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**STARPHARMA
DEP[®] Drug Delivery**



**BioEurope – Cologne
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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.

Overview: Starpharma Holdings Limited (ASX:SPL)



- ASX 300 company (ASX:SPL, OTCQX:SPHRY) located in Melbourne, Australia
- Market Cap ~ A\$250M
- Deep product portfolio of commercial and late stage products based on novel polymer (dendrimer) platform:
- Developing first-in-class (new) therapies through a highly experienced in-house commercialization team;
- Established commercial partnerships with some of the world's leading companies - accelerates product development, shares development risk, and transfers development costs
- Strong cash position (\$46M 30/6/16)

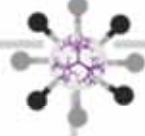


*Starpharma's headquarters and laboratories
Melbourne, Australia*

A global leader in dendrimer products

Starpharma's portfolio includes multiple commercial partnerships with leading companies

Starpharma's Dendrimer Platform
~120 granted patents



VivaGel® Portfolio

DEP™ Drug Delivery

Agrochemicals



VivaGel® Condom

VivaGel® BV (bacterial vaginosis)



VivaGel® BV Treatment



VivaGel® BV Prevention of Recurrence

Internal DEP™ Programs
DEP™ docetaxel
Other DEP™ cabazitaxel, oxaliplatin, targeted etc.

Partnered DEP™ Programs

companies including
AstraZeneca

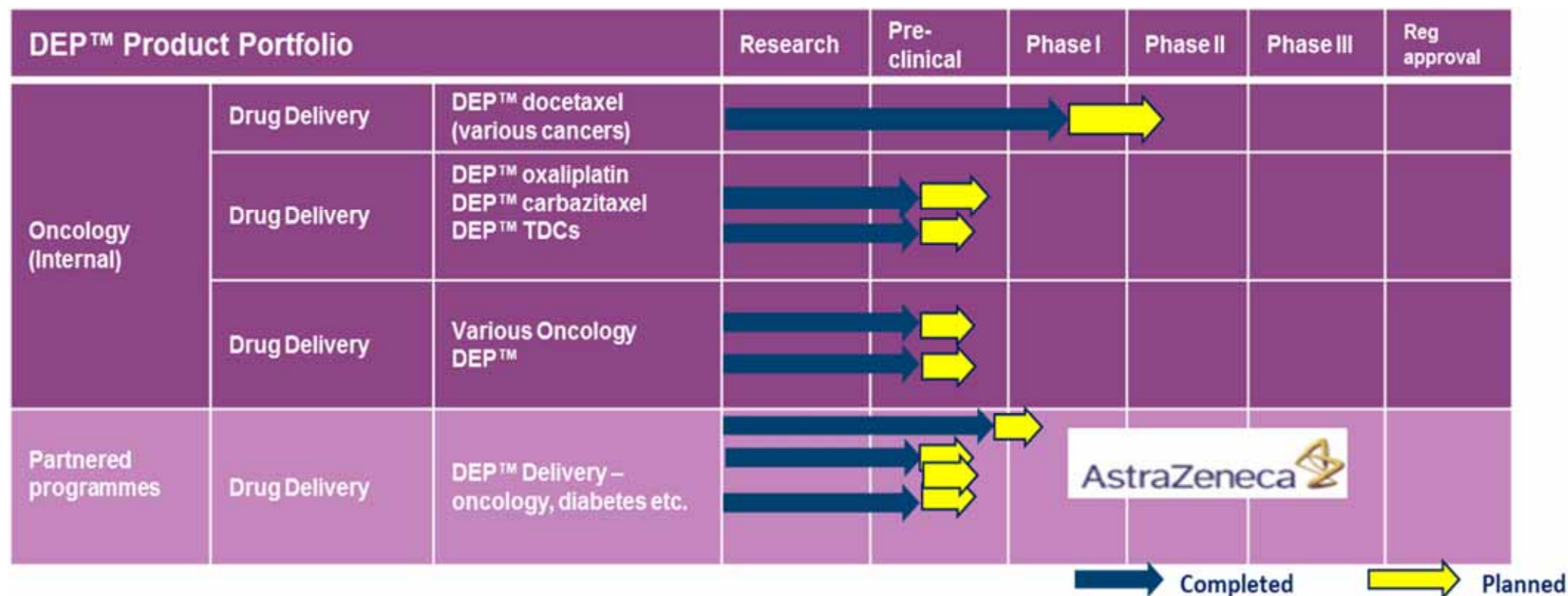
Priostar® Improved Agrochemicals
Glyphosate, Gluphosinate ammonium & others

Partnered Priostar® Programs

companies including
ADAMA
Gowan
To Company
ISAGRO

DEP[®] Drug Delivery Platform

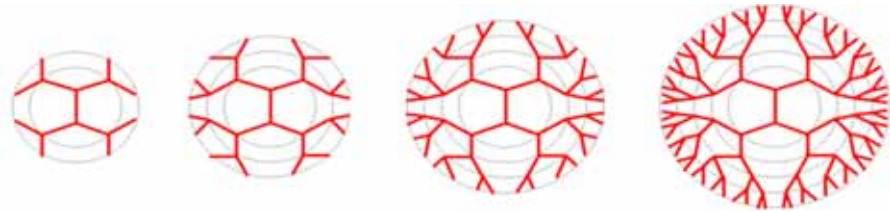
- DEP[™] dendrimer (nanoparticle) delivery technology shows broad commercial applicability
- Internal development and partnered program allows for accelerated development and increased returns
- Applicable to both currently marketed/generic and proprietary pharmaceuticals
- Potential across multiple diseases – cancer, inflammation, diabetes,
- High commercial value opportunity, significant optionality via multi-product application



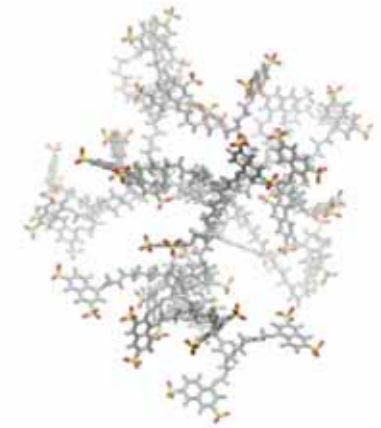


DEP[®] Drug Delivery

Dendrimers



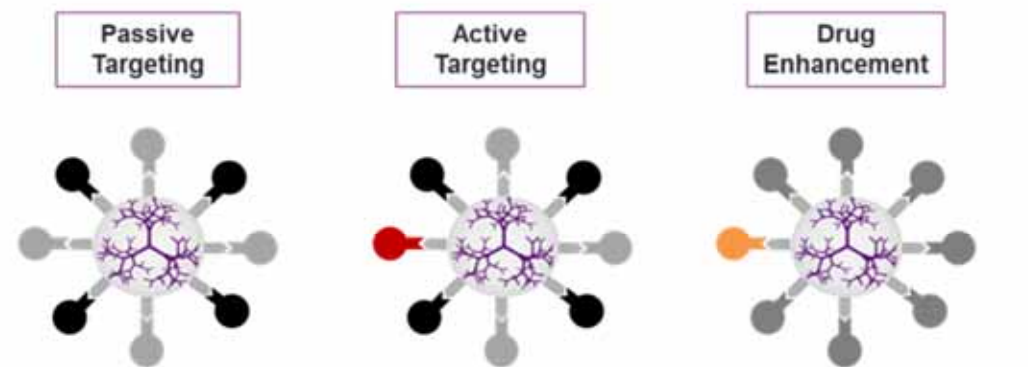
- Starpharma's dendrimers are based on lysine, have a precise and defined size
 - A dendrimer is a highly branched, approximately spherical macromolecule.
 - Multiple layers (Generations) of monomer built around a central core, size 1-100 nm diameter, commonly 5-15 nm
- Starpharma's dendrimers are in the clinic (phases I-III)
 - Have been demonstrated to be well tolerated
 - Current cGMP manufacture (multiple 30kg scale) provides dendrimers that are extremely pure
 - Dendrimers are prepared by standard chemical synthetic methods: scalable, practical, easy to formulate and cost effective








**Illustrative 3D
structure of a
Starpharma
dendrimer, SPL7013
(VivaGel®)**

Starpharma's DEP[®] platform

A highly versatile platform with significant commercial and therapeutic benefits



 DEP™ dendimer	Precisely manufactured poly-lysine dendrimer (variable size) Manufactured using standard chemistry
 Toxin/Drug/Payload	Small molecule, Cytotoxic, Ultratoxic
 Targeting group	Whole antibody, fragment, mimetic, small molecule
 PEG	Provides stealth; solubility; control clearance; flexibility in size
 Drug to be enhanced	Molecule requiring enhanced PK, PD, solubility or elimination of off target toxicities, expansion of therapeutic window

Commercial Benefits	Patent protection /extension	✓
	Innovative treatment options	✓
	Competitive product advantages	✓
	Robust, scalable manufacturing	✓

Therapeutic Benefits	Flexible platform with broad applicability in targeted therapies	✓
	Enhanced product properties – increased solubility; enhanced PK and efficacy; better side effect profile	✓
	Greater homogeneity with higher payload ratio than conventional ADC approaches	✓
	Enhanced therapeutic window	✓

Starpharma's DEP™ Delivery License with AstraZeneca (LON:AZN)



- AZ multi-product license for use of DEP™ delivery platform for the development and commercialisation of proprietary AZ compounds directed at a defined family of targets
- SPL eligible to receive development, launch and sales milestones for the first AZ DEP™ product of up to USD\$126m plus royalties & up to USD\$93m in milestones for each subsequent qualifying AZ DEP™ products
- Tiered royalties on net sales
- AZ funds all development and commercialisation costs
- DEP™ docetaxel not impacted and agreement field allows for multiple other DEP™ licences
- Received US\$2M in H1 FY2016

“SPL estimates that each product successfully commercialised under this agreement could be worth around US\$450m to Starpharma and, depending on the range of indications and degree of commercial success in the market, potentially significantly more”



“We already have a long-standing and successful working relationship with Starpharma. This license agreement will enable us to further harness the DEP™ technology and evaluate its potential across novel molecules within our oncology portfolio.”

*Dr Susan Galbraith,
Head of the Oncology Innovative Medicines Unit at AstraZeneca*

DEP[®] Platform – Flexible, Scalable, Precise

DEP[™] dendrimer

- Clinically validated
- Easily scalable; precisely manufactured

Drug/Payload

- Payload flexibility – type and number

Linkers

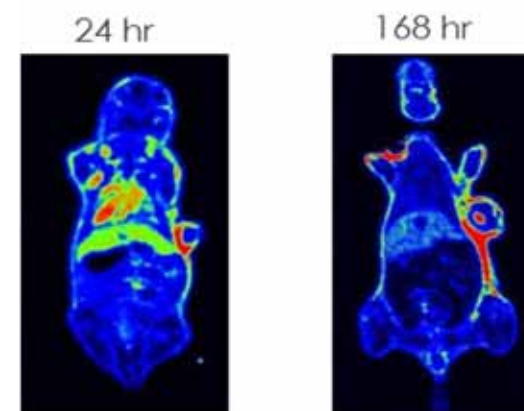
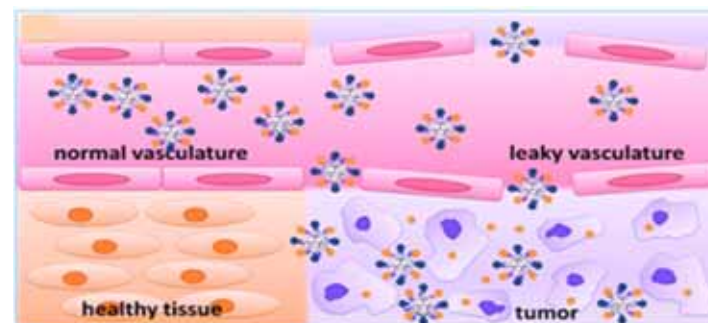
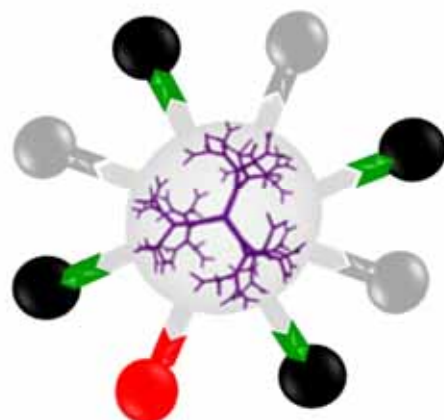
- Tuneable to meet payload release requirements

PEG

- Provides stealth
- Controls clearance

Targeting (optional)

- Sites specific attachment
- Targeting moiety flexibility



DEP[™] docetaxel
accumulation in tumour

DEP[®] Docetaxel Preclinical Findings:

Multiple advantages - Better efficacy and less toxicity

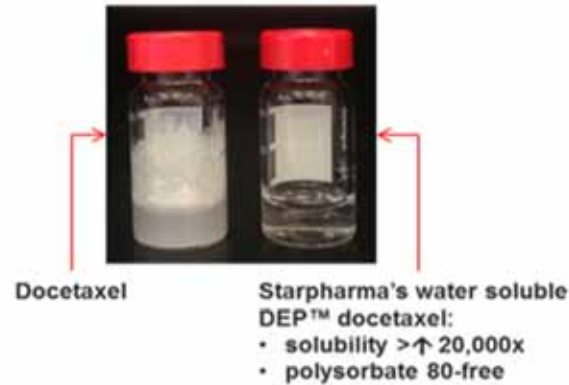
T_{1/2} and Targeting

	Plasma Half Life (hours)*
DEP [™] - Docetaxel	39
Taxotere [®]	0.5

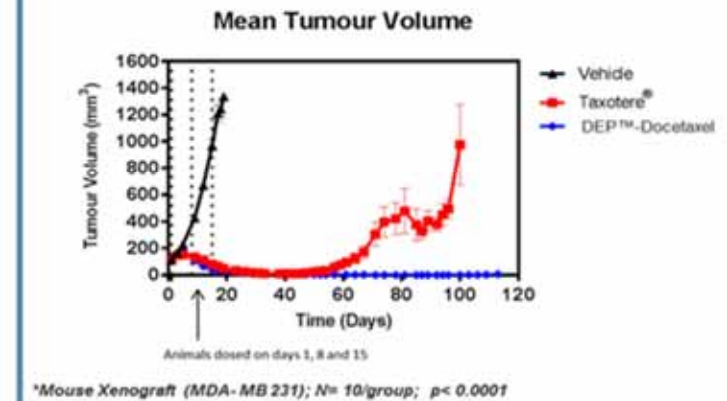
*n = 4 rats per group

- DEP[™] docetaxel formulation extends plasma t_{1/2} by >75-fold vs. Taxotere[®]

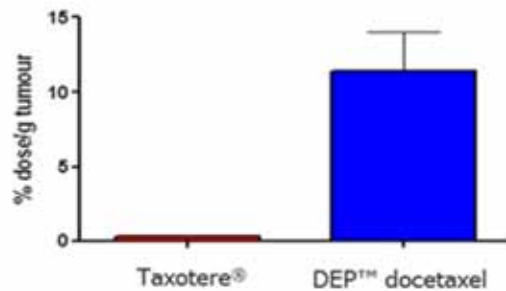
Safety



Efficacy

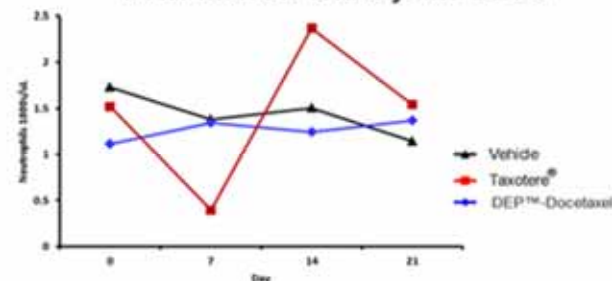


Tumour accumulation

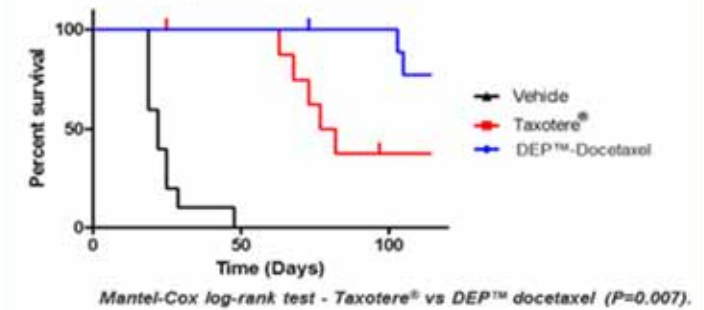


DEP[™] docetaxel shows preferential uptake into mouse MDA-MB-231 xenograft (45-70 fold)

DEP[™] docetaxel – Reduction of bone marrow toxicity and DLT's



Improved Survival

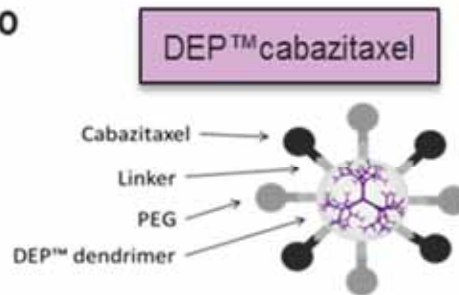


Patents filed will offer coverage to 2032 (potential for further filings)

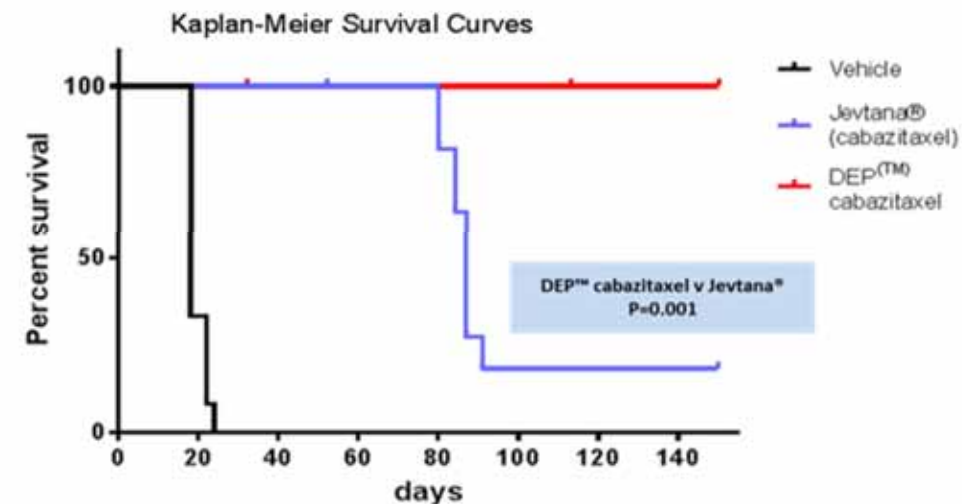
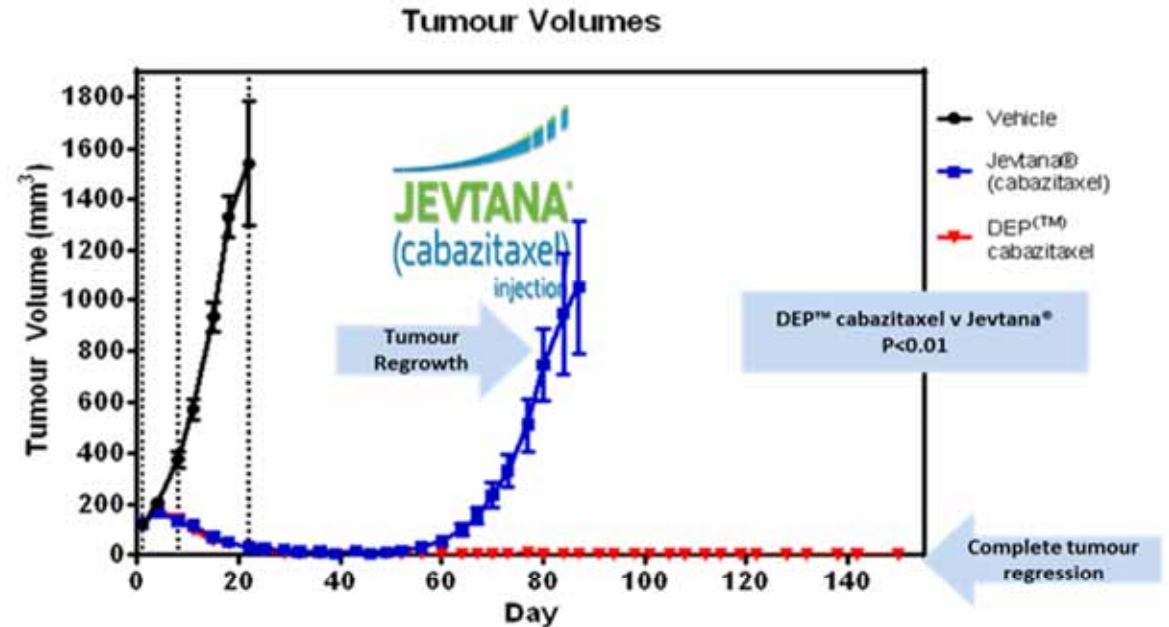
DEP™ cabazitaxel: significantly improved efficacy in breast cancer model*

About Cabazitaxel (Jevtana®)

- 2015 sales: US\$427m (+18%)
- Primary indication – Prostate cancer
- In development for various other cancer including breast, bladder, Head and Neck and others
- Dose Limiting Toxicity – neutropenia (FDA “Black box” warning)
- FDA “Black box” warning due to anaphylaxis (Polysorbate 80 detergent)

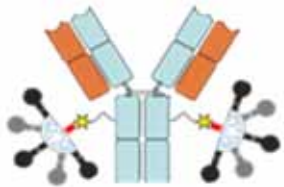


- MDA-MB-231 (human breast tumour) xenograft model in Balb/c nude mice

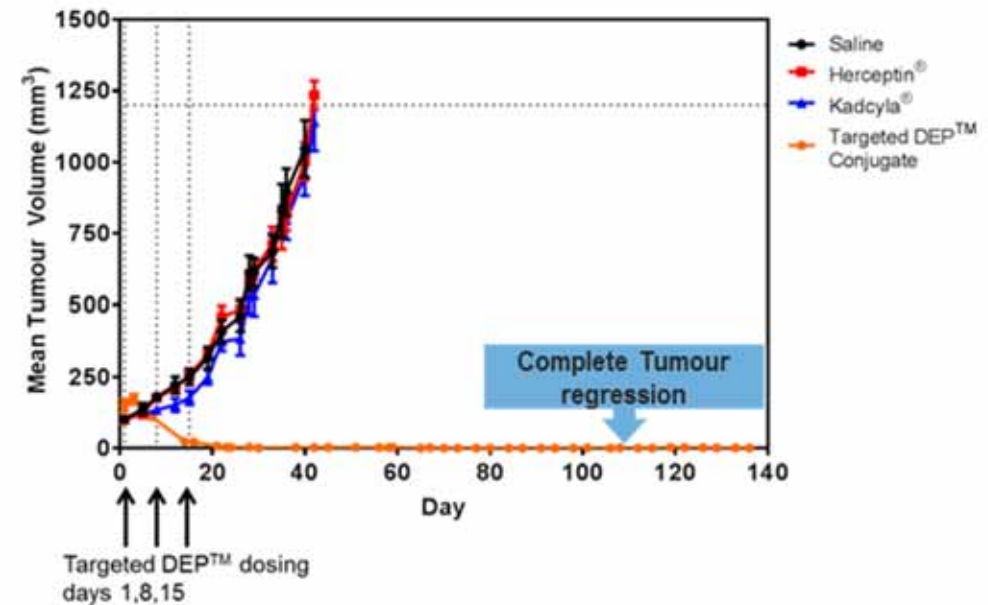


Targeted DEP[®] Conjugates

A flexible approach to drug conjugate design and development



Diagrammatic representation of Herceptin targeted dendrimer conjugates



Starpharma's Ab TDC's provide;

- **Greater** homogeneity
- **Site specific** attachment of drug conjugate
- High **affinity**
- The delivery of **significantly higher payload** levels than conventional ADC's

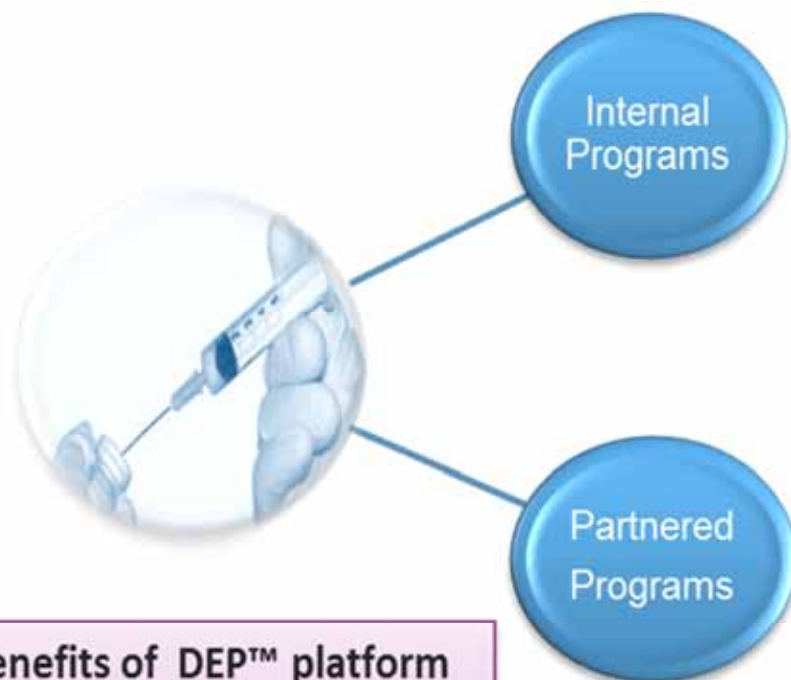
- SPL's novel HER2-targeted DEP[™] conjugate resulted in;
 - complete tumour regression and 100% survival in an ovarian cancer model
 - significantly outperformed both Roche's Kadcylo[®] (T-DM1) and the monoclonal antibody Herceptin[®] (Trastuzumab) alone

Statistical analysis at day 40. Kadcylo[®] vs Targeted DEP[™]; P < 0.0001. (ANOVA followed by Tukey's post hoc test).
- 2 targeted DEP[™] partnerships signed with major antibody-drug-conjugate players - August 2016

DEP[®] Drug Delivery

Dual Strategy

Provides technical, IP and financial leverage
Increases commercial opportunities
Reduces invested capital
De-risks



General Benefits of DEP[™] platform

- Improved efficacy
- Reduced toxicity
- Improved pharmacokinetics
- Improved solubility

- Applies DEP[™] to generics
- Creates new patented agents
- Self funded
- Return through licensing eg. DEP[™] docetaxel

- Application DEP[™] to partner drugs (existing or new)
- Creates new patented agents
- Funded by partner
- Platform with broad optionality
- Return through milestones and royalties eg. AstraZeneca

Extensive partner engagement to maximise commercial outcomes

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