR Agonist, eg Cancer**
 - Polyvalent engineering of existing small molecule GPCR ligands to improve efficacy and pharmacokinetics