



Starpharma Holdings Limited

ASX:SPL

OTCQX:SPHRY

ASX Small to Mid Caps Conference

Hong Kong

21 October 2010

Dr Jackie Fairley, CEO



This document contains certain forward-looking statements, relating to Starpharma's business, which can be identified by the use of forward-looking terminology such as "promising", "plans", "anticipated", "will", "project", "believe", "forecast", "expected", "estimated", "targeting", "aiming", "set to", "potential", "seeking to", "goal", "could provide", "intends", "is being developed", "could be", "on track", or similar expressions, or by express or implied discussions regarding potential filings or marketing approvals, or potential future sales of product candidates. Such forward-looking statements involve known and unknown risks, uncertainties and other factors that may cause actual results to be materially different from any future results, performance or achievements expressed or implied by such statements. There can be no assurance that any existing or future regulatory filings will satisfy the FDA's and other health authorities' requirements regarding any one or more product candidates nor can there be any assurance that such product candidates will be approved by any health authorities for sale in any market or that they will reach any particular level of sales. In particular, management's expectations regarding the approval and commercialization of the product candidates could be affected by, among other things, unexpected clinical trial results, including additional analysis of existing clinical data, and new clinical data; unexpected regulatory actions or delays, or government regulation generally; our ability to obtain or maintain patent or other proprietary intellectual property protection; competition in general; government, industry, and general public pricing pressures; and additional factors that involve significant risks and uncertainties about our products, product candidates, financial results and business prospects. Should one or more of these risks or uncertainties materialize, or should underlying assumptions prove incorrect, actual results may vary materially from those described herein as anticipated, believed, estimated or expected. Starpharma is providing this information as of the date of this presentation and does not assume any obligation to update any forward-looking statements contained in this document as a result of new information, future events or developments or otherwise. Certain VivaGel studies are funded by U.S. NIH/NIAID/DAIDS, Contract No. HHSN266200500042C. The content of this presentation does not necessarily reflect the views or policies of the Department of Health and Human Services, nor does mention of trade names, commercial products, or organizations imply endorsement by the U.S. Government.



Starpharma Holdings Limited - ASX:SPL

Investment Summary

Starpharma is a leader in the development of proprietary dendrimers (highly branched polymers) for pharmaceutical and life-science applications

- **Attractive commercial partnership for VivaGel® condom coating**
 - VivaGel® Condom Coating licensed to SSL (under bid by Reckitt Benckiser)
 - royalty revenues expected to commence in CY11
- **Lead product VivaGel® completing mid-stage clinical trials:**
 - Gel to protect women from sexually transmitted infections (HIV, HSV-2, HPV, bacterial vaginosis)
 - in Phase 2 clinical development ; >US\$26M NIH support
- **Multiple partnerships already in place for Starpharma's dendrimers:**
 - Drug delivery (Lilly, Elanco, GSK/Stiefel)
 - Medical technology (Siemens, Aldrich, Merck, Qiagen)
 - Agrochemical deal with multi-billion dollar US Co.
 - Other opportunities: Industrial, cosmetic, water treatment

15 October 2010

ASX Code	SPL
Share Price SPL AUD	56c
52 Week Range AUD	44-78c
Shares on Issue	239.4M
Market Capitalisation AUD	~ \$134M
Average Mthly Volume: ASX	~6.1M shares
Average Mthly Volume: OTCQX (Code: SPHRY)	~1M shares
Cash (AUD) 30/06/10	\$22.8M
Major Shareholders	Acorn Capital Orbis Dow



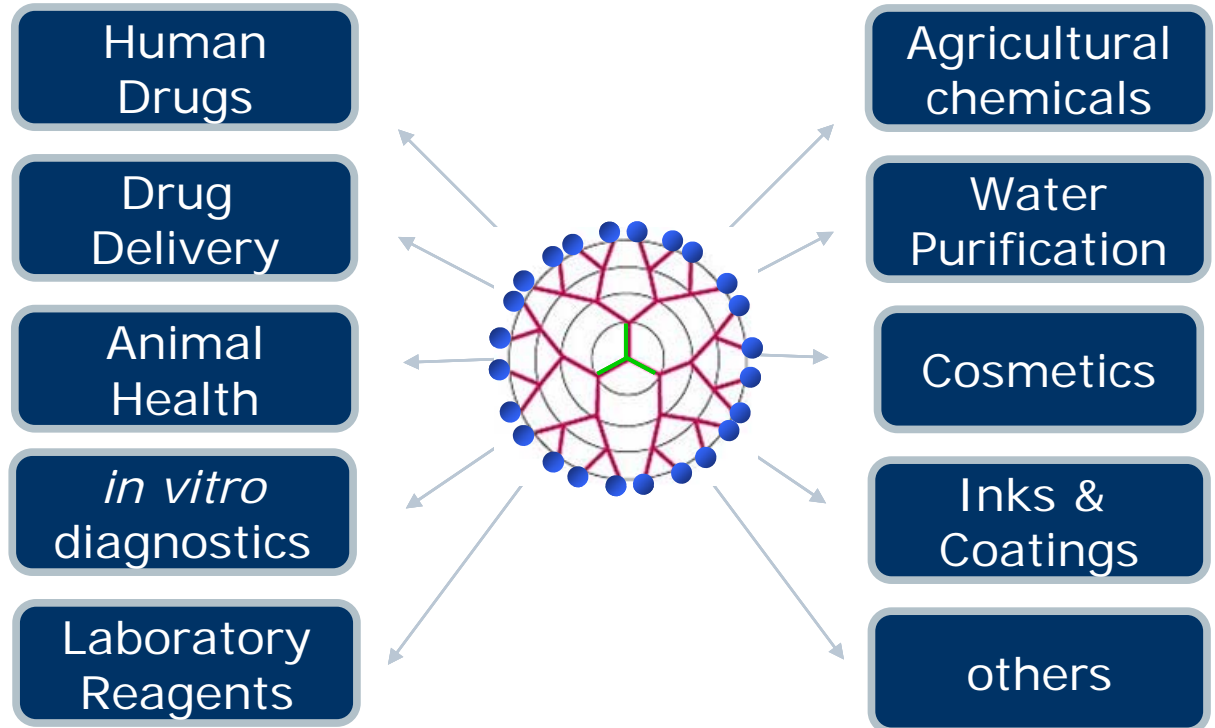
Dendrimers – A Versatile “Platform” Technology

“SPL is one of the few companies in Australian biotechnology sector that has what we consider to be a true technology platform which can be used for a wide range of healthcare and industrial applications.”

Shaw Stockbroking, 9 Dec 2009

“Starpharma provides excellent exposure to the biotech sector, without the development and expenditure risks attributable to late stage therapeutic players.”

Taylor Collison, 23 Mar 2010



Starpharma’s dendrimers are highly branched polymers with versatile commercial applications



Starpharma's Commercial Partnerships

Starpharma - partnering with market-leading companies



VivaGel®

Co-development deal for Condom Coating



Dendrimers for Drug Delivery

Lilly, Elanco, Stiefel (GSK); Drug delivery collaborations



Stratus CS®

Various diagnostics licensed to Siemens Healthcare (Dade Behring)



SuperFect®

Gene transfection technology licensed to Qiagen



Starburst®

Dendrimers commercially available via Sigma Aldrich



PrioFect® : siRNA & DNA transfection reagents



VivaGel® - 2 Products: Anti-viral Condom Coating and Microbicide Gel

VivaGel®-Coated Condom



VivaGel®



Condom coated with patented antiviral
- inactivates viral STIs
(HIV, Herpes, HPV)

Licensed to SSL International
(under bid by Reckitt Benckiser)

Combination Product
(Device Branch review)



Product

**Commercialization
Strategy**

Regulatory path

Topical Microbicide Gel
- for the prevention of
viral STIs (HIV, Herpes, HPV)

In-house development,
late stage license

Standard Pharmaceutical;
FDA Fast Track

VivaGel® Condom Coating License Agreement with Durex®

Starpharma to receive:

- royalties on SSL sales
- milestones
- development assistance

Value to Starpharma:

- **Estimated receipts in excess of A\$100m**
- Nearer term revenue potential (device route)
- **Enhancement of VivaGel® brand**
- Commercial validation of VivaGel® and microbicides

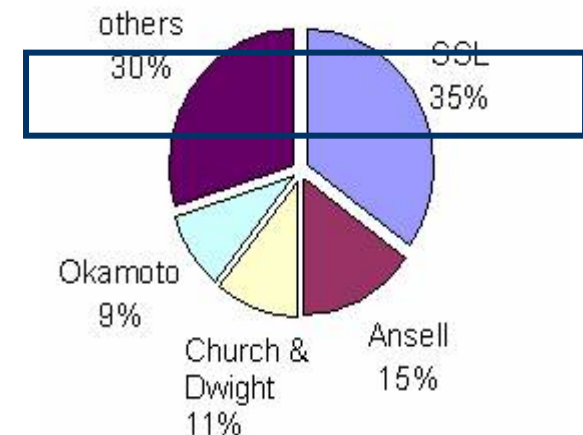
SSL International plc to market globally

- Global consumer product company (**LSE:SSL**) Mkt. Cap GBP1.7 billion
- Major brands include **Durex®** and **Scholl®**
- **Durex® is No. 1 condom brand globally**
- **~40-42%** of global branded condom market; aggressively building share and capacity, including Russia and China

Condom Market - prior to SSL Russian Acquisition

Total Sales:	US\$3.26B (2006)
Top 4 sales:	70% of total
Sales Growth:	4-5% annually

Chief Factor in growth:
awareness of AIDS and STIs



source: "Condoms - a global strategic business report 2005"



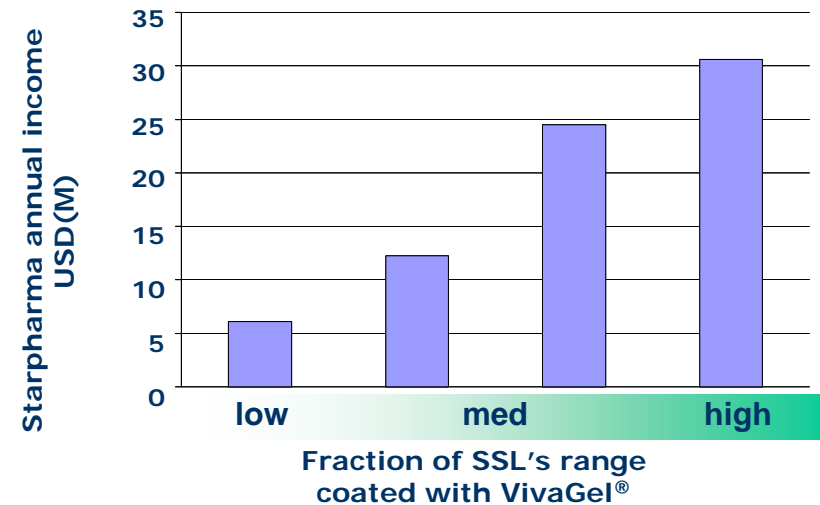
VivaGel®-Coated Condom

Licensed to SSL International, owners of Durex® the leading global condom brand



- Early opportunity
- Anti-viral Condom Coating
- >>A\$100m (est.) license & royalties
- Combination Product (Device Branch review)

Starpharma Income Scenarios



Key Assumptions:

- Global Branded Condom Market est: US\$1.1 - \$1.7 B
- SSL Global market Share 40 -42%
- Market Growth Rate pa. 5%
- Patent expiry 2027 (excl. extensions)

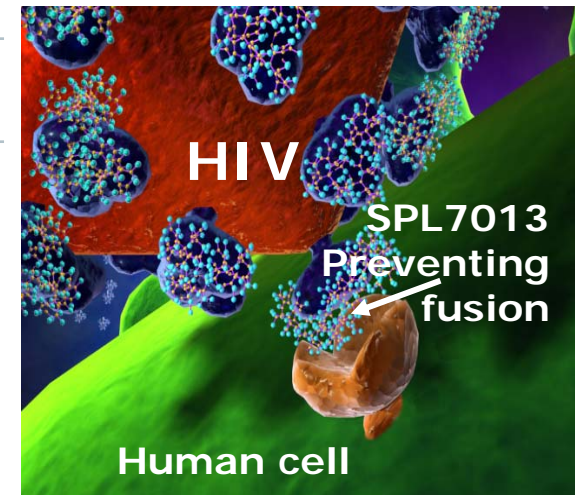
Potential upsides (not included):

- Further SSL market share growth
- Market growth > 5%



VivaGel® - Microbicide for the Prevention of HIV and Genital Herpes

Product	Topical vaginal microbicide
Indications:	Under development: Prevention of STIs in women Phase 2 (IND): HIV, genital herpes (HSV-2) and Bacterial Vaginosis
Presentation:	Applicator delivered Gel
Active:	Pharmaceutical grade Dendrimer (SPL7013)
Mechanism:	Dendrimer inactivates HIV and HSV-2 Binds to receptors on the virus; blocks cell entry
Motivation:	Vaccines ineffective; condoms not widely used
Other:	FDA Fast Track Status; More than \$26M NIH support Highly active in HIV & Herpes in stringent animal models Potent Activity in humans to 24 hours Activity in HPV and bacterial vaginosis ; other pathogens under investigation; contraceptive activity in animals Global patent coverage to 2027





Commercial Opportunity for Microbicides

Genital Herpes an important health issue and key driver

Genital Herpes: a major health issue in the USA and Europe

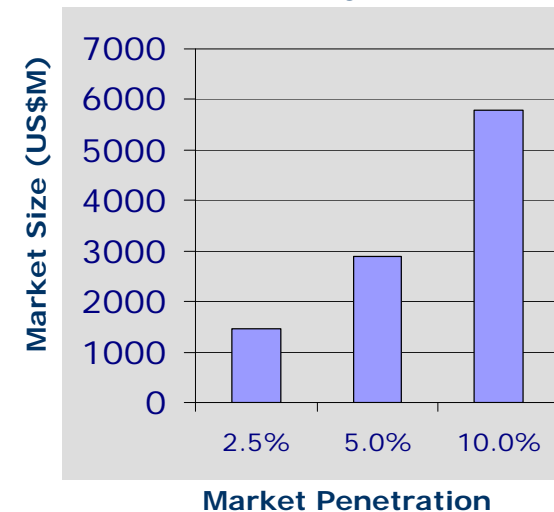
- Affects >50 million Americans today ; 26% women in the USA and 15-20% adults in Europe
- 40-50% of women in the U.S. by 2025 (estimated)
- Recurrent, lifelong viral infection;
- Herpes infected individuals 6-8x increased risk of HIV
- Alternative prevention options are limited; vaccines ineffective
- VivaGel® is the only microbicide being developed for Herpes prevention



Industry surveys confirm strong consumer demand for microbicides

- 30 - 40% of female US college students would buy a microbicide effective against STIs
- Other studies: >20 million women in US would use a microbicide

Estimated Market* for Microbicides in Developed Countries only



Independent Microbicide market estimates: \$1.5-6 Billion

Source: World Bank; UNAIDS; EC AIDS survey; BCG analysis, various analyst and microbicide publications;

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



VivaGel®: Human Papilloma Virus (HPV) Activity

VivaGel® has broad activity in HPV strains not currently addressed by existing vaccines

	HPV-5	HPV-6	HPV-11	HPV-16	HPV-18	HPV-31	HPV-45
Genital warts Cutaneous infection		✓	✓				
Cervical Carcinoma				✓	✓	✓	✓
Gardasil® (CSL/Merck)	✗	✓	✓	✓	✓	✗	✗
Cervarix® GSK	✗	✗	✗	✓	✓	✗	✗
VivaGel® SPL7013*	✓	✓	✓	✓	✓	✓	✓

*In-vitro results obtained at NCI and University of Queensland



VivaGel® - Bacterial Vaginosis (BV) –Treatment and Prevention of Recurrence

An Attractive Commercial Opportunity

- The most common vaginal infection worldwide
 - 21 million women infected with BV in US, (as high as 51% in certain demographics);
 - Causes unpleasant discharge, increased risk STIs, linked to preterm birth
 - Global market for *topical* BV treatments alone: approx. US\$300-350M
 - Shortcomings amongst current antibiotic treatments:
 - Low cure rates < 50% and high rate of recurrence
 - Adverse effects: toxicity, reaction with alcohol, incompatibility with condoms
-
- VivaGel® clinical safety trials showed BV resolution in a number of human participants
 - Lab tests show desirable differential action between normal flora (*Lactobacilli spp.*) & pathogenic bacteria (*G. vaginalis, Bacteroides, Prevotella.*)
 - Phase 2 Trial for VivaGel® BV treatment underway; prevention of recurrence and Phase 3 planned



VivaGel® - Anti-viral Condom Coating and Microbicide Gel

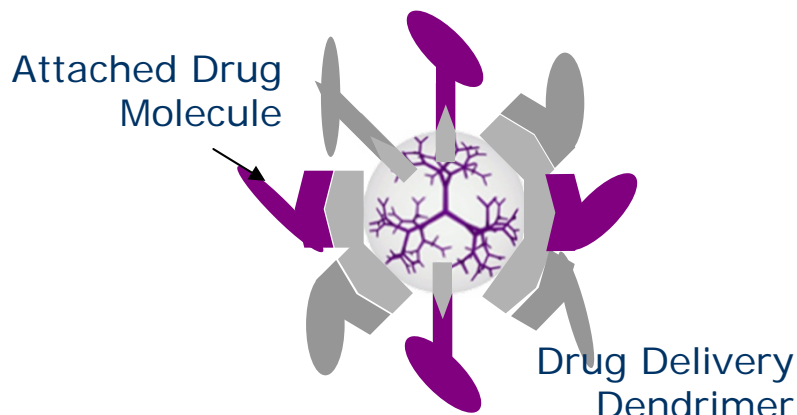
Product	Indication	Regulatory Path	Market Potential USD
VivaGel® Standalone Gel	STI (HIV/HSV2) Prevention Phase 2	Drug	\$3-6Bi ¹
VivaGel® Standalone Gel	BV treatment (& prevention) Phase 2	Drug	\$300-350M ¹
VivaGel® Coated Condom	Antiviral coating	Drug/Device combination	\$1.1 - \$1.7 Bi ¹

1: World Bank; UNAIDs; EC AIDS survey; various analyst and microbicide publications; industry reports and accounts of industry participants; SSL Annual Reports and condom industry data



Dendrimers for Drug Delivery

Advantages can include - efficacy, reduced toxicity, less frequent dosing and new patent life



Capabilities of Starpharma's Technology include:

- sImproved efficacy of drugs
- sExtension of drug half-life
- sReduced toxicity
- sActive or passive targeting (e.g. EPR*)
- sProduct lifecycle management
- sImproved solubility of drugs
- sDrug "rescue"

*enhanced permeability & retention effect

Starpharma's Delivery Partnerships:

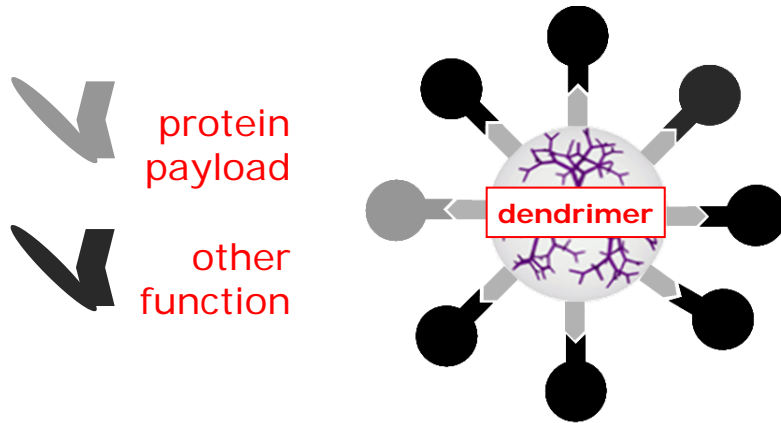
- Eli Lilly and Company – human pharmaceuticals
- Stiefel Labs. Inc (a GSK company) – Dermal
- Lilly's Animal Health Division , Elanco
- Various additional, early stage





Dendrimers for Drug Delivery - Proteins and Peptide Drugs

Longer half life – less frequent dosing



Approach

Conjugate protein or peptide to functionalised dendrimer

Benefit

Control half life of protein or peptide therapeutics

Improve dosing regimen

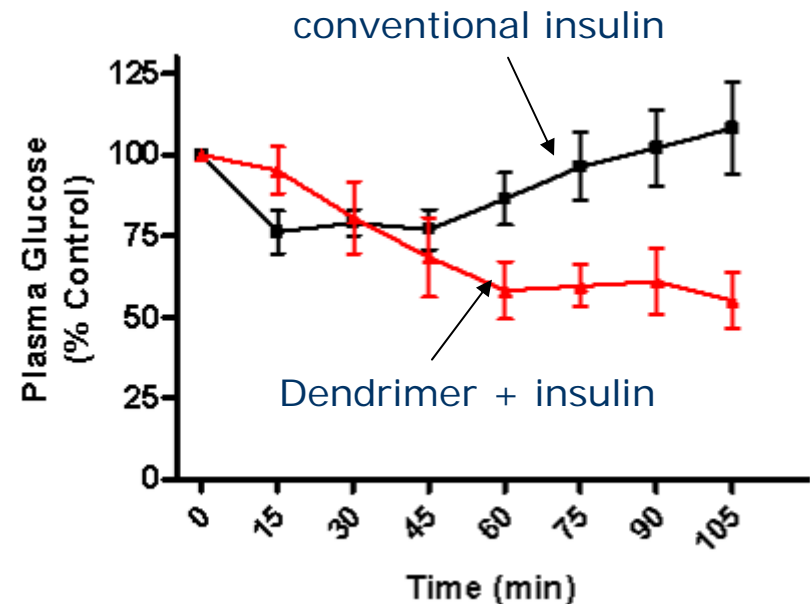
Reduce protein metabolism

Status

in vivo using insulin for proof of concept **achieved**

Co-development program with undisclosed partner

In vivo mouse model

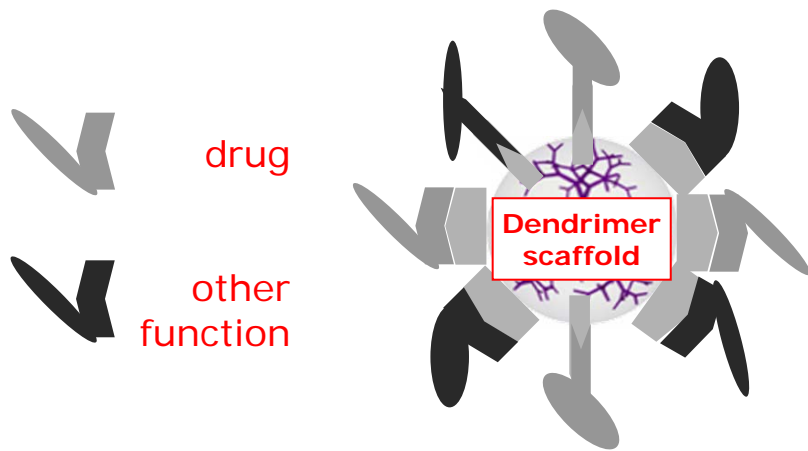


Dendrimer insulin shows prolonged suppression of blood glucose *in vivo*

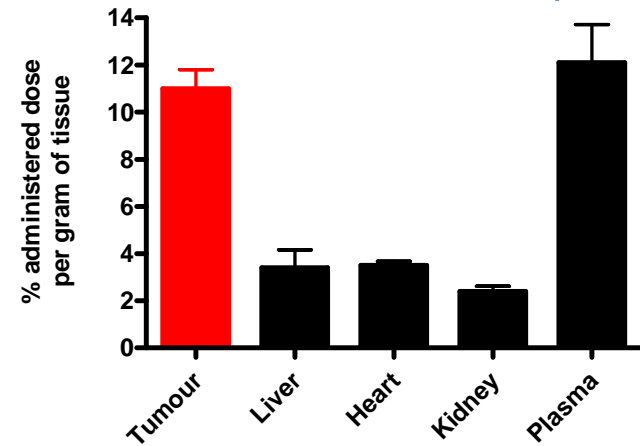


Small Molecule Drug Delivery

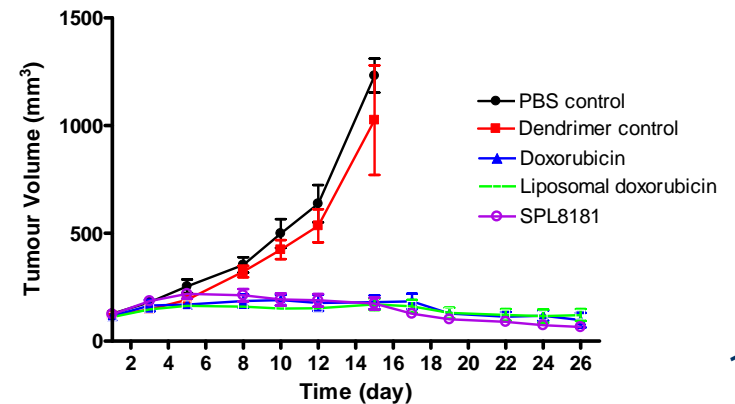
Efficacy - with reduced toxicity



Mouse Tissue Deposition



Breast Cancer Xenograft

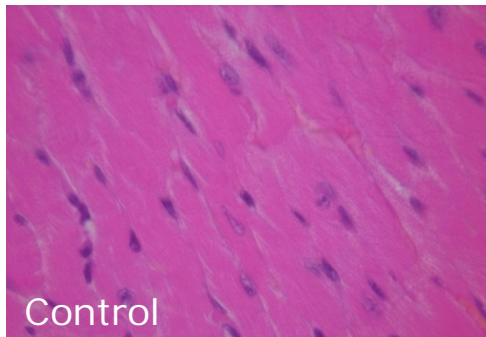




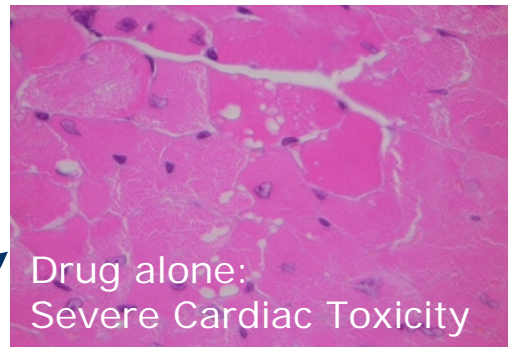
Dendrimers for Drug Delivery

Efficacy - with reduced toxicity

Cardiac toxicity of one of world's most widely used cancer drugs (doxorubicin) reduced markedly



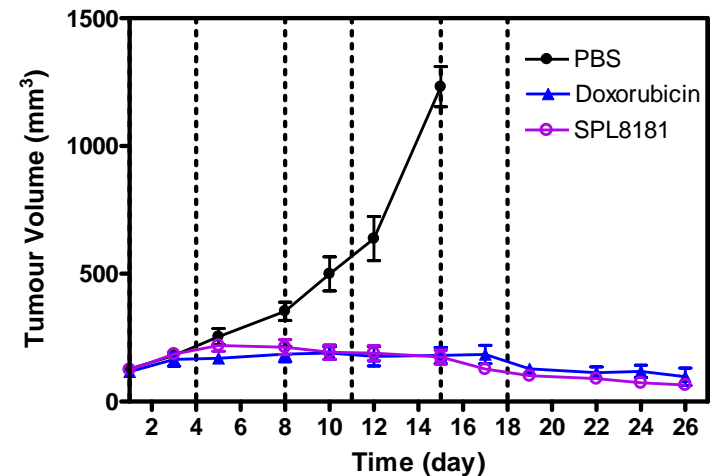
Control



Drug alone:
Severe Cardiac Toxicity



Drug with Dendrimer:
Protected



...whilst preserving or enhancing drug function



Dendrimers in Agrochemicals



Starpharma signs agrochemicals deal

Melbourne, Australia; 5 November 2009 - Starpharma Holdings Limited (ASX:SPL, OTCQX:SPHRY) today announced the signing of a research and collaboration agreement between its wholly owned US subsidiary, DNT Inc, and a prominent, US-based agricultural chemicals company. The confidentiality provisions of the agreement prevent disclosure of the name of the collaborating company at this time.

Under the agreement the parties will use DNT's Priostar® dendrimer technology to enhance the performance of existing pesticides. The approach is a natural extension of Starpharma's drug delivery work, in which dendrimers extend the persistence of an active molecule, potentially reducing the amount of active that is required for a given effect.

The agreement applies to specific classes of pesticides, and does not prevent Starpharma's further commercialisation of dendrimers more widely in the agricultural chemicals sector.

- Extension of drug delivery technology
- Valuable new opportunity for dendrimers
- Agrochemicals market US\$124B (Pesticides US\$35.8B)
- Faster development than pharmaceuticals
- One agreement announced Nov. 2009 – a number of discussions in progress



Model demonstrating multiple points of attachment

Dendrimer can enhance the performance of existing agrochemicals

- Adhesion to difficult surfaces
- Extension of effect/
Controlled release
- Solublising
- Protection of Actives
- Sequestration



Financials and Value Drivers for Starpharma

	FY 2010 (\$M)
Royalty, customer & license revenue	1.4
Grant, interest and other income	4.5
Total revenue and income	5.9
Net loss after tax	(6.4)
Net cash outflow before new capital (Cash Burn)	(3.9)
New share capital (net proceeds)	15.1
Cash at Bank (30 June 10)	22.8

15 October 2010	
ASX Code	SPL
Share Price SPL AUD	56c
52 Week Range AUD	44-78c
Shares on Issue	239.4M
Market Capitalisation AUD	~ \$134M
Major Shareholders	Acorn Capital Orbis, Dow

Value Drivers

VivaGel® - Coated Condom to market

- Complete co-development with SSL; royalty revenue estimated for CY11

Advance VivaGel® clinical development

- Complete Phase-2 Bacterial Vaginosis program and commence Phase-3
- Advance Herpes/HPV/(HIV) efficacy trials

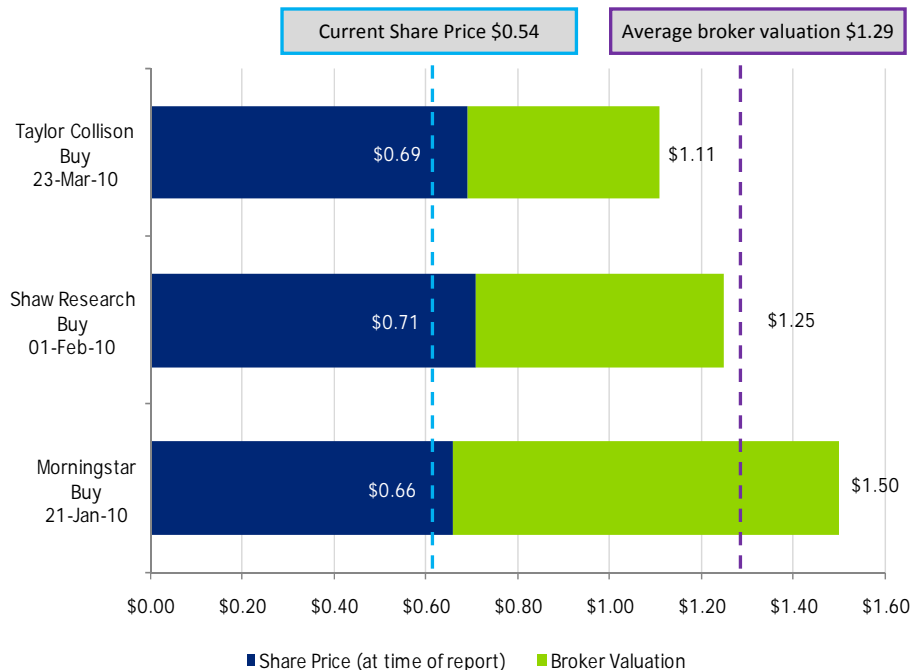
Expand dendrimer-based commercial relationships

- Advance existing and form new commercial partnerships - pharmaceuticals, diagnostics, agrochemicals



SPL Analyst coverage and commentary

Analyst valuations / Price targets^{3, 1}



Notes:

1) As at 28 April 2010

2) Shaw acted for Starpharma in the role of Lead Manager within the past 12 months (from report date), for which they received a fee. Shaw, its associates, employees and authorised representatives have an interest in the financial products of Starpharma

3) Broker Price Targets excludes Morning Star who did not provide a price target

Analyst commentary

"Starpharma provides **excellent exposure to the biotech sector, without the development and expenditure risks** attributable to late stage therapeutic players."

- Taylor Collison, 23 Mar 2010

"This deal [Elli Lilly's partnership with SPL for drug delivery] provides further validation of opportunities around SPL's dendrimer technology and the company's business model."

- Shaw Research, 1 Feb 2009

"Any price weakness in SPL is likely to be met with keen interest by stock accumulators looking to benefit ahead of **anticipated flow of revenue in 2011 from Starpharma's condom coatings with SSL.**"

- Bioshares, 20 Dec 2009

"SPL is one of the few companies in Australian biotechnology sector that has what we consider to be a **true technology platform** which can be used for a wide range of healthcare and industrial applications." ⁽²⁾

- Shaw Research, 9 Dec 2009

"A significant **commercialisation deal in 2008 and the start of revenue generation now focuses investor attention.**"

- Morning Star, 25 Sept 2009



Starpharma Holdings Limited

ASX: SPL

OTCQX: SPHRY

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CEO

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Supplementary Information

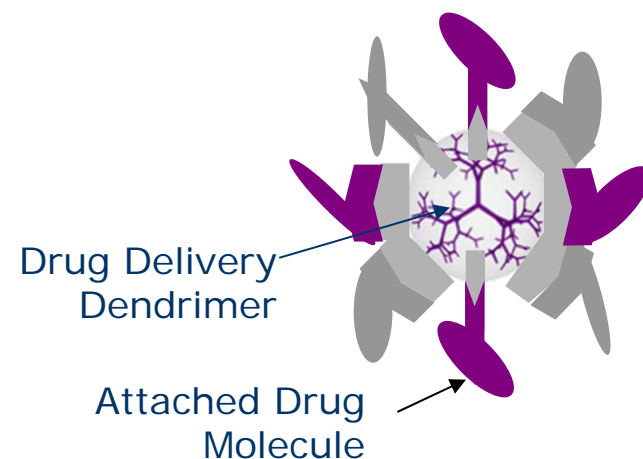
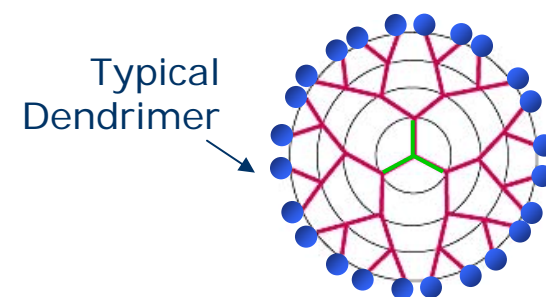


Technology Overview : Dendrimers

- **Dendrimers are a special type of polymer:**
 - Small (millionths of a millimetre)
 - Versatile
 - Highly regular size and structure
 - Synthetic
 - Well tolerated pharmaceutically

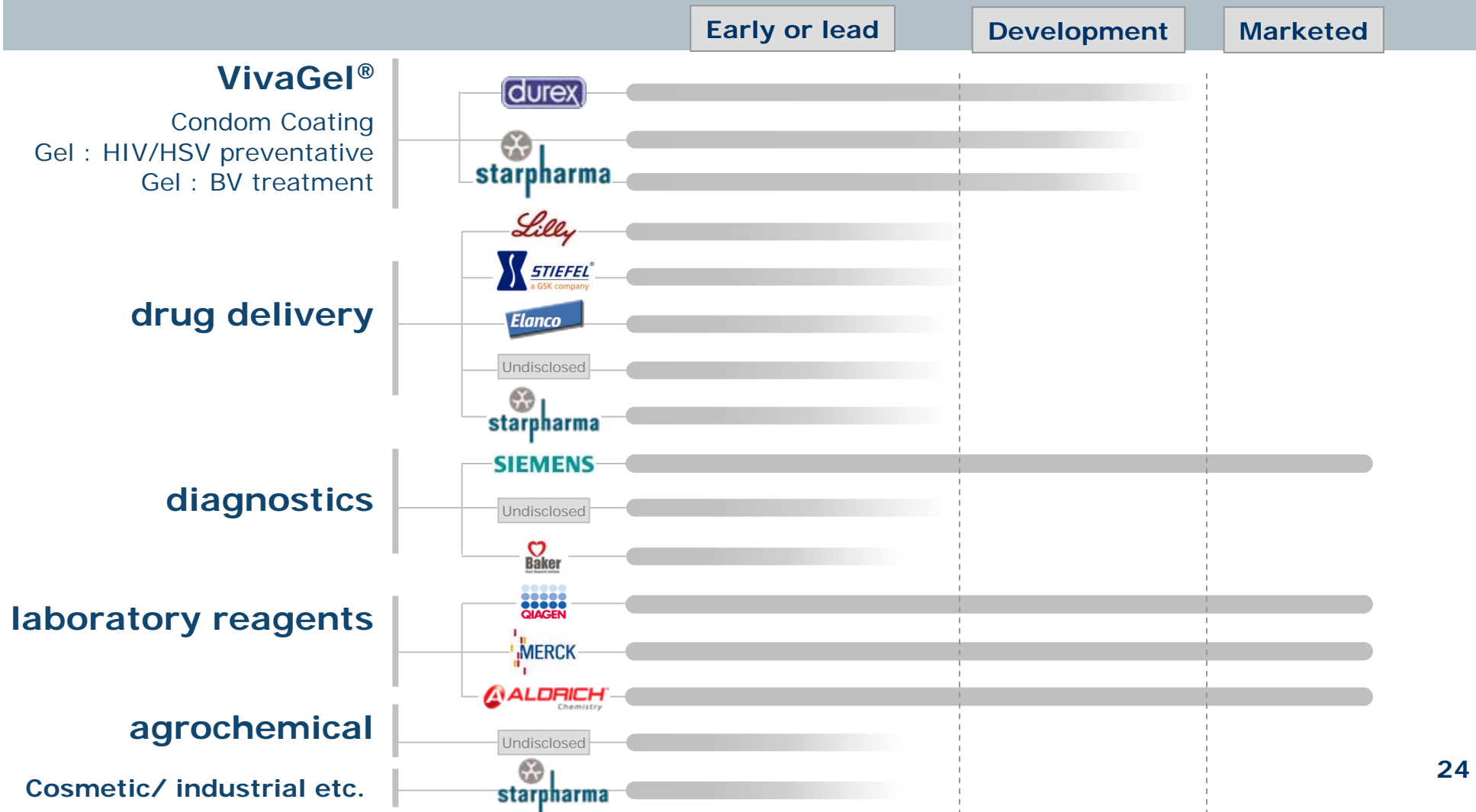
- **Starpharma's unique dendrimer advantage:**
 - Dominant IP position
 - Unique, proprietary manufacturing process
 - First company to bring a dendrimer to the clinic (US-FDA)
 - World leading dendrimer synthesis and analysis team

- **Wide range of applications – medical & industrial:**
 - Active drugs (VivaGel®)
 - Drug delivery
 - Agrochemicals
 - Cosmetics, Research reagents
 - Materials and Coatings
 - Water remediation (US Dept. Defence funding)





Pipeline: Dendrimers – A Versatile “Platform” Technology





Application of Dendrimers to Drug Delivery - Improved Solubility

Dendrimer construct improves the aqueous solubility of the drug Paclitaxel by >9,000X

Paclitaxel (Taxol®)
6 mgs in 2 mL of water



Paclitaxel aqueous solubility 0.8 µg/mL*

* Bull Korean Chem Soc. 1999, Vol. 20, No 12, 1389 – 1390.

**30 mg Dendrimer-
Paclitaxel construct:**
equivalent to 6 mgs of
Paclitaxel in 2 mL of
water



**SPL8278; 20% w/w Paclitaxel loading
aqueous solubility >37mg/mL**

***Potential Value of
Drug Delivery
technologies:***

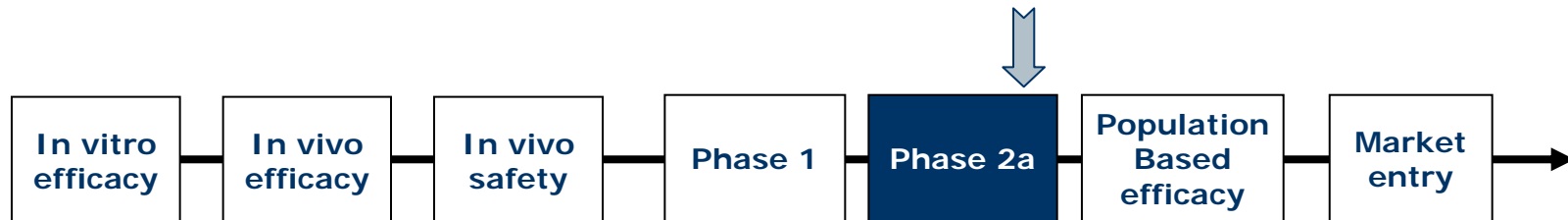
***Celgene's acquisition of
Abraxis BioSciences Inc.
for \$2.9 Billion***

(June 2010)



VivaGel® Clinical Development Status

Prevention of HIV & Genital Herpes



- Currently in mid-stage clinical trials for HIV and Genital Herpes
- 5 Clinical Trials in >200 people
- Safe and well tolerated in humans
- Non-dilutive NIH funding >US\$26m; extensive development package
- US FDA Fast Track Status

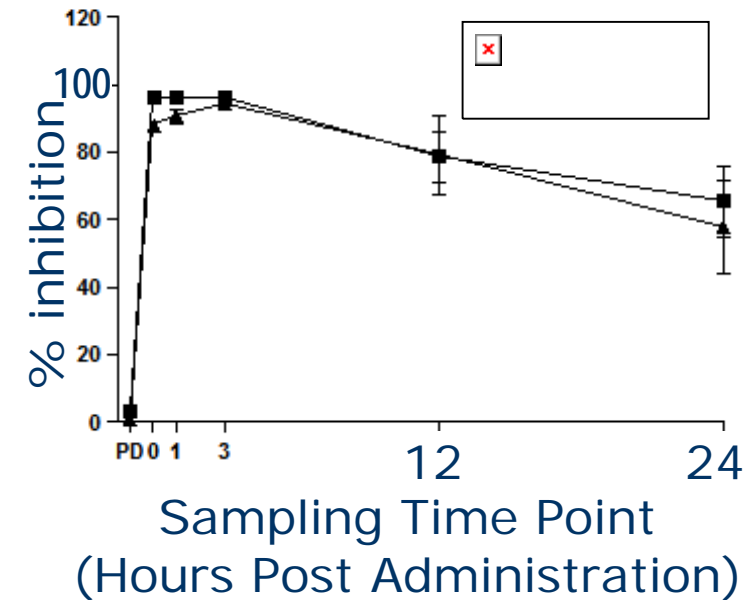
- New indication: Bacterial Vaginosis trials commenced 2010



Completed VivaGel® Clinical Trials

Study	N=	Site(s)	Status
Objectives: Safety, tolerability and PK Schedule: Administered vaginally, once daily for 7 days	37	Adelaide, Australia	Complete
Objectives: Safety and acceptability Schedule: Administered to the penis once daily for 7 days	37	Melbourne, Australia	Complete
Expanded safety and tolerability study Schedule: Administered twice daily for 14 days - sexually abstinent women	54	San Francisco, USA and Kisumu, Kenya	Complete
Expanded safety and acceptability study Schedule: Administered twice daily for 14 days - sexually active women	61	Tampa, USA and San Juan, Puerto Rico	Complete
Objectives: Assessment of local retention of SPL7013 and timescale over which the product retains antiviral (HIV, HSV-2) activity after (0-24 hours) vaginal administration	12	Melbourne, Australia	Complete

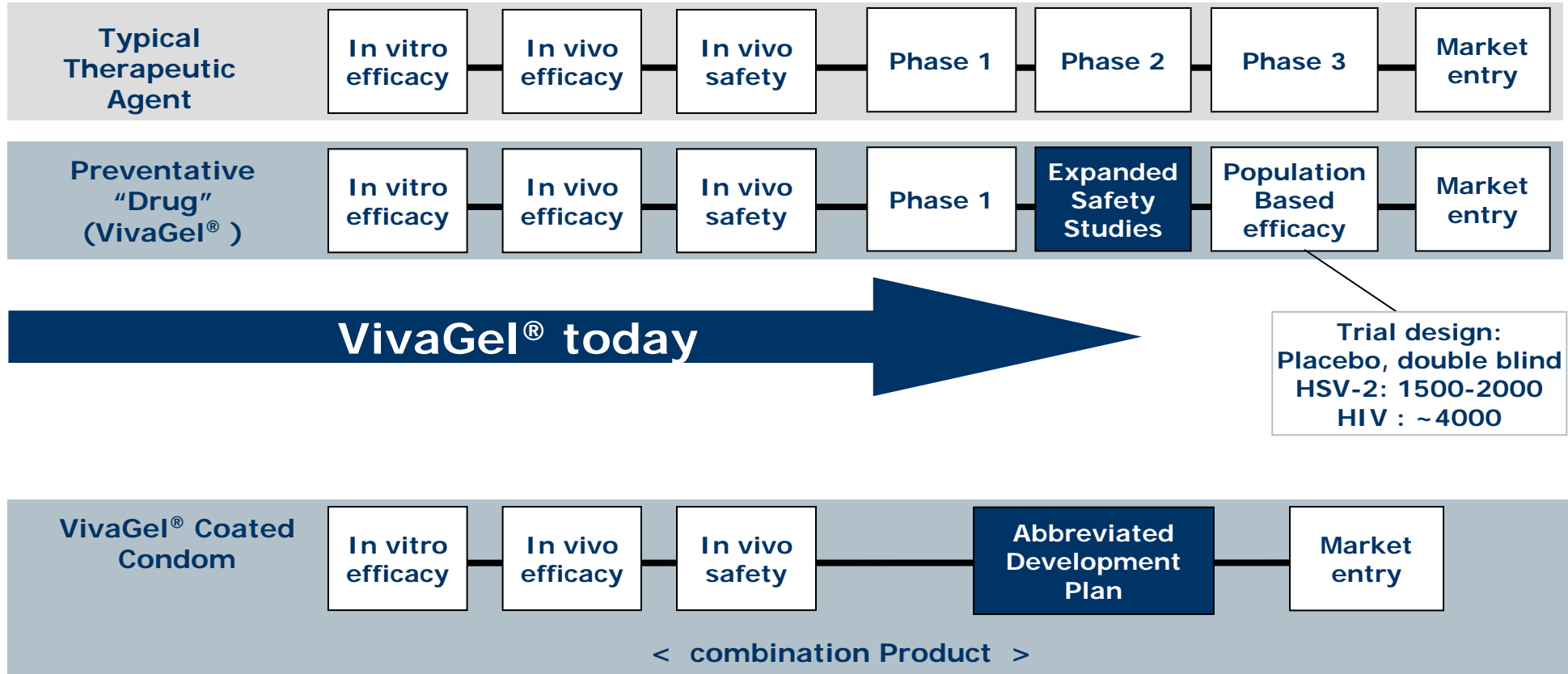
HIV and HSV-2 Inhibition *In Vitro* Following Vaginal Administration of VivaGel® (mean ± SEM)





VivaGel® - Development stage and plan

PRODUCT TYPE





Competition in Development (No Marketed Competition)

	VivaGel®	Pro2000	Tenofovir / ARVs
Being Developed under IND for both HIV and genital Herpes	Positive	Negative	Negative
Spectrum of clinically relevant HIV strains	Positive	Negative	Positive
Avoids virus developing resistance to active	Positive	Positive	Negative
Comprehensive development package; Scale up advanced	Positive	Negative	Data not available
Protects against cell-free and cell associated virus	Positive	Negative	Positive
Avoids systemic absorption of pharmaceutical	Positive	Negative	Negative
Single molecular entity simpler manufacturing / regulatory	Positive	Negative	Positive

Key

Positive

Negative

Data not available

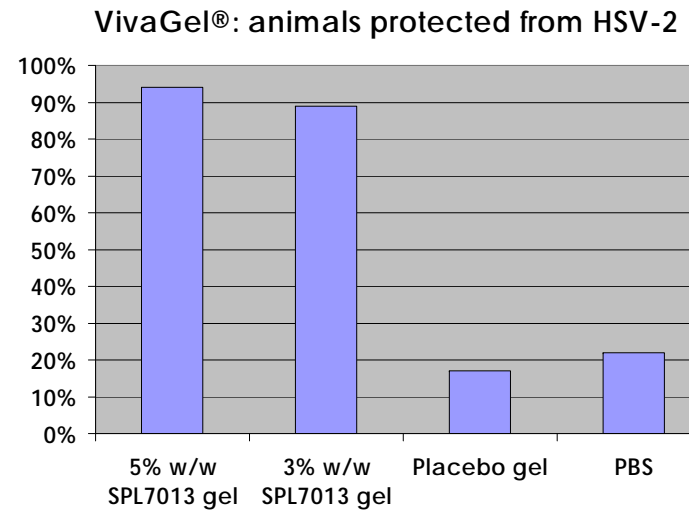
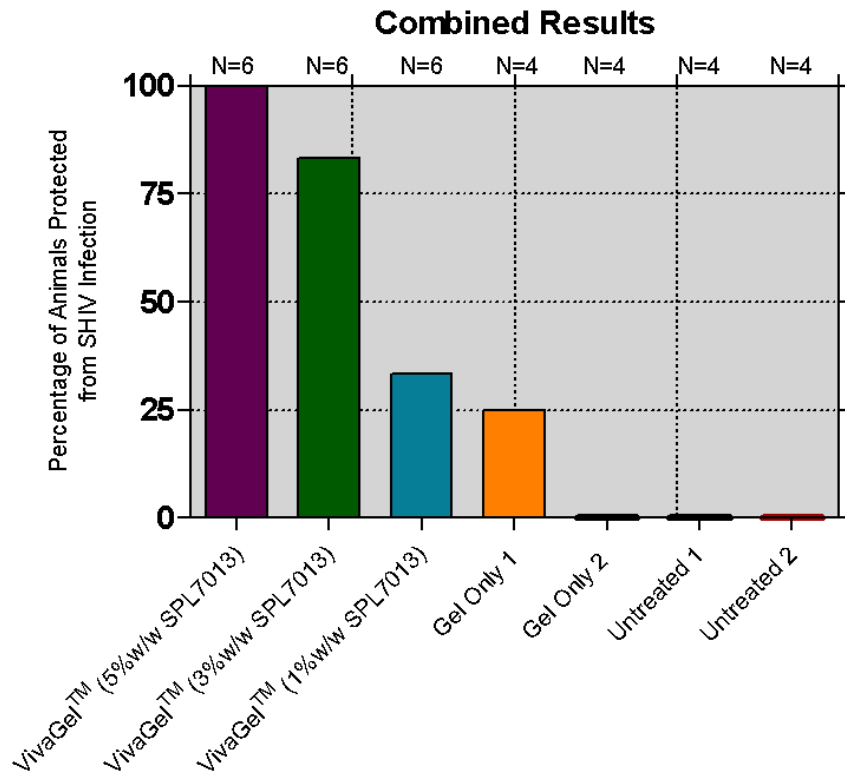
For this reason the competing ARV class of microbicide has already been banned in a number of countries, even before it has been developed.



VivaGel®: Animal Efficacy results

SHIV/HIV Protection (primate)

Herpes Protection (guinea pig)



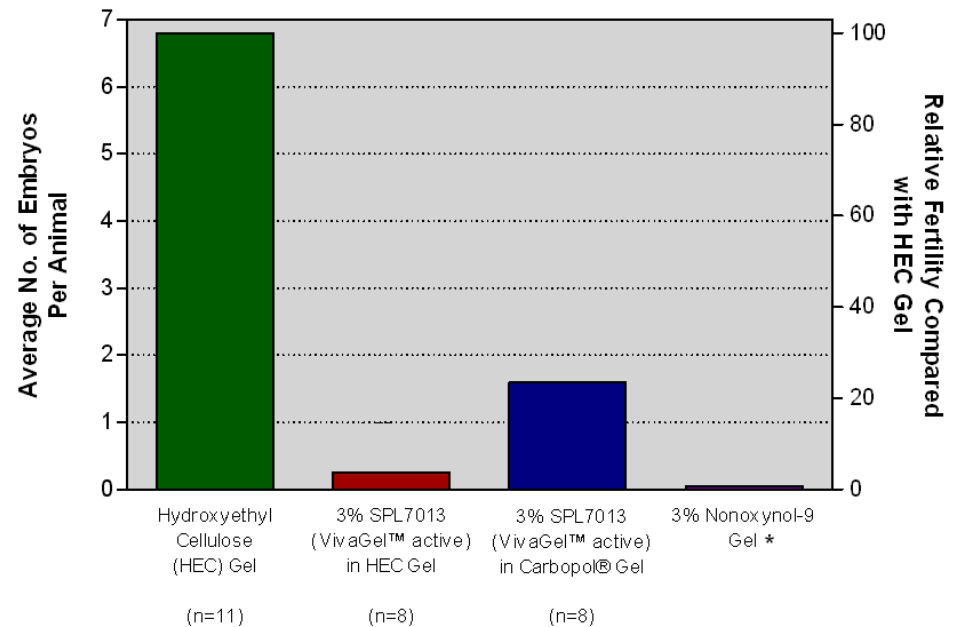


VivaGel®: Potent Contraceptive Activity in Rabbits

- 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

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

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



Portfolio: siRNA Delivery – PrioFect®

Concept: Overcome the principal obstacle to the development of RNAi-based drugs ... delivery

PrioFect® : a delivery agent for siRNA (“Transfection”)

siRNA : a means to achieve RNAi

- ...potential foundation for a whole new class of specific and potent drugs against diseases that are difficult to treat.
- ...a natural mechanism that the body uses to inhibit expression of certain genes.

Commercial opportunities for PrioFect®:

1. Research reagent market(\$200 million)
Licensed globally to EMD Biosciences*
Agreement includes royalties, supply and milestones
First product launched April 2008
2. Therapeutic/delivery application
Rights retained
Significant commercial potential for an effective delivery agent
Opportunity for multiple deals



Merck buys Sirna Therapeutics

By Bioperform Web Watch
Posted 10/31/2006 11:01:00 AM

The Associated Press reports that Merck & Co. has agreed to pay \$1.1 billion to buy Sirna Therapeutics Inc. Merck's \$13-per-share offer for the San

Alnylam:

“The alliance could be valued at over 1 billion US dollars.....”

Roche website 2007



“Roche acquires Mirus...for RNAi delivery”

Transaction: USD125 million

Source: roche.com





Key Management

**Dr Jackie Fairley,
President and CEO**

- >20 years international business development and general management experience in pharmaceuticals and biotechnology
 - Former senior roles with CSL and Faulding (now Hospira) ; MBA

**Dr Paul Barrett, VP Business
Development**

- Significant experience in marketing and business development in Australia and UK
 - Broad life-science experience; competitive intelligence

**Dr Malcolm McColl, VP
Business Development**

- > 20 years international business development experience in global pharmaceuticals and biotechnology companies
 - Former international roles with CSL and Hospira; MBA

Dr David Owen, VP Research

- Extensive experience in medicinal chemistry and biochemistry
- Managing teams focussed on commercially directed drug discovery

**Dr Jeremy Paull, VP
Development & Reg. Affairs**

- Integral role to advancement of VivaGel clinical program
- Extensive NIH liaison, regulatory and product development experience

**Ben Rogers,
Company Secretary**

- Extensive experience in finance, corporate governance and HR management
 - Member of Starpharma's start-up/IPO management team

Nigel Baade, CFO

- CPA qualified accountant
- Experience in the pharmaceutical and biotechnology industries

**Roman Salij, VP Business
Development – DNT Inc.**

- 25 years Marketing & Business Development with Amoco Chemical, Motorola Inc
 - US based, Chem. Eng. and MBA