



OTCQX Virtual Investor Conference

DR JACKIE FAIRLEY
CEO

11 & 12 April 2018

STARPHARMA HOLDINGS LIMITED

ASX:SPL; OTC:SPHY

Important notice and disclaimer

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: Deep portfolio of products and extensive partnerships with industry leaders

- Melbourne-based ASX300 company; Market Cap ~A\$500M
- Unique proprietary polymer (dendrimer) platform
- Deep portfolio of products in large, high-value markets
- Proven track record of commercialisation
- VivaGel® BV – approved in Australia and Europe for treatment, awaiting launch and US FDA New Drug Application lodged under Fast Track Status
- VivaGel® condom in-market (approved Australia & Canada)
- Added significant value to Priostar® (Agrochemicals) portfolio, sold to Agrium Inc. for \$35M
- Successful, long-standing global partnerships including with AstraZeneca, creating significant optionality, accelerating path to market & managing investment risk
- Well-funded, with >\$49.9M cash at 31 Dec 2017 (excludes R&D tax incentive \$3.7M and US\$2.4M FDA refund received)



*Starpharma's headquarters and laboratories
Melbourne, Australia*

Global leader in dendrimer products – multiple commercial partnerships with leading companies

Starpharma's Dendrimer Platform

VIVAGEL®

(dendrimer active)

VivaGel® BV



SPL7013



GLOBAL LICENSING
PROCESS UNDERWAY



VivaGel® Condom

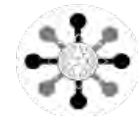
LifeStyles®



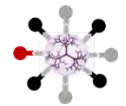
DEP®

(dendrimer acts
as a scaffold
delivering
another drug)

DEP® Internal Products



DEP®



Targeted
DEP®

DEP® Partnered Products




















AstraZeneca 



World-leading Antibody
Drug Conjugate Companies

MULTIPLE HIGH VALUE COMMERCIAL OPPORTUNITIES PROTECTED BY 100+ PATENTS

Starpharma's deep pipeline of VivaGel® and DEP® products provides exceptional optionality

	Product	Preclinical	Clinical/Regulatory
VIVAGEL®	VIVAGEL® BV – Bacterial Vaginosis 		
	VIVAGEL® CONDOM – Anti-viral condom 	   	
	VIVAGEL® – Viral conjunctivitis		
INTERNAL DEP®	DEP® DOCETAXEL – Oncology		
	DEP® CABAZITAXEL – Oncology		
	DEP® IRINOTECAN – Oncology		
	OTHER DEP® – Oncology (multiple)		
	TARGETED DEP® – Oncology		
PARTNERED DEP®	ASTRAZENECA #1 DEP® CANDIDATE – AZD0466		 
	ASTRAZENECA #2 DEP® CANDIDATE – Oncology	 	
	OTHER ASTRAZENECA DEP® PROGRAM – Undisclosed	 	
	ADC PARTNERS – Oncology		Undisclosed global partners 

Strong financial position

Key Financial Data	1H FY 2018 A\$M	FY 2017 A\$M	FY 2016 ¹ A\$M
Total revenue and income	1.2	3.6	4.6
Loss from continuing operations	(6.2)	(15.2)	(21.3)
Profit/(loss) from discontinued operation	-	23.4	(1.4)
Profit/(loss) for the period	(6.2)	8.2	(22.7)
Net operating & investing cash inflows/(outflows)	(11.5)	15.7	(17.8)
Net cash burn²	(11.3)	(18.0)	(17.5)
Closing Cash (at 31 Dec / 30 June)	49.9	61.2	46.0

CASH AT 31 DEC 2017 EXCLUDES

- \$3.7M FY17 R&D tax incentive refund received Feb 2018
- US\$2.4M FDA NDA refund subsequently received

OUTLOOK - Revenues expected to build with:

- Milestones (DEP® / VivaGel® BV)
- Receipts following VivaGel® BV launch and additional VivaGel® BV licence(s)
- VivaGel® condom geographic expansion

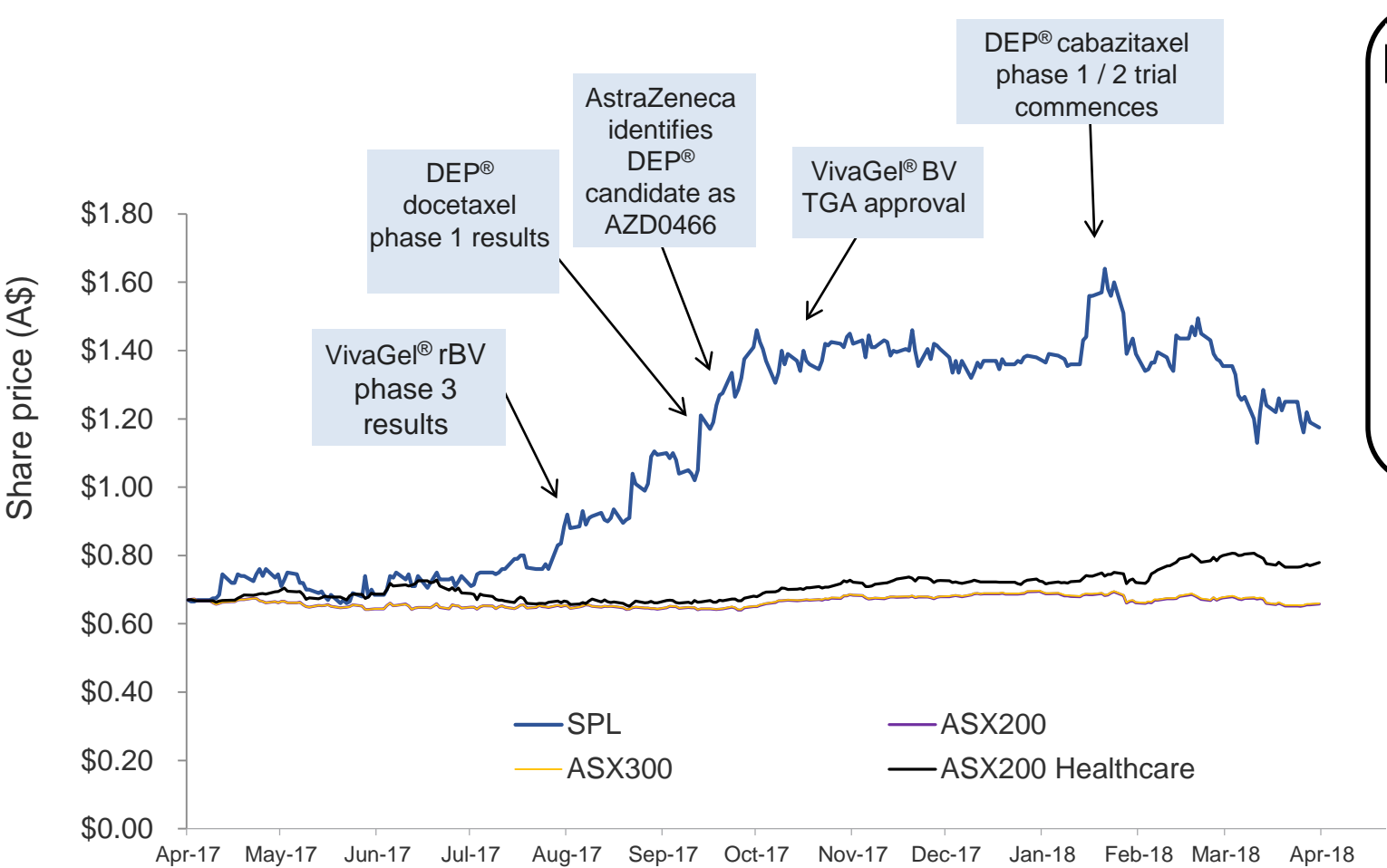
OUTLOOK - Reduced R&D burn FY18:

- Phase 3 VivaGel® rBV trials complete
- No R&D spend on Agrochemicals
- R&D spend now focused on DEP®

¹ The prior year financial results are re-presented for the comparative results of the discontinued operations (Starpharma's agrochemicals business).

² Net cash burn is considered a non-IFRS value and has not been audited in accordance with Australian Accounting Standards. Net cash burn is calculated by the movement in cash and cash equivalents between reporting periods. For example, FY2017 from 30 June 2016 to 30 June 2017, excluding the \$33.3 million of net proceeds from the sale of Starpharma's agrochemicals business.

Share price performance



BELL POTTER

22 Nov '17: SPL price target upgraded

“FY18 to be a transformational year for SPL”

- Tanushree Jain
Analyst, Healthcare & Biotech

1 year movement	SPL	ASX300	ASX200	S&P/ASX 200 Healthcare
	+75%	-1%	-2%	+16%

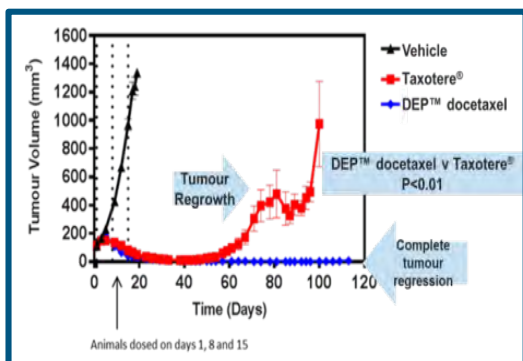
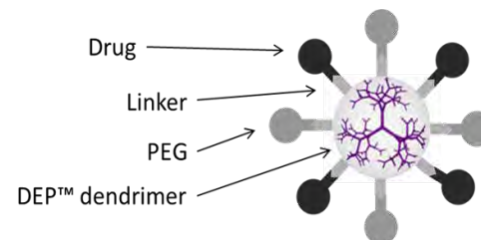
Indices rebased for comparative purposes



DEP[®] PORTFOLIO

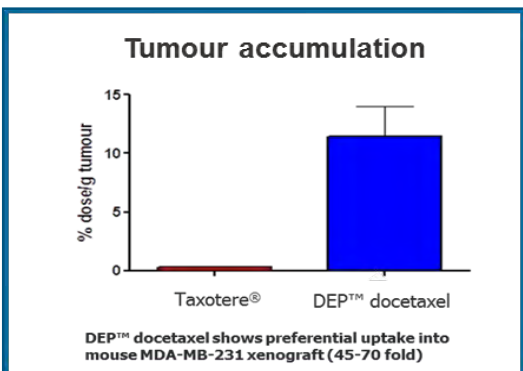
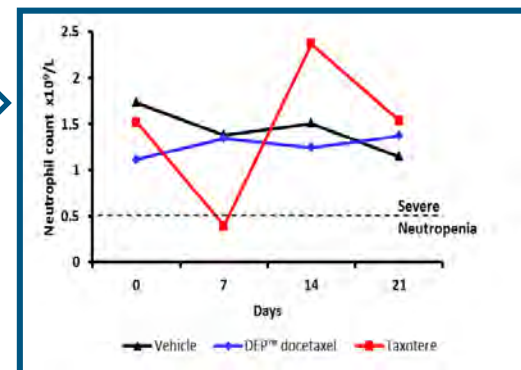


DEP[®] platform: Superior drug delivery with highly reproducible benefits and new IP position



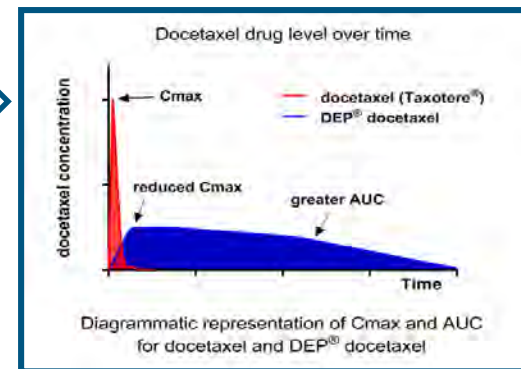
Improved Efficacy
Reproducible results with many candidates & tumour types

Improved Safety
Reduced neutropenia/BM toxicities



Targeting Tumour Tissue
45-70 x more drug in tumour v original drug

Improved PK and Half-Life
Longer half life and lower Cmax



Improved Solubility
Detergent Free Formulations for improved safety – 20,000 x solubility increase

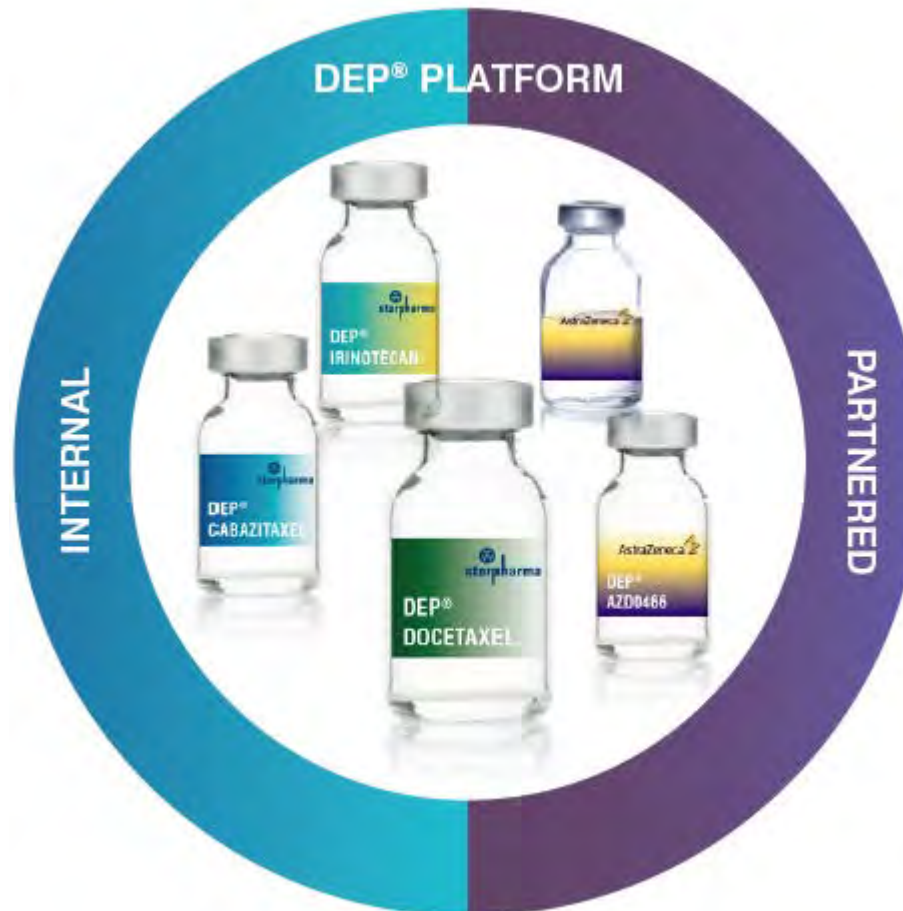


Dendrimer Enhanced Products (DEP®) Dual Strategy

Starpharma's dual DEP® strategy provides technical, IP and financial leverage, as well as increasing commercial opportunities, improving ROI and de-risking development

INTERNAL DEP®

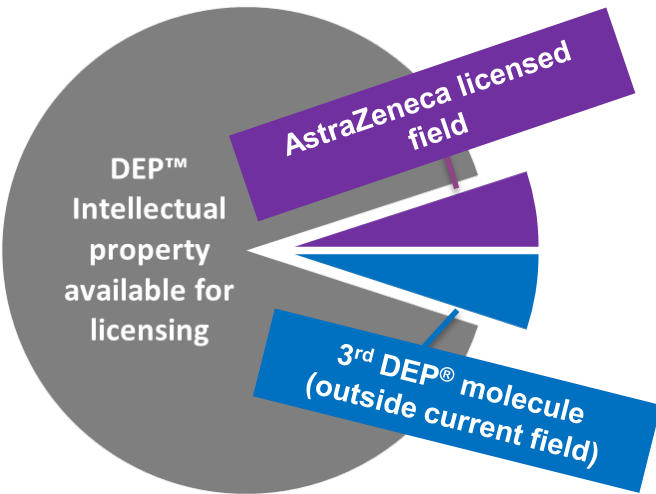
- Application to established drugs reduces risk and expedites development
- Patent life extension
- Self-funded
- Returns through licensing, milestones and royalties



PARTNERED DEP®

- Application to partners' drugs, both novel (eg. AZD0466) and existing
- Patent life extension
- Funded development
- Returns through licensing, milestones and royalties

AstraZeneca multiproduct licence and further program – Partnered DEP[®] momentum building



AstraZeneca DEP[®] multiproduct licence

- First DEP[®] candidate, AZD0466: US\$126M + royalties
- Subsequent DEP[®] candidates US\$93M + royalties
- Tiered royalties on net sales on the resultant AstraZeneca DEP[®] products
- AstraZeneca funds all development and commercialisation costs
- Two further AstraZeneca programs added since multiproduct licence signed
- US\$4M received in milestone payments FY2016 & 2017

“We already have a long-standing and successful working relationship with Starpharma. This licence 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

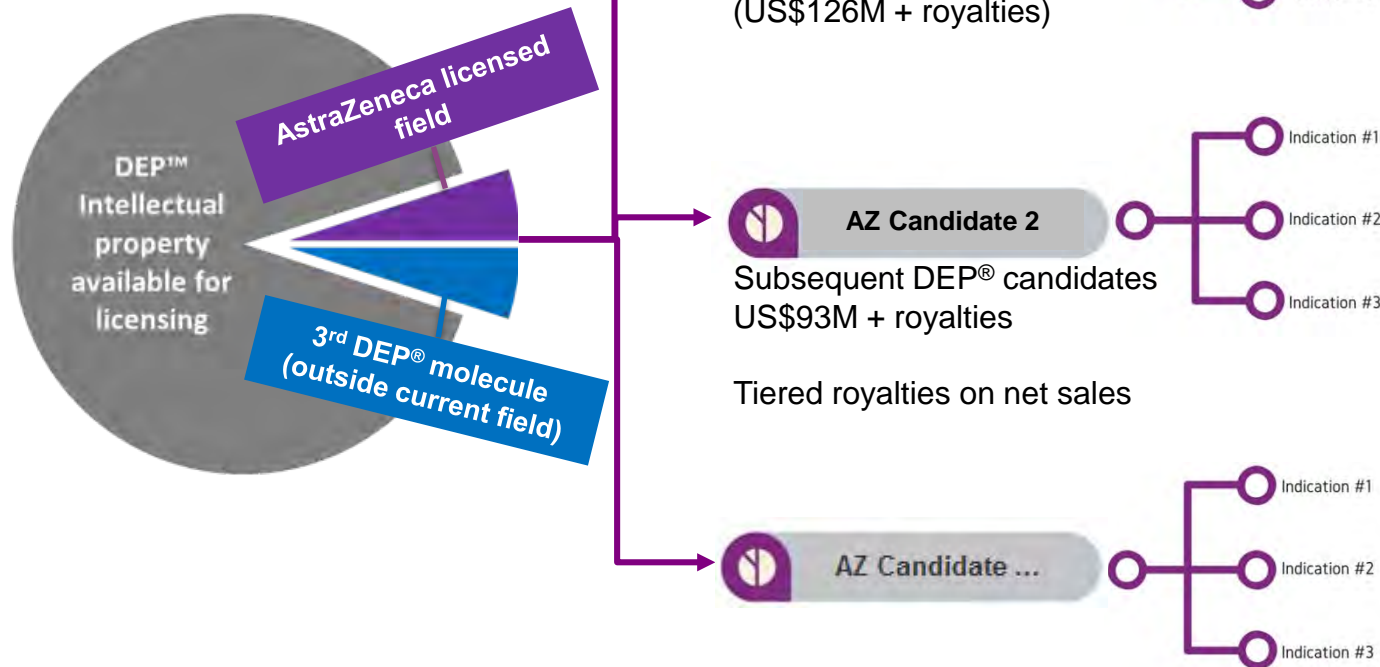
“SPL estimates that each product successfully commercialised under this agreement could be worth around US\$450m to Starpharma and, depending on the range of indications and degree of commercial success in the market, potentially significantly more.”



Dr Jackie Fairley, CEO, Starpharma

AstraZeneca's multiproduct licence 1st candidate AZD0466: An exciting novel oncology agent

"...the DEP® technology has enabled us to advance a very exciting novel oncology agent towards the clinic"

Dr Susan Galbraith, AstraZeneca



- Bcl2 is an exciting and clinically validated oncology target
- Venetoclax (Venclexta), a first generation Bcl2 inhibitor (specific for Bcl2) was approved in 2016 with est. US sales to exceed US\$2B by 2021 
- Targeting Bcl2 alone is not ideal in maximising cell kill – surviving cells exploit Bcl2/xl as a parallel survival mechanism
- AZD0466 is a dual Bcl2/xl inhibitor in a highly optimised DEP® formulation with the potential to be a best-in-class agent in this field 

"...this blood cancer drug [AZD0466] has immense potential and broad applicability both as monotherapy and in combination"

– Bell Potter Analyst

Starpharma's DEP[®] pipeline – internal products

The optionality with the DEP[®] platform enables Starpharma to build a deep pipeline of enhanced drugs – a very attractive commercial strategy



DEP[®] cabazitaxel:
Detergent-free
version of leading
anti-cancer drug
Jevtana[®]

- ✓ Improved Efficacy
- ✓ Improved Safety
- ✓ Improved Survival
- ✓ Patent Life Extension
- ✓ Detergent Free



DEP[®] docetaxel:
Starpharma's most
advanced DEP[®] product
- a detergent-free,
enhanced version of
anti-cancer drug
Taxotere[®]

- ✓ Improved Efficacy
- ✓ Improved Safety
- ✓ Improved Survival
- ✓ Patent Life Extension
- ✓ Detergent Free

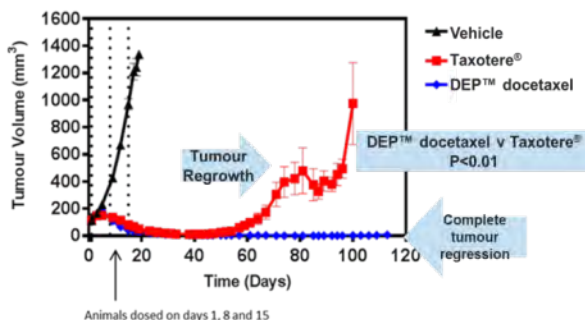


DEP[®] irinotecan:
Improved version
of irinotecan
(Camptosar[®])

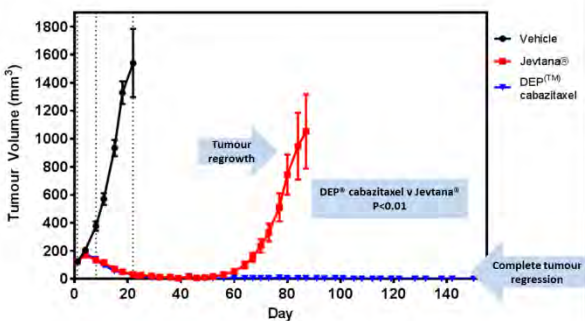
- ✓ Improved Efficacy
- ✓ Improved Safety
- ✓ Improved Survival
- ✓ Patent Life Extension

DEP®: A true platform with highly reproducible benefits creating exceptional optionality

Improved Efficacy



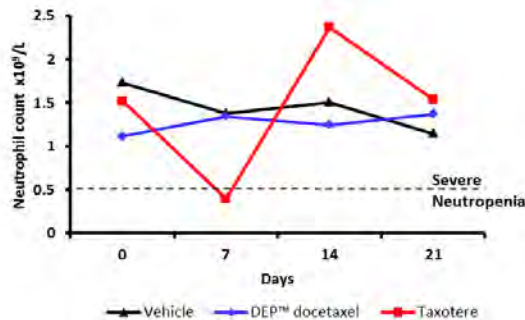
DEP® docetaxel



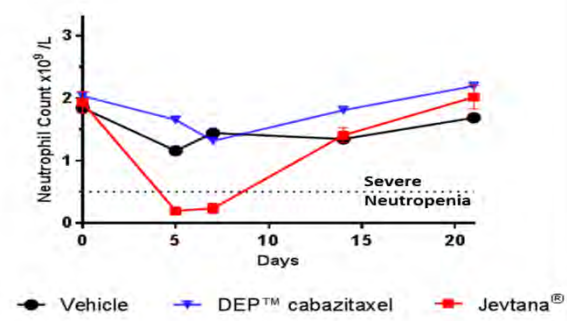
DEP® cabazitaxel

Mouse xenograft models using MBA-231
DEP® conjugate vs original – P<0.01 for
both docetaxel and cabazitaxel

Improved Safety



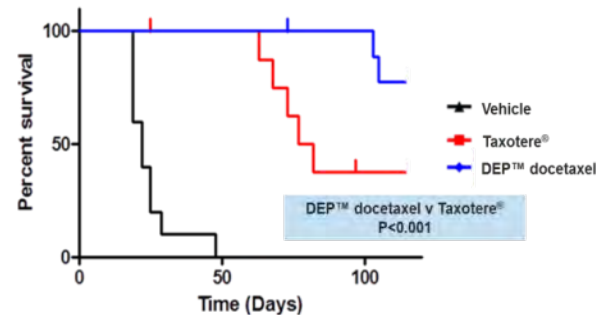
DEP® docetaxel



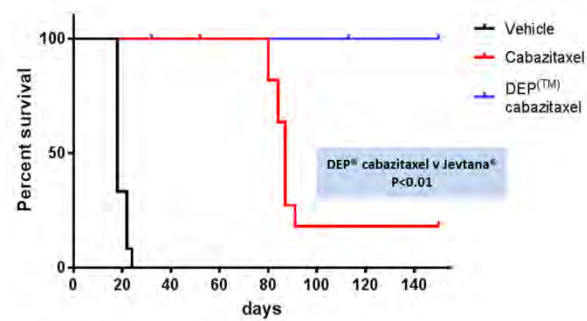
DEP® cabazitaxel

Lack of neutropenia – the DLT for both
docetaxel and cabazitaxel – as seen with
DEP® conjugates in rat model

Improved Survival



DEP® docetaxel



DEP® cabazitaxel

Kaplan Meier survival curves
DEP® conjugate vs original – P<0.001
for both docetaxel and cabazitaxel

Reproducible DEP® benefits as seen in preclinical studies with DEP® docetaxel and DEP® cabazitaxel

DEP[®] docetaxel: Multiple benefits



Docetaxel (Taxotere[®]) is a blockbuster cancer drug with peak global sales >US\$3.1B despite having multiple US FDA “Black Box” warnings



Docetaxel is one of the most widely used cancer drugs for a range of tumours including breast, lung and prostate



Starpharma's patented DEP[®] docetaxel is an enhanced version of docetaxel, designed to reduce side-effects such as neutropenia while enhancing efficacy



DEP[®] patents and applications provide coverage to 2032

DEP[®] docetaxel vs Taxotere[®]

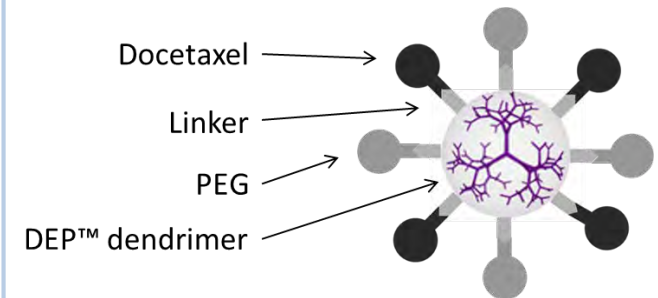
- ✓ Elimination of major dose-limiting side effect (neutropenia)
- ✓ Detergent-free formulation (less toxic)
- ✓ Tumour-targeting (~70x more)
- ✓ Extended duration (half-life)
- ✓ Improved efficacy



VS



DEP[®] DOCETAXEL



DEP[®] docetaxel Phase 2 underway; successful Phase 1 completed in 2017



Phase 1 trial completed n= 27 various solid tumours

- No neutropenia (compares to >>90% with Taxotere[®])
- No protocol-defined DLTs
- Only one patient (1/27) with mild alopecia/hair loss – compared to ~75% with Taxotere[®]
- No reports of other problematic adverse events observed with docetaxel treatment, including anaphylaxis, fluid retention, diarrhoea and nail disorders
- Recommended Phase 2 Dose – 60mg/m²
- Encouraging efficacy signals in 13/27 DEP[®] docetaxel patients including:
 - stable disease (SD) in multiple patients with lung, pancreatic (SD>20 wks), and gastro-oesophageal (SD >18 wks) cancers, and in other patients with brain and renal cancers
- No standard steroid pre-treatment required due to DEP[®] docetaxel's detergent-free formulation - unlike Taxotere[®]

PHASE 2 STUDY (currently recruiting in the UK)

- Multi-site trial – 2 sites recruiting (Guy's Hospital London, UCLH) with 2 more to open shortly
- Open-label, two-stage design n=40 (20+20)
- Objective: establish anti-tumour activity (efficacy) and safety of DEP[®] docetaxel
- First stage will enrol approximately 20 patients with lung or prostate cancer (key approved indications for docetaxel)
- Second stage will enrol a further 20 patients with tumour types selected based on results from the first stage.
- In parallel, combination of DEP[®] docetaxel with nintedanib (Vargatef[®]) in lung cancer (~12 patients)

DEP® cabazitaxel: Multiple benefits

About cabazitaxel (Jevtana®)

- 2016 sales approx. US\$400M (est. US\$500M by 2018)
- Primary indication – prostate cancer and in clinical development for other cancers including Breast, Bladder, Head & Neck
- Dose Limiting Toxicity – neutropenia (FDA “Black Box” warning)
- FDA “Black Box” warning due to anaphylaxis (polysorbate 80 detergent)



DEP® cabazitaxel

- ✓ Significantly enhanced efficacy versus Jevtana® (cabazitaxel) in human breast and prostate cancer models
- ✓ Detergent (polysorbate 80) free formulation
- ✓ Lack of neutropenia



DEP[®] cabazitaxel phase 1 / 2 trial underway

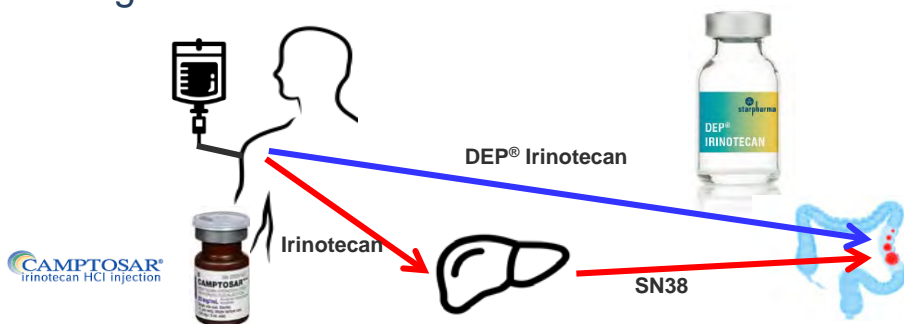
- Planning to enroll ~35 patients (solid tumours)
- Trial being conducted at multiple sites, including in the UK at Guy's Hospital and University College London Hospital (UCLH) – now open
- Phase 1: Open-label, sequential dose-escalation (accelerated) to establish the Maximum Tolerated Dose and Dose Limiting Toxicities, Recommended Phase 2 Dose and Pharmacokinetics
- Phase 2: Dose expansion to establish preliminary efficacy of DEP[®] cabazitaxel
- As the trial progresses, decisions will be made as to which tumour types to focus on and any additional patients required to further characterise efficacy in specific tumour types



Adaptive phase 1 / 2 trial design enables seamless transition from phase 1 to phase 2, to explore efficacy as early as possible.

Further validation of the DEP® platform – DEP® irinotecan outperformed Camptosar®

- Irinotecan (Camptosar®) is primarily used for the treatment of advanced colorectal cancer (peak sales US\$1.1B)
- Colorectal cancer is the third most common cancer and second leading cause of cancer death in the world, an area of significant unmet need with few treatment options
- Irinotecan has FDA “Black Box” warnings for severe diarrhoea and neutropenia
- DEP® irinotecan incorporates the irinotecan active moiety (SN-38) and shows enhanced tumour growth inhibition compared to irinotecan and near-complete tumour regression



	DEP® Benefits
Manufacture	Readily scalable and validated through extensive FDA input
Stability	Highly stable Long shelf-life
Particle Size	DEP® nanoparticles selectively accumulate in tumour tissue
Plasma Half life	DEP® platform consistently delivers longer duration of effect
Enhanced Efficacy	Significantly enhanced efficacy in all tumor models tested (vs Camptosar®)



VIVAGEL® PORTFOLIO



VivaGel® portfolio overview – late stage / commercial assets



VivaGel® BV: A breakthrough product for Bacterial Vaginosis (BV) Treatment & Prevention of Recurrent BV (rBV)

- Approved in AUS and expected to be available in pharmacies in 2018 under the Fleurstat™ brand
- Approved in EU for Treatment (rBV to be added with Phase 3 data now available)
- Prevention of Recurrent BV (rBV) – Successful phase 3 trials (under SPA) reported in August
- FDA NDA for both treatment and prevention of rBV lodged through a rolling submission process
- Fast Track status and QIDP designation will expedite approval
- Advanced licensing negotiations underway in multiple territories including Europe, USA, RoW



VivaGel® Condom: World's first and only anti-viral condom

LifeStyles®



- VivaGel® condom licensed under the LifeStyles® brand in multiple regions; licensed to Okamoto in Japan, Sky & Land in China and Koushan Pharmed; Launched in Australia and in Canada and regulatory processes well advanced in other regions



BV has serious health consequences and significant impact for patients

Bacterial Vaginosis (BV)

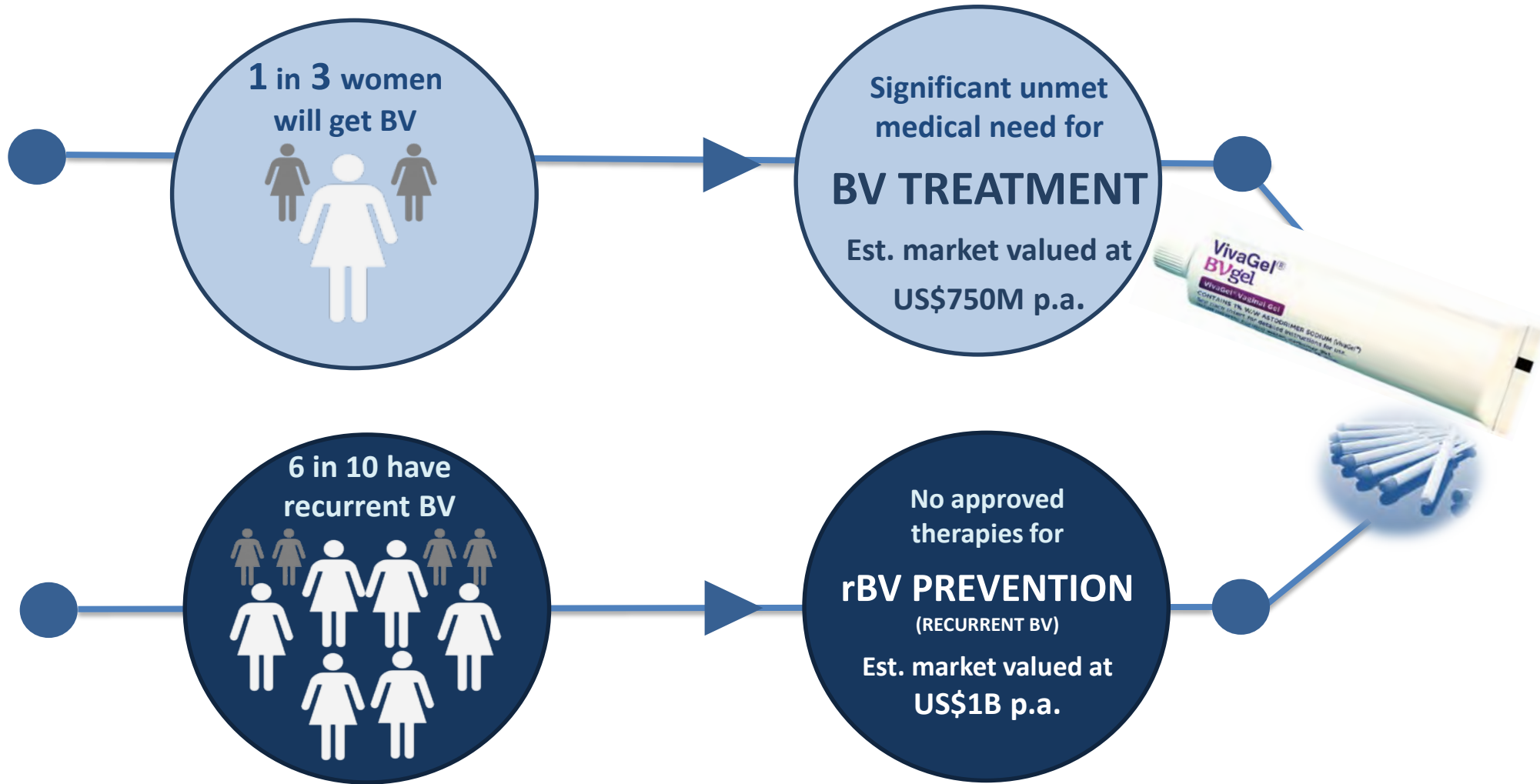
- Most common vaginal infection worldwide
- ~30% women infected in US; up to 51% in some groups
- Serious medical consequences (PID, infertility, miscarriage, increased risk of HIV and other STIs)
- Current therapies are inadequate with low cure rates and nasty side effects
- rBV occurs in 50-60% of BV sufferers
- Large market opportunity for both prevention of rBV and BV Treatment

BV – Major Impact for Patients

- >2/3 of women reported BV had a major impact on their lives
- Most distressing symptom for women was odour
- BV made women feel embarrassed, self-conscious and uncomfortable
- Concerns about BV symptoms caused some women to avoid professional, social or recreational activities

Source: Independent VivaGel® BV US Market Research 2017,
KOL feedback & multiple publications

VivaGel® BV: Two Attractive Commercial Opportunities



VivaGel® BV: A breakthrough therapy for BV - a significant unmet medical need

*"VivaGel® BV is a wonderful product which specifically targets BV bacteria.
My patients have called it a 'life-changing and miraculous treatment'."*

Dr Belvia Carter, Ob-Gyn, Memphis, Tennessee. Principal investigator in VivaGel® BV Trials

VivaGel® BV

- ✓ Treatment and rapid symptom resolution
- ✓ Non-antibiotic
- ✓ Local effect, not systemically absorbed
- ✓ Excellent tolerability
- ✓ Selective antimicrobial effect
- ✓ Suitable for long-term use

Current BV Therapies

- ✗ Inadequate efficacy or inappropriate for use in prevention of rBV
- ✗ Antibiotic resistance is problematic
- ✗ Do not stop BV recurring
- ✗ Antibiotics have unpleasant side effects and other issues that inhibit usage (e.g. bad taste, yeast infections, patients unable to consume alcohol)
- ✗ No currently approved therapies for prevention of rBV

Positive market research findings for VivaGel® BV - from US physicians and payers alike

*"I would love to try it [VivaGel® BV] because **it is not an antibiotic.**"*

-US GYN #1

*"it [VivaGel® BV] is certainly simple enough and **the side effect profile is minimal**"*

-US GYN #6

*"I like the molecule [VivaGel® BV] a lot better for this [prevention of rBV]. **There is nothing really that treats that recurrent patient.**"*

-US Payer #2

*"The good news is **not having an antibiotic** hanging around the environment **is good**. The more antibiotics you have out there, the more potential for resistance."*

-US Payer #3

*"I think part of the reason why we are seeing **more recurrence** is that there has got to be some kind of **resistance being built up to the antibiotics.**"*

-US GYN #5

*"It seems like it [VivaGel® BV] would **replace current [off label] prophylactic regimens** that I recommend."*

-US NP #1

*"The biggest unmet need is to be able to prescribe a treatment that has **minimal side effects**, does not interfere with the patient's lifestyle and **resolves symptoms quickly.**"*

-US PCP #1



Source: Independent US VivaGel®
BV Market Research 2017

Extensive global licensing negotiations for VivaGel® BV

VivaGel® BV licence strategy and negotiations positively impacted by:

- Fast Track status and QIDP
- Revised, favourable FDA BV guidance
- Successful phase 3 VivaGel® BV rBV results
- NDA lodgement under rolling submission with Fast Track status
- TGA and EU approval, relevant for other markets

Global and regional negotiations covering all the large markets, including in North America, Europe and Asia

- Multiple term sheet negotiations underway in parallel
- Leading US healthcare investment bank appointed to support global licensing process for VivaGel® BV
- Major global and regional companies as well as specialised Women's Health companies are involved in licensing negotiations



Successful VivaGel® rBV phase 3 trial results (Aug 2017)

VivaGel® BV demonstrated statistically significant efficacy in 2 pivotal phase 3 trials



- Two randomised, double-blinded, placebo-controlled trials enrolled 1,223 women across more than 100 trial sites conducted under SPA



- VivaGel® BV consistently resulted in reduced rates of BV recurrence by the primary efficacy endpoint **and** five secondary efficacy measures
- VivaGel® BV showed sustained benefits for at least 3 months after cessation of treatment
- VivaGel® BV demonstrated excellent safety and tolerability, very low rates of candidiasis



- VivaGel® BV Phase 3 trial results add significant commercial value

“Our ability to prevent recurrent BV with current treatment regimes is abysmal. There is an enormous need for a safe and effective treatment to prevent recurrence of BV in women suffering BV.”

Professor J Sobel, ID Physician & KOL Dean, Wayne State Uni School of Medicine

VivaGel® condom

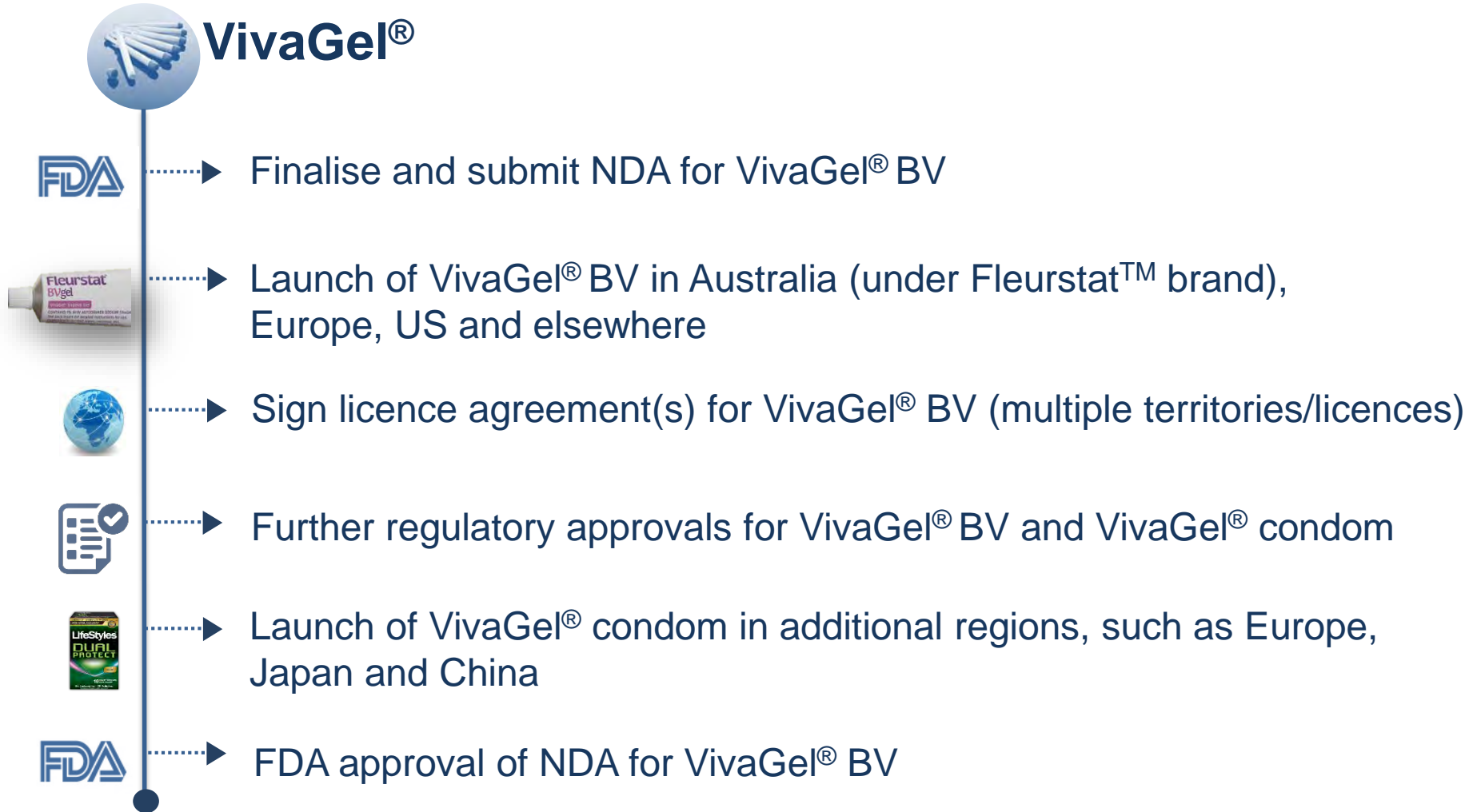
- VivaGel® condoms carry the VivaGel® brand and Starpharma receives royalties based on sales
- VivaGel® condom recently launched in Canada under LifeStyles® Dual Protect™ brand
- Ansell sold its sexual wellness division to Chinese Company Humanwell; Re-branded LifeStyles® – the VivaGel® condom continues to be marketed under the LifeStyles® Dual Protect™ brand
- Humanwell's strong presence in the fast-growing Asian markets - complementary to Sky and Land licence for the Chinese Government market
- Good regulatory progress in Japan, China, Europe and other markets, with a number of approvals expected in 2018



THE
WORLD'S
FIRST
ANTI-VIRAL
CONDOM



Outlook



Outlook



DEP®



Progress with DEP® docetaxel and DEP® cabazitaxel trials



AstraZeneca program developments, including progressing AZD0466 to the clinic and associated milestones



Other DEP® candidates developed and advanced to the clinic (e.g. DEP® irinotecan)



Further AstraZeneca compounds advanced and expanded licenses



Targeted DEP® program developments and licences



Other partnered DEP® deals anticipated



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