

#### AGM Chairman's address and CEO's presentation

**Melbourne, Australia; 30 November 2021:** Attached is the Chairman's address together with the CEO's presentation to the Annual General Meeting (AGM) of Starpharma Holdings Limited (ASX: SPL, OTCQX: SPHRY), to be held at 11am (Melbourne time) today.

The AGM will be held online. Shareholders and proxyholders will be able to listen, view presentations, vote and ask questions during the meeting in real-time through the Lumi virtual platform, for which details are available via <u>https://starpharma.com/2021agm</u>.

About Starpharma

Starpharma Holdings Limited (ASX:SPL, OTCQX:SPHRY) is a global biopharmaceutical company and a world leader in the development of new pharmaceutical and medical products based on proprietary polymers called dendrimers, with programs for respiratory viruses, DEP<sup>®</sup> drug delivery and VivaGel<sup>®</sup>. Starpharma has developed VIRALEZE<sup>™</sup>, an antiviral nasal spray that is registered for sale in the Europe, India and New Zealand, and available outside Australia in certain markets online. VIRALEZE<sup>™</sup> is not approved for sale or supply in Australia. SPL7013 is utilised in approved products - the VivaGel<sup>®</sup> condom and VivaGel<sup>®</sup> BV. VivaGel<sup>®</sup> BV has been licensed in >160 countries, is registered in >45 countries and available for sale in the UK, Europe, Japan, South East Asia, South Africa, Australia and New Zealand.

As a leading company in dendrimer-based drug delivery, Starpharma's proprietary drug delivery platform technology, DEP<sup>®</sup>, is being used to improve pharmaceuticals, to reduce toxicities and enhance their performance. There are numerous internal and partnered programs underway to develop DEP<sup>®</sup> versions of existing drugs, particularly in the area of anti-cancer therapies. DEP<sup>®</sup> partnerships include oncology programs with AstraZeneca, with Merck in the area of Antibody Drug Conjugates (ADCs), with Chase Sun in the area of anti-infectives and other world leading pharmaceutical companies. Starpharma's partnered DEP<sup>®</sup> programs have the potential to generate significant future milestones and royalties.

#### Starpharma.com | Twitter | LinkedIn

Media: Sumit Media Grant Titmus Mob: +61 419 388 161 grant@sumitmedia.com.au	Starpharma Holdings Limited Dr Jackie Fairley, Chief Executive Officer Nigel Baade, CFO and Company Secretary +61 3 8532 2704 <u>investor.relations@starpharma.com</u> 4-6 Southampton Crescent Abbotsford Vic 3067	<b>Disclosure</b> This ASX Announcement was authorised for release by the Chairman, Mr Rob Thomas.
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#### **Forward Looking Statements**

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 authorities' requirements regarding any one or more product candidates nor can there be any assurance that such product candidates will be approved by any 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 trial results, including additional analysis of existing data, and new 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 document 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. Clinical case studies and other clinical information given in this document are given for illustrative purposes only and are not necessarily a guide to product performance and no representation or warranty is made by any person as to the likelihood of achievement or reasonableness of future results. Nothing contained in this document nor any information made available to you is, or shall be relied upon as, a promise, representation, warranty or guarantee as to the past, present or the future performance of any Starpharma product.

#### <u>Chairman's Address</u> Starpharma Holdings Limited Annual General Meeting 30 November 2021

Good morning,

On behalf of the Board of Directors, it is my pleasure to welcome you to Starpharma's 2021 Annual General Meeting.

Before I give my formal address, on behalf of the Board, I want to acknowledge the recent passing of our fellow Director, Peter Turvey, who stepped down as a Director in July this year due to illness. We extend our sincere condolences to his family and colleagues. Peter made an exceptional contribution to the company during his tenure and was a highly respected and regarded member of the biopharmaceutical industry. I know Peter was incredibly proud of Starpharma's development and was pleased to be involved with the development of medical products, and particularly oncology products, which have the potential to improve patient's lives and health outcomes.

I also want to thank upfront our CEO Dr. Jackie Fairley and the entire team at Starpharma for their commitment through such a challenging year. A year impacted by significant periods of lockdown and restrictions in Melbourne, and dealing with multiple regulators and clinical trials within a global pandemic background. Our team of around 50 people are highly skilled, innovative and passionate about making a difference. They operate at the cutting edge of science.

And while from an operational perspective, this has been a year of substantial progress, including the reporting of some very exciting new interim clinical results for DEP<sup>®</sup> cabazitaxel last week in prostate cancer patients, we nevertheless share with you the frustration with the current share price despite having recently achieved a multitude of valuable milestones.

This year, we continued to witness the devastating impacts of the COVID-19 pandemic following the emergence of multiple new and more severe variants, which required our community to innovate and adapt quickly to overcome the challenges posed by this global health crisis.

For Starpharma, it reinforced the value of our purpose and strategic focus as an organisation, which is to leverage the company's proprietary dendrimer platform technology to build a portfolio of high-value products and partnerships that address significant unmet patient need. It inspired our team to develop VIRALEZE<sup>™</sup>, an innovative broad-spectrum antiviral nasal spray that can be used in situations where individuals may be at risk of being exposed to respiratory viruses, including coronavirus.

Throughout 2021, Starpharma expedited the development and commercialisation of VIRALEZE<sup>™</sup>. This involved rapid development, scale-up and manufacture of the product, while pursuing registrations and securing the right distributors in multiple regions worldwide. We registered VIRALEZE<sup>™</sup> in Europe, India, and New Zealand, and secured distribution agreements in the UK, Italy, and Vietnam, to enable launches of VIRALEZE<sup>™</sup> in pharmacies, online and in retail outlets in those regions. Starpharma established its own e-commerce store which has now shipped VIRALEZE<sup>™</sup> to consumers in more than 50 countries. You will hear from Jackie shortly regarding these developments, including an update on the commercial arrangements her team are working on across the globe.

During the year, we continued to test the antiviral agent in VIRALEZE<sup>™</sup> (SPL7013), against new coronavirus variants as they emerged, and other respiratory viruses, to understand the breadth of activity of the product. SPL7013, which already has a deep pedigree as a potent and broad spectrum antiviral compound, was shown to be virucidal against all four of the World Health Organisation's SARS-CoV-2 *'variants of concern'* – Delta, Alpha, Beta and

Gamma – as well as other respiratory viruses, including influenza and RSV, and pandemic viruses, SARS, and MERS in laboratory studies. New data on VIRALEZE<sup>™</sup> and SPL7013 has also been published in prestigious international and peer reviewed scientific journals this year, highlighting the product's impressive antiviral and virucidal activity. Indeed, our collaborators at the prestigious Scripps Research Institute have emphasized the significance of this broad-spectrum activity across multiple variants.

COVID-19 is not the first pandemic the world has faced, and experts tell us it won't be the last. And while preventing a pandemic may not be entirely possible, across the world there is a recognition that we can better prepare ourselves with a range of interventions, like VIRALEZE<sup>™</sup>. With its advantages of broad-spectrum antiviral and virucidal activity, excellent safety profile and room temperature storage, VIRALEZE<sup>™</sup> has great potential for providing an additional layer of protection against a range of respiratory viruses now and in future pandemic preparedness.

In parallel with our work on VIRALEZE<sup>™</sup>, Starpharma has also expanded the application of its cutting-edge DEP<sup>®</sup> drug delivery platform.

The company was excited to sign a new DEP<sup>®</sup> partnership agreement with leading international pharmaceutical company, Merck & Co Inc., in February. This is in addition to our established DEP<sup>®</sup> partnerships with AstraZeneca and Chase Sun, as well as several undisclosed partner programs. This growing stable of partnerships with leading companies demonstrate the optionality and high value of Starpharma's DEP<sup>®</sup> technology and the increasing attention from big pharma around the world.

Our DEP<sup>®</sup> collaborations enable partners to utilise Starpharma's drug delivery platform to develop value-added candidates with early-stage development costs partner funded and future licensing rights available for resultant DEP<sup>®</sup> based products. The partnerships we have built with our DEP<sup>®</sup> platform have the potential to create life-changing products for our patients, and long-term revenues for Starpharma by way of milestones and royalties.

Starpharma's commercial deal with AstraZeneca for instance, is an excellent demonstration of the potential progression for these partnered programs and the valuable opportunities associated with our DEP<sup>®</sup> technology.

It has been very exciting to see AstraZeneca accelerate and expand its clinical program for their novel anti-cancer drug, AZD0466, into a global multi-centre phase I/II trial this year, with a focus on hematological tumours *or* blood cancers. This expanded program includes a substantial increase in the number of trial sites globally, and this particular trial design means that the transition from phase I to phase II is seamless and significantly expedited. The study is actively enrolling patients at sites in the US, South Korea, and Australia, with plans to open in Europe as part of the global expansion announced earlier this year. This investment and expansion are being undertaken by AstraZeneca to facilitate development of AZD0466 with the objective of obtaining regulatory approval as soon as possible for specific indications of high unmet clinical need.

Starpharma was delighted to see that AstraZeneca and the prestigious MD Anderson Cancer Center will present AZD0466 at the world's premier hematology conference, ASH, in December, with two posters and presentations highlighting the clinical program and impressive performance of this innovative oncology agent as well as the benefits Starpharma's DEP<sup>®</sup> technology can deliver. We look forward to further updates as the program for AZD0466 progresses.

Internally, we continued to progress our three clinical stage DEP<sup>®</sup> products, DEP<sup>®</sup> docetaxel, DEP<sup>®</sup> cabazitaxel and DEP<sup>®</sup> irinotecan, through each of their phase II clinical development programs. Despite varying impacts of COVID-19 on each trial, all continued to recruit patients during the year and make good progress.

We are seeing impressive responses in patients treated with our DEP<sup>®</sup> products, demonstrating efficacy signals in a range of cancer types that are difficult to treat and in very

heavily pre-treated patients. These efficacy signals, which include significant reductions in measurable tumours for some patients, are particularly important for those who have failed multiple previous treatments and have few options. The results from these phase II trials have the potential to deliver vital treatment options for cancer patients and will be important milestones for the company by way of supporting new DEP<sup>®</sup> licences. We look forward to completing these programs.

Our Board, management, and Starpharma's partners have great confidence in the significant value of Starpharma's DEP<sup>®</sup> technology. This value lies not only in its ability to improve on the performance of existing and new drugs and to reduce side effects, but also its versatility and broad applicability to a wide range of medical products, including oncology agents, anti-infectives and so on.

To enable us to keep developing additional DEP<sup>®</sup> candidates towards the clinic and build value in our internal portfolio, Starpharma has deepened its development pipeline with a range of new DEP<sup>®</sup> candidates, including DEP<sup>®</sup> radiopharmaceutical and DEP<sup>®</sup> ADC (Antibody Drug Conjugate) products. The use of ADCs is an innovative and cutting-edge area in cancer therapy that continues to grow. Starpharma already has a number of partner programs including with Merck & Co Inc., and so the value of DEP<sup>®</sup> in this area is becoming well recognised. We look forward to progressing our partnered and internal programs further, in the year ahead.

Lastly with our VivaGel<sup>®</sup> portfolio – our commercial partners continued to roll out our products, including new launches of VivaGel<sup>®</sup> BV by Mundipharma in Nordic countries and South Africa, and the launch of the VivaGel<sup>®</sup> condom by LifeStyles in Europe. VivaGel<sup>®</sup> BV is now registered in more than 45 countries, and we continue to work closely with our partners to advance registrations and launches in other countries. The feedback from consumers and clinicians about VivaGel<sup>®</sup> BV is extremely positive.

I do want to thank my fellow board members for all their support. On the 1<sup>st</sup> of August 2021, we were pleased to appoint Lynda Cheng as an independent non-executive Director. Lynda Cheng has extensive experience as a finance executive, including as a CFO and has substantial non-executive and international experience.

Looking ahead this is an exciting time for Starpharma. We have an increasingly broad and high-value product pipeline, with multiple products in the clinic and on market, a very strong IP position and a growing suite of partners and commercial opportunities across our portfolio.

As we near the end of 2021, we are focused on progressing our DEP<sup>®</sup> programs, internal and partnered, and closing out a number of valuable distribution arrangements and product registrations for VIRALEZE<sup>™</sup>. As we look to 2022 and beyond, Starpharma remains focused on fulfilling its purpose and strategic objectives with further registrations, launches and revenue growth for VIRALEZE<sup>™</sup> and VivaGel<sup>®</sup> products, and DEP<sup>®</sup> partnerships.

We take great pride in knowing that our product portfolio has real potential to create positive, even lifechanging, results for patient and customer health worldwide, all the while generating significant long-term value for our shareholders.

I thank shareholders for their support and look forward to the year ahead.

Thank you

Rob Thomas AO Chairman



ASX:SPL OTC:SPHRY

## **Annual General Meeting**

30 November 2021

Dr Jackie Fairley, CEO



## Important notice and disclaimer

This document contains certain forward-looking statements, relating to Starpharma's business, which can be identified by the use of forwardlooking 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.

Clinical case studies and other clinical information given in this document are given for illustrative purposes only and are not necessarily a guide to product performance and no representation or warranty is made by any person as to the likelihood of achievement or reasonableness of future results. Nothing contained in this document nor any information made available to you is, or shall be relied upon as, a promise, representation, warranty or guarantee as to the past, present or the future performance of any Starpharma product.

FLEURSTAT BVGEL (VivaGel<sup>®</sup> BV) for the treatment of BV and relief of symptoms: Ask your pharmacist – they must decide if this product is right for you. Always read the label. Follow the directions for use. Do not use for more than 7 days unless a doctor has told you to. See your doctor if symptoms persist after 7 days or recur within 2 weeks, and if you consider you may be at risk of an STI. See a doctor if you are diabetic or pregnant/breastfeeding (or plan to be).

VIRALEZET: Always read the label and follow the instructions for use. This medical device is a regulated health product which bears, under this regulation, the CE marking in the EU. Do not use if you have a history of sensitivity to any ingredients in the formulation. Not for use in children under the age of 12 years. See a doctor If you are pregnant or breastfeeding. Always follow recommendations from health authorities, including vaccination and good hygiene practices, such as the use of masks, physical distancing, and regular handwashing to ensure the best possible protection against respiratory viruses. Not approved for sale or supply in Australia. Starpharma's dendrimer platform delivers significant optionality with multiple potential revenue streams, valuable products & clinical-stage assets



Through innovative research and development, Starpharma is creating therapies which have the potential to improve patient health worldwide.

- Unique polymer (dendrimer) platform creating valuable patented healthcare products (>200 patents)
- Deep portfolio of high-value products on-market and clinical stage assets, with current sales, near term potential commercial and clinical milestones
- Products address clear unmet medical need for large markets
- Established manufacturing and supply chain
- Successful partnerships with leading global companies
- Well funded; share register is made up of ~55% institutions, ~40% retail, ~5% staff & other



**DEP**<sup>®</sup> - A valuable proprietary nanoparticle drug delivery platform creating significant optionality, accelerates path to market and manages investment risk



VIRALEZE<sup>™</sup> Antiviral Nasal Spray - Registered for sale in the UK/Europe, India, and New Zealand, and available in certain markets online



VivaGel<sup>®</sup> BV - Registered in >45 countries; licensed in >160 countries, on-market in the UK, Europe, Asia, South Africa, Australia & NZ

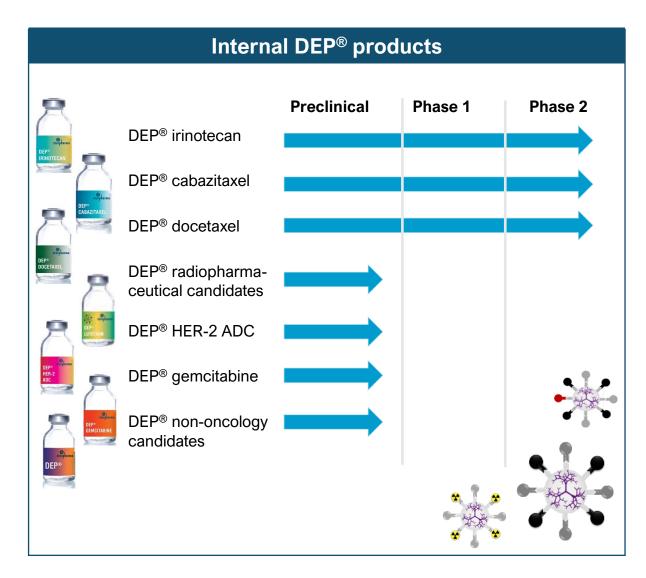


**VivaGel<sup>®</sup> condom** -Approved in Japan, Europe, Australia & Canada



## Starpharma's portfolio: High-value assets including VIRALEZE™, VivaGel<sup>®</sup> products on market, and multiple DEP<sup>®</sup> clinical-stage assets





#### **Marketed Products**



#### **Partnered DEP<sup>®</sup> Products**

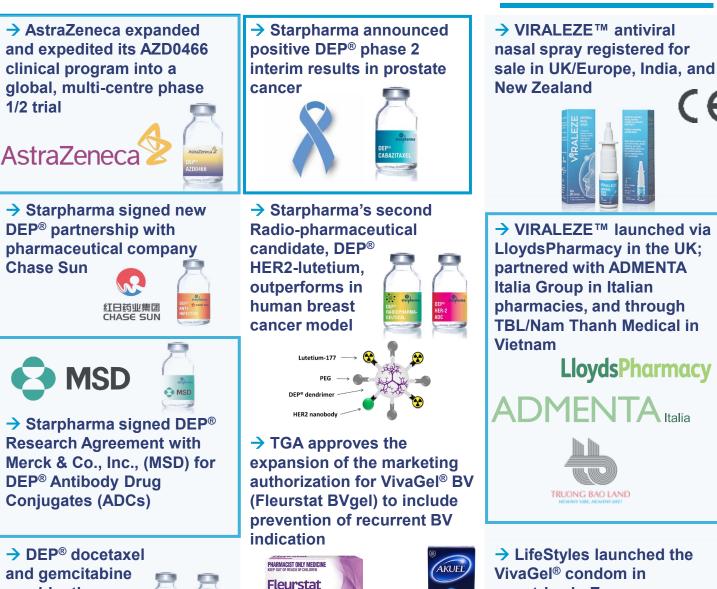
- Global multi-centre phase 1/2 trial underway for AstraZeneca's first DEP<sup>®</sup> oncology drug, AZD0466
- Research agreement signed with MSD for dendrimer-based ADCs using DEP<sup>®</sup> technology
- Research partnership with Chase Sun, to develop several DEP<sup>®</sup> nanoparticle formulations for an anti-infective drug







### 2021 HIGHLIGHTS



**BV**gel

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Absolute DUAL PROTECTIO Travelogie anterodel Prese countries in Europe,

marketed under Absolute™

**DUAL PROTECTION brand** 

combination

clinical study

commences

 → Testing for VIRALEZE™
 confirms
 SPL7013
 virucidal activity *in vitro* in multiple
 variants of
 SARS-CoV-2
 it inactivated
 >99.99% of the
 Delta variant
 within
 30 seconds



→ Testing for VIRALEZE™ confirms SPL7013 active against other pandemic respiratory viruses "SARS" and "MERS", in laboratory studies

→ Testing for VIRALEZE™ confirms SPL7013 active against human respiratory syncytial virus (RSV), in laboratory studies



Spreads much faste than other variants'

→ Starpharma awarded
 \$1 million by the Australian
 MRFF to expedite
 development
 of VIRALEZE™



→ VIRALEZE<sup>™</sup> administered nasally reduced viral load by >99.9% (vs. saline) in the lungs and trachea of animals challenged with SARS-CoV-2; study published in the international peer-reviewed journal, Viruses



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→ VIRALEZE<sup>™</sup> well tolerated in multiple dose clinical study

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## **Financial summary** Strong balance sheet with \$53.4M cash (30 September 2021)



Key Financial Data	FY21 A\$M	FY20 A\$M
Revenue	2.2	6.6
Other Income	1.3	0.6
Loss for the period	(19.7)	(14.7)
Net operating cash outflows	(14.8)	(10.8)
Net financing & investing cash in/(out) flows	46.1	(0.7)
Net cash burn (excluding capital raise) <sup>1</sup>	(16.5)	(11.2)

FY21 Result
<ul> <li>Revenue:</li></ul>
• Other Income includes \$0.9M MRFF grant income for VIRALEZE™
<ul> <li>Investment in R&amp;D Programs: ↑ DEP<sup>®</sup>, ↑ VIRALEZE<sup>™</sup>, ↓</li> <li>VivaGel<sup>®</sup> BV</li> </ul>
<ul> <li>R&amp;D tax incentive: ↑ \$7.2M (FY20 \$5.7M) anticipated to be received early Q3FY22</li> </ul>
<ul> <li>Corporate, Admin &amp; Finance expense:          on \$1.1M unfavourable     </li> <li>FX movement of foreign cash held</li> </ul>

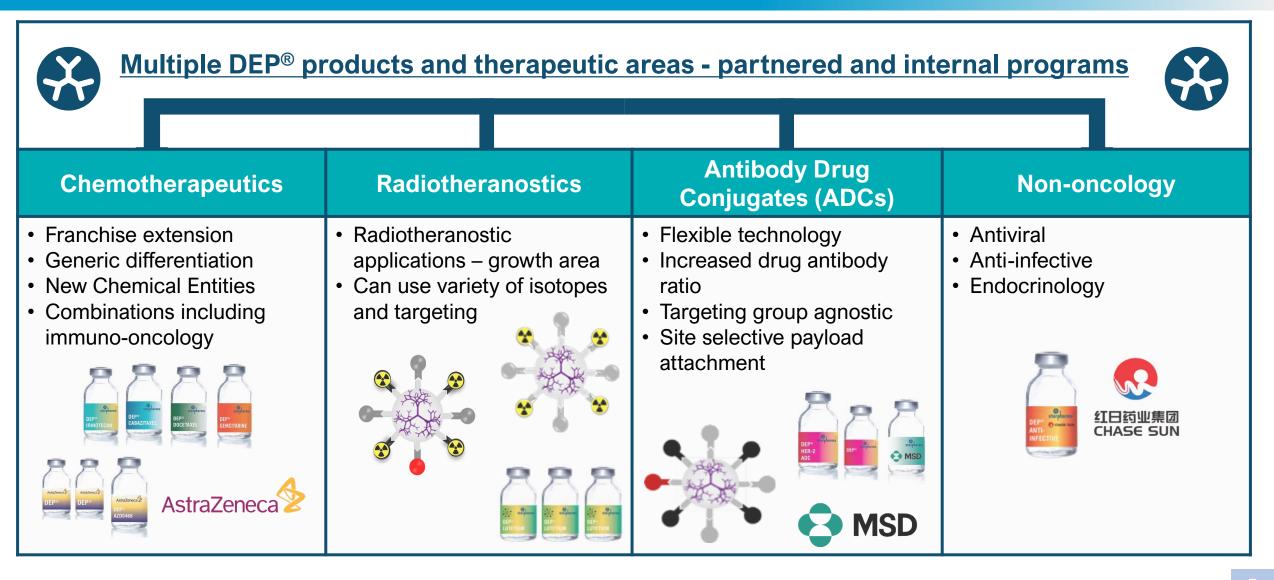
 Net financing cash inflows: \$46.9M net proceeds from equity placement and share purchase plan

### Cash as at 30 Sep 2021 is \$53.4M



<sup>1</sup> 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, adjusted for the impact of the capital raising during the period.

# Starpharma's DEP<sup>®</sup> platform - broad applicability and exceptional optionality



## **DEP®** partnering creates significant value and optionality

Starpharma's DEP<sup>®</sup> platform enhances the commercial and therapeutic value of a wide range of drugs, creating multiple potential revenue streams and significant IP leverage



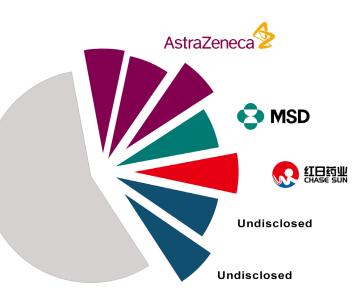
## AstraZeneca's novel DEP<sup>®</sup> nanoparticle AZD0466

- Clinical program significantly expanded and advanced in 2021, to a multi-region, global Phase 1/2 clinical trial in advanced haematological malignancies
- The new phase 1/2 trial design is aimed at seamless transition to phase 2, to facilitate expedited marketing approval
- AZD0466 is the first candidate in Starpharma's multiproduct licence with AstraZeneca; US\$7M in milestones received to date
- Total AZD0466 deal up to US\$124M milestones + royalties (est. up to A\$2.4B revenue to SPL)



## DEP<sup>®</sup> platform allows for multiple partnerships

Starpharma has several disclosed/undisclosed partnered DEP<sup>®</sup> programs, including with large pharma companies: AstraZeneca, Merck and Chase Sun.



DEP<sup>®</sup> platform offers optionality, enabling multiple licences to run in parallel Starpharma has signed a DEP<sup>®</sup> research agreement with MSD for dendrimer-based ADCs using DEP<sup>®</sup> technology

"MSD is a recognised leader in oncology, and we are delighted to have signed this new Research Agreement in such an innovative and valuable area" Dr Jackie Fairley, CEO Linker

leader in delighted w in such able Drug Linker PEG Dendrimer

Starpharma has a research partnership with Chase Sun, to develop several DEP<sup>®</sup> nanoparticle formulations for an antiinfective drug



## AstraZeneca's novel DEP<sup>®</sup> nanoparticle AZD0466

- AZD0466 is a highly optimised DEP<sup>®</sup> nanoparticle formulation of AstraZeneca's dual Bcl-2/xL inhibitor (AZD4320)
- Dual Bcl-2/xL inhibition with AZD0466 has potential for broader activity than the marketed Bcl-2 inhibitor, venetoclax (Venclexta<sup>®</sup>). In 2020, Venclexta had sales of ~US\$1.34 billion (+69% cf. 2019)
- Clinical program significantly expanded and advanced in 2021, to a multi-region Phase 1/2 clinical trial in • advanced haematological malignancies
- This new phase 1/2 trial is aimed at seamless transition to phase 2, to facilitate expedited marketing approval
- AZD0466 is the first candidate in Starpharma's multiproduct licence with AZ; US\$7M in milestones received to date
- Total AZD0466 deal up to US\$124M milestones + royalties (est. up to A\$2.4B revenue to SPL)
- AZD0466 studies in a human mesothelioma model were recently published in Nature Biotechnology

### AstraZeneca to present AZD0466 posters at 2021 Annual Society of Hematology (ASH) Meeting

Poster 1: 2353 NIMBLE: A Phase I/II Study of AZD0466 https://ash.confex.com/ash/2021/webprogram/Paper147482.html	Poster 2: 1867 Combination Therapy of BcI-2/XL dual Inhibitor AZD0466 with Acalabrutinib to Overcome Therapeutic Resistance in Aggressive R/R Mantle Cell Lymphoma https://ash.confex.com/ash/2021/webprogram/Paper151609.html
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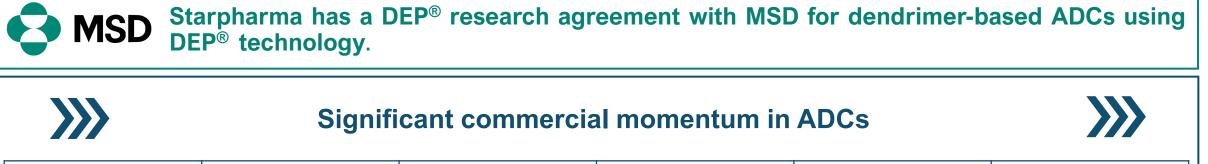




# Starpharma has a number of partnerships with leading antibody drug conjugate companies



Starpharma's DEP<sup>®</sup> technology represents a valuable partnering platform which has the potential to generate revenue through royalties and milestones



AstraZeneca Daiichi-Sankyo	GILEAD Immunomedics	SeattleGenetics	VELOSBIO	Boehringer Ingelheim	Bristol-Myers Squibb
AstraZeneca & Daiichi Sankyo, <b>US\$6.9B,</b> <i>July 2020</i>	Gilead & Immunomedics, <b>US\$21B,</b> <i>Sep 2020</i>	Seattle Genetics & Merck, <b>US\$6.8B,</b> <i>Sep 2020</i>	Merck & VelosBio, <b>US\$2.75B,</b> <i>Nov 2020</i>	Boehringer Ingelheim & NBE Therapeutics, €1.2B, Dec 2020	BMS & Eisai, <b>US\$3.1B,</b> <i>June 2021</i>

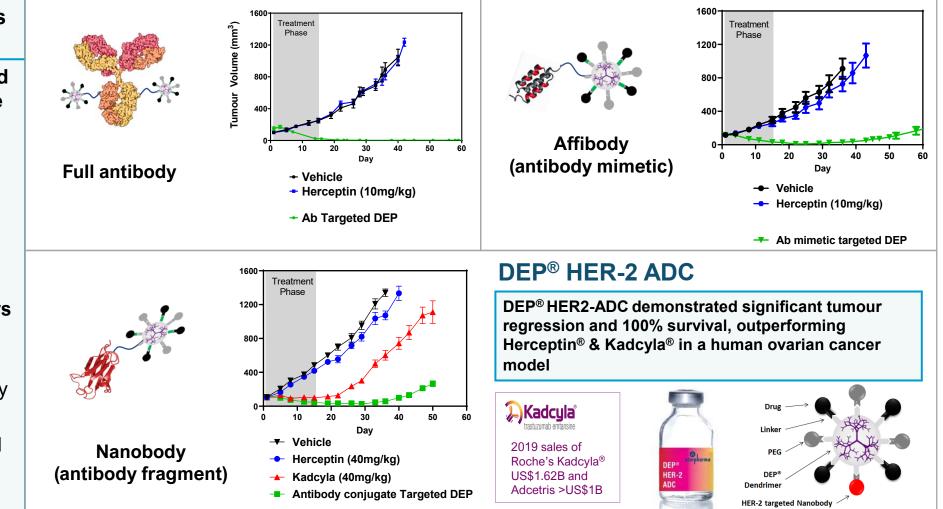
# DEP<sup>®</sup> platform delivers multiple benefits and unique flexibility in Antibody Drug Conjugates (ADCs)



#### Starpharma's DEP<sup>®</sup> technology provides advantages, including enhanced efficacy, over conventional ADCs

Starpharma's DEP<sup>®</sup> ADCs

- Multiple Benefits
- Allows increased payload per dendrimer conjugate (DAR)
- Flexibility in use of wide range of targeting molecules e.g., full antibodies, antibody fragment, small molecules
- Can use a wide range of payloads and drug linkers to meet desired drug release requirements
- Readily scalable precisely manufactured
- Can also deliver increased solubility and formulation benefits



## **DEP® internal oncology programs** Multiple clinical-stage assets with high commercial value potential







DEP<sup>®</sup> DOCETAXEL: Enhanced version of docetaxel (Taxotere<sup>®</sup>) – widely used for breast, lung & prostate cancer

Docetaxel (Taxotere<sup>®</sup>) was a blockbuster cancer drug with peak global sales >US\$3B despite having multiple US FDA "Black Box" warnings

#### Advantages of DEP<sup>®</sup> docetaxel<sup>#\*</sup>:

Reduction in neutropenia; detergent-free formulation; no steroid pre-treatment; tumour-targeting (~70x more); improved efficacy; improved pharmacokinetics; patent filings to 2032 (plus up to an additional ~5 years).

CETAXEL: version of (Taxotere<sup>®</sup>) –

DEP® CABAZITAXEL CABAZITAXEL CABAZITAXEL CABAZITAXEL CABAZITAXEL CABAZITAXEL CABAZITAXEL CABAZITAXEL CABAZITAXEL

Cabazitaxel (Jevtana®) – global sales of ~US\$600M for 2020 despite having multiple US FDA "Black Box" warnings

**DEP® CABAZITAXEL:** 

Enhanced version of

Advantages of DEP<sup>®</sup> cabazitaxel<sup>#\*:</sup> Improved toxicity profile; detergent-free formulation; no steroid pre-treatment; tumour-targeting, improved efficacy; patent filings to 2039 (plus up to an additional ~5 years).



JEVTANA (cabazitaxel)

DEP<sup>®</sup> IRINOTECAN: Improved version of irinotecan (Camptosar<sup>®</sup>) predominantly used for colorectal cancer

CAMPTOSAR® irinotecan HCI injection

**Camptosar®** had peak global **sales of US\$1.1B** despite having multiple US FDA "Black Box" warnings.

Advantages of DEP® irinotecan#\*: Irinotecan is a pro-drug that is converted to the more active metabolite, SN38; DEP® solubilises SN38 and allows direct dosing, avoiding the need for liver conversion and patient variability; improved efficacy; patent filings to 2039 (plus up to an additional ~5 years).



Starpharma's deep preclinical pipeline includes DEP<sup>®</sup> candidates including:

- DEP<sup>®</sup> gemcitabine
- DEP<sup>®</sup> radiotherapeutic candidates
- DEP<sup>®</sup> antibody drug conjugate (ADC) candidates
- Other therapeutic areas

Create value through clinical proof-ofconcept (phase 2)



Clinical data adds value to partnered programs



Utilise accelerated development /reg. pathways (i.e. 505b2) for optimal ROI

#Clinical studies have demonstrated reduction in important side effects with DEP® such as bone marrow toxicity, anaphylaxis, severe diarrhoea and hair-loss

**DEP<sup>®</sup> cabazitaxel: phase 2 trial ongoing, encouraging efficacy signals** Enhanced version of leading prostate cancer drug cabazitaxel (Jevtana<sup>®</sup>)

Trial status:	Phase 2, ongoing, 51 patients recruited	62-year-old man with metastatic prostate cancer 3 Months Before Study (doubling every month)
Efficacy signals seen in:	Prostate, ovarian, gastro-oesophageal, cholangiocarcinoma, head & neck, lung, thymic and other cancers	showed 87% reduction in PSA (right)
Interim observations:	• Encouraging efficacy signals have been observed, including radiological responses, significant target tumour shrinkage and substantial tumour biomarker reductions (e.g., Prostate Specific Antigen (PSA)), in cancers including prostate, ovarian, lung, gastro-oesophageal, head and neck and other cancers.	BEP <sup>®</sup> CABAZITAXEL 0.0 STUDY WEEK
	<ul> <li>These impressive tumour responses were observed in heavily pre-treated patients and include significant tumour shrinkage including in prostate and ovarian cancer, in patients who have failed multiple other lines of cancer treatment.</li> <li>Significantly fewer and less severe side effects, particularly bone marrow toxicity, than is usually associated with Jevtana<sup>®</sup>.</li> </ul>	Positive DEP® cabazitaxel phase 2 interim results in prostate cancer patientsOne or more encouraging efficacy signals were observed in 100% of advanced prostate cancer patients assessed following DEP® cabazitaxel treatment.
Sites:	Canolfan Ganser Felindre	versity College London Hospitals NHS Foundation Trust

stard

iarma

# DEP<sup>®</sup> cabazitaxel Phase 2 Trial – Positive Interim Results in Prostate Cancer Cohort



CABAZITAX

Prostate cancer is the 2<sup>nd</sup> most common cancer in males, with ~1.4 million new prostate cancer patients diagnosed annually<sup>1</sup>

#### About cabazitaxel (Jevtana®)

- · Primary indication prostate cancer
- 2 FDA "Black Box" warnings for neutropenia and anaphylaxis (polysorbate 80 detergent)
- Sales of Jevtana<sup>®</sup> exceeded US\$600 million in 2020 (+12%)

#### **DEP®** cabazitaxel - Phase 2 prostate cancer patients

- 25 heavily pre-treated patients (average age 73 years) with Stage (IV) hormone-refractory prostate cancer
  - Average of 4 prior anti-cancer treatments and >70 months/cycles
  - >95% had received prior taxanes, including docetaxel and cabazitaxel (Jevtana<sup>®</sup>)
- Patients received DEP<sup>®</sup> cabazitaxel at 20mg/m<sup>2</sup> cabazitaxel
- No need for prophylactic steroids or antihistamines as polysorbate 80-free aqueous formulation
- No primary G-CSF<sup>4</sup> prophylaxis required

## DEP<sup>®</sup> cabazitaxel - Phase 2 interim results in prostate cancer cohort

## 100% of evaluable patients<sup>2</sup> had one or more efficacy response<sup>3</sup>:

- 64% had prolonged disease control for up to 36 weeks
  - 18% had significant tumour shrinkage, a Partial Response (Jevtana<sup>®</sup> – 18.5%)
- 90% had a PSA decrease
  - 52% had a  $\geq$ 50% decrease in PSA (Jevtana<sup>®</sup> 29.5%)
- 83% had no progression of secondary bone disease
- 56% evaluable for all three measures had responses in all three

## Significantly fewer and less severe adverse events reported than for Jevtana:

- Fewer and less severe bone marrow toxicities, particularly neutropenia
- No anaphylaxis DEP<sup>®</sup> cabazitaxel aqueous formulation polysorbate 80-free
- No severe hypersensitivity or hair loss
- Vast majority of AEs mild to moderate
- Very few patients required G-CSF therapy for myelosuppression

3: Scher, H.I., et al., Trial design and objectives for castration-resistant prostate cancer: updated recommendations from the Prostate Cancer Clinical Trials Working Group 3. J Clin Oncol, 2016, 34(12):1402-18.

<sup>1:</sup> https://www.uicc.org/news/globocan-2020-new-global-cancer-data

<sup>2:</sup> Evaluable patients are those who received ≥1 dose DEP<sup>®</sup> cabazitaxel and had an applicable efficacy assessment conducted post treatment. 3 patients were not evaluable for efficacy.

## DEP<sup>®</sup> cabazitaxel: Advantages over Jevtana<sup>®</sup> many commercial parallels with Abraxane<sup>®</sup> (paclitaxel)



### Abraxane®



- Abraxane<sup>®</sup> is an improved nanoparticle formulation of Taxol (paclitaxel), which had peak sales US\$1.6B prior to patent expiry
- Abraxane<sup>®</sup> approved in 2005 by the FDA initially for the treatment of breast cancer with further indications added
- Celgene acquired Abraxis<sup>^</sup> in 2010 for ~\$2.9B; Abraxane<sup>®</sup> sales were US\$314M in 2009
- Abraxane<sup>®</sup> sales in 2020 US\$1.24B (Celgene now part of BMS)
- Abraxane<sup>®</sup> now accounts for ~97% of paclitaxel sales (\$)

**Bristol-Myers Squibb** 

	Jevtana® 2020 sales US\$600M	DEP® cabazitaxel (Improved nanoparticle formulation)		
FDA Black box	1. Neutropenic Deaths (febrile neutropenia)	Not observed		
warning	2. Severe hypersensitivity (polysorbate-80 detergent)	<ul> <li>Not observed; detergent-free formulation</li> </ul>		
Premedication	<ul> <li>Antihistamine (required)</li> <li>Corticosteroid (required)</li> <li>H2 antagonist (required)</li> <li>Antiemetic prophylaxis (recommended)</li> </ul>	<ul> <li>Not required; polysorbate- 80/detergent-free formulation</li> </ul>		
Primary G-CSF prophylaxis (bone marrow protection)	<ul> <li>Prophylactic G-CSF recommended for older/high- risk patients (to prevent severe myelosuppression)</li> </ul>	<ul> <li>Not required</li> <li>Significantly less bone marrow toxicity (myelosuppression)</li> </ul>		
Patent	<ul> <li>EU – expired</li> <li>US – 2031 (use patent) will exclude generics</li> </ul>	<ul> <li>EU – 2039</li> <li>US – 2039 (potential for 5-year extension)</li> </ul>		

Data ex IMS

^Abraxis Biosciences Inc. was the owner of the product, Abraxane®

## DEP<sup>®</sup> cabazitaxel: clinical case study in prostate cancer



#### 80-year-old man with stage IV prostate cancer



- Progressed following 33 cycles/months of 3 different prior anti-cancer therapies
- 7 cycles of DEP<sup>®</sup> cabazitaxel to date
- Achieved 79% reduction in PSA (prostate specific antigen)
- Achieved partial response (significant tumour shrinkage), including a 62% decrease in size of target lymph node)
- No G-CSF therapy required

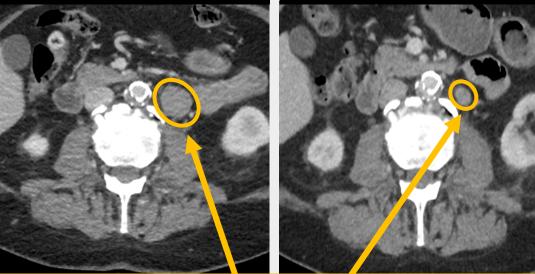
#### Notable absence of clinically significant:

- Neutropenia
- Anaemia
- Thrombocytopenia

#### **CT Scans of Lymph Node metastasis**

BASELINE

POST-TREATMENT



62% reduction in size of cancerous lymph node, returned to normal size

## DEP<sup>®</sup> cabazitaxel: clinical case study in oesophageal cancer

CABAZITAX



#### **Oesophageal cancer**

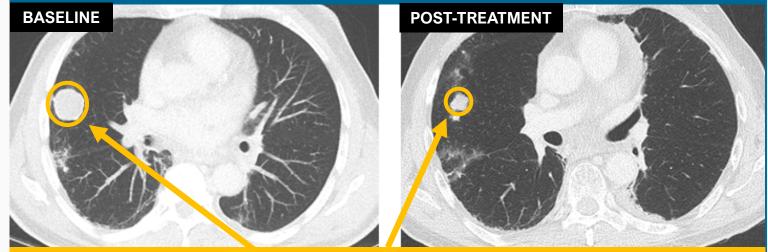
- Oesophageal cancer is the sixth leading cause of cancerrelated mortality worldwide.<sup>1</sup>
- The diagnosis typically occurs in patients with locally advanced unresectable or metastatic disease, when palliative chemotherapy is the primary treatment option.
- The 5-year survival rates can be as low as 5%.<sup>2</sup>

 Sung H, Ferlay J, Siegel RL, et al. Global cancer statistics 2020: GLOBOCAN estimates of incidence and mortality worldwide for 36 cancers in 185 countries. *CA Cancer J Clin*. 2021;71(3):209-249. doi:10.3322/caac.21660
 Siegel RL, Miller KD, Fuchs HE, Jemal A. Cancer Statistics, 2021. *CA Cancer J Clin*. 2021;71(1):7-33. doi:10.3322/caac.21654

### 73-year-old man with stage IV oesophageal cancer

- Cancer progressed following extensive radiation therapy and chemotherapy
- Achieved partial response (significant tumour shrinkage) following 5 cycles of DEP<sup>®</sup> cabazitaxel:
  - 42% overall decrease in tumour burden
  - 45% reduction in size of lung metastasis

#### CT scans of cancer metastasis in lung



#### 45% reduction in size of lung metastasis

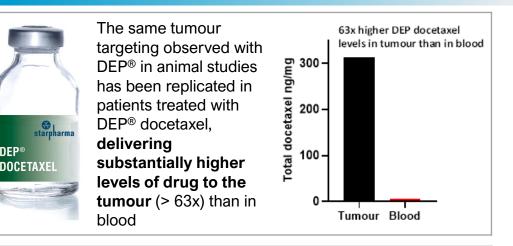
## **DEP® docetaxel: phase 2 trial ongoing, encouraging efficacy signals** Enhanced version of docetaxel (Taxotere®) – widely used for breast, lung & prostate cancer



Trial status:	Phase 2 trial ongoing, 65 patients recruited <sup>^</sup>			
Efficacy signals seen in:	Lung, pancreatic, oesophageal, cholangiocarcinoma, gastric cancers (and others)			
Combinations:	+ gemcitabine (Gemzar <sup>®</sup> ), targeting pancreatic cancer			
	+ nintedanib (Vargatef <sup>®</sup> ), targeting lung cancer			
Interim observations:	• Encouraging efficacy signals observed, including prolonged stable disease and significant tumour shrinkage in patients with pancreatic, oesophageal, cholangiocarcinoma, and gastric cancer. These impressive tumour responses include stable disease for up to 40 weeks and significant tumour shrinkage in a heavily pre-treated late-stage oesophageal cancer patient.			
	<ul> <li>Notable lack of bone marrow toxicity (e.g., neutropenia) and other common side effects incl. hair-loss, mouth ulcers, anaphylaxis and oedema.</li> </ul>			
	• Efficacy signals observed in heavily pre-treated patients (treated with up to 40 cycles and 9 different anti-cancer regimens previously).			
Sites:	Ebeatson       Suy's and St Thomas'       The Christie         University College London Hospitals       The Newcastle upon Tyne Hospitals       The Leeds         University College London Hospitals       The Newcastle upon Tyne Hospitals       The Leeds			

NHS Foundation Trust

NHS Foundation Trust



#### **DEP<sup>®</sup> docetaxel clinical combination studies**

DEP<sup>®</sup> docetaxel + gemcitabine (Gemzar<sup>®</sup>)

 Based on compelling DEP<sup>®</sup> preclinical data & investigator interest, combination DEP<sup>®</sup> docetaxel with gemcitabine trial commenced, targeting pancreatic cancer

#### DEP<sup>®</sup> docetaxel + nintedanib (Vargatef<sup>®</sup>)

- Encouraging efficacy signals observed
  - Prolonged stable disease & tumour shrinkage in nonsmall cell lung cancer; heavily pre-treated patients
  - Notable lack of bone marrow toxicity (e.g., neutropenia) and other common side effects, including mouth ulcers, anaphylaxis and oedema

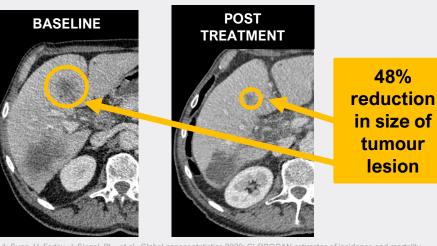
# DEP<sup>®</sup> docetaxel clinical case studies: monotherapy and in combination



## 66-year-old man: stage IV oesophageal cancer with liver metastases (monotherapy)



- Oesophageal cancer is the sixth leading cause of cancer-related mortality worldwide<sup>1</sup>; 5-year survival rates can be as low as 5%<sup>2</sup>
- Patient had progressive disease after radiotherapy and 9 cycles of two different treatment regimens
- Response to DEP<sup>®</sup> docetaxel:
  - Reduction in size of tumour lesions of up to 48%; maintained for >16 weeks

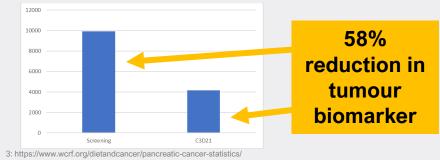


#### 1: Sung H, Ferlay J, Siegel RL, et al. Global cancer statistics 2020: GLOBOCAN estimates of incidence and mortality worldwide for 36 cancers in 185 countries. CA Cancer J Clin. 2021;71(3):209-249. doi:10.3322/caac.21660/ 2: https://www.cancerresearchuk.org/about-cancer/oesophageal-cancer/survival

## 74-year-old man with stage IV pancreatic cancer (in combination with gemcitabine)



- Pancreatic cancer is the 12<sup>th</sup> most common cancer worldwide.<sup>3</sup> The 5-year survival rate is only 10.7%.<sup>4</sup>
  - Progressed following surgery and ~34 cycles of two different treatment regimens, including 6 cycles of gemcitabine
  - Received 5 cycles of DEP<sup>®</sup> docetaxel + gemcitabine
- Response to combination therapy:
  - 58% reduction in tumour biomarker CA19-9 after 13 weeks
  - Stable disease for >19 weeks



4: https://www.canceraustralia.gov.au/about-us/news/tackling-one-australias-deadliest-cancers

## DEP<sup>®</sup> irinotecan: phase 2 trial underway, encouraging efficacy signals

Enhanced version of irinotecan (Camptosar<sup>®</sup>) - predominantly used for colorectal cancer



Trial status:	Phase 2, ongoing, 61 patients recruited					
Efficacy signals seen in:	Breast, colorectal, ovarian, pancreatic, lung and oesophageal cancer					
Interim observations:	<ul> <li>Encouraging efficacy signals observed include prolonged stable disease, impressive tumour shrinkage and reductions in tumour marker levels for a number of tumour types, including breast, colorectal, ovarian, pancreatic, lung and oesophageal cancer</li> </ul>					
Combinations:	<ul> <li>Combinations, based on investigator interest and preclinical studies, being explored with partners to create value</li> </ul>					
Sites:	The ROYAL MARSDEN NHS Foundation Trust Interview Whot Courts Autors Auto					



**DEP**<sup>®</sup> irinotecan incorporates the irinotecan active moiety (SN38) and is an improved version of **Camptosar**<sup>®</sup>

DEP<sup>®</sup> irinotecan:

- Provides the ability to solubilise the active metabolite, SN38
- Removes the need for liver metabolism
- Showed improved efficacy and survival benefit in preclinical models
- Patented formulation

#### **Results from DEP® irinotecan phase 1 trial:**

- Encouraging efficacy signals observed in 50% of evaluable<sup>^</sup> patients, all of whom were heavily pretreated
- Efficacy signals observed included prolonged stable disease and substantial tumour shrinkage in tumour types including CRC, pancreatic and breast cancer
- No cases of the severe high-grade diarrhoea with DEP<sup>®</sup> irinotecan – this side effect is experienced by 20-40% of patients with conventional irinotecan, and often requires hospitalisation
- Patients treated with DEP<sup>®</sup> irinotecan generally experienced less severe side effects than typically associated with Camptosar<sup>®</sup>; AEs observed included nausea, vomiting, alopecia and neutropenia

#### Phase 1/2 Combination arm

DEP<sup>®</sup> irinotecan in combination with 5-FU+ Leucovorin ('FOLFIRI') – a commonly used combination treatment, particularly first-line, in colorectal cancer – to commence shortly in the UK and Australia.



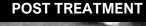
#### 55-year-old woman with heavily pre-treated stage IV ovarian cancer

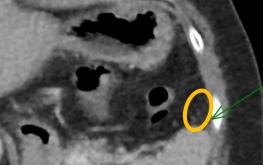


- Ovarian cancer has the lowest survival rate of women's cancer\* with a 5-year survival of ~17% for Stage IV
- Patient was heavily pre-treated with > 60 treatmentcycles of 6 different kinds of anti-cancer therapy
- Platinum and PARP-resistant ovarian cancer
- Received 10 cycles of DEP<sup>®</sup> irinotecan
- Response to DEP<sup>®</sup> irinotecan:
  - Complete resolution of target tumour lesion
     after 3 cycles of treatment;
  - Partial Response maintained for up to 27 weeks
  - 98% reduction in tumour biomarkers

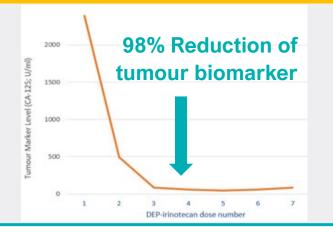
\* https://ovariancancer.net.au/wp-content/uploads/2019/01/Ovarian-Cancer-Facts-\_2019\_-FINAL.pdf







Complete resolution (100%) of tumour lesion up to 27 weeks of treatment with DEP® irinotecan



## DEP<sup>®</sup> irinotecan: clinical case study in oesophageal cancer



#### **Oesophageal cancer**

- Oesophageal cancer is the sixth leading cause of cancerrelated mortality worldwide.<sup>1</sup>
- The diagnosis typically occurs in patients with locally advanced unresectable or metastatic disease, when palliative chemotherapy is the primary treatment option.
- The 5-year survival rates can be as low as 5%.<sup>2</sup>

 Sung H, Ferlay J, Siegel RL, et al. Global cancer statistics 2020: GLOBOCAN estimates of incidence and mortality worldwide for 36 cancers in 185 countries. *CA Cancer J Clin*. 2021;71(3):209-249. doi:10.3322/caac.21660
 Siegel RL, Miller KD, Fuchs HE, Jemal A. Cancer Statistics, 2021. *CA Cancer J Clin*. 2021;71(1):7-33. doi:10.3322/caac.21654

#### 60-year-old man with stage IV oesophageal cancer



RINOTECA

- Pre-treated with 3 different prior anti-cancer agents
- Received 7 cycles of DEP<sup>®</sup>
   irinotecan
- Significant tumour lesion reduction (40%) observed after 3 cycles of DEP<sup>®</sup> irinotecan
- Stable disease >18 weeks
- 87% reduction in tumour biomarker



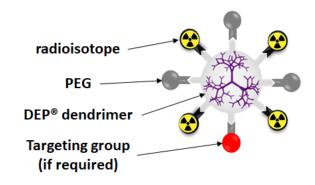
40% reduction in a tumour lesion size after 9 weeks of treatment

POST-TREATMENT

#### ^Nuclear medicine world market report & directory, MEDraysintell, 2016)

- Radiotheranostics is a rapidly developing area of cancer treatment and diagnosis with sales estimated to grow to \$12–15 billion by 2030<sup>^</sup>
- Significant corporate activity in recent years
- Starpharma's DEP<sup>®</sup> platform has yielded multiple radiotheranostic DEP<sup>®</sup> products
- Starpharma continues discussions with potential partners regarding access to Starpharma's DEP<sup>®</sup> platform and licensing DEP<sup>®</sup> radiotheranostic/radiopharmaceutical candidates

Deals involving radiopharmaceuticals							
Advanced Advanced Accelerator Applications	ENDOCYTE NOVARTIS	Solution Lantheus Medical Imaging Progenics Pharmaceuticals	HARMACEUTICALS FHARMACEUTICALS COE HEALTHCARE	Fusion Promoceutication Franceutication Franceutication Franceutication Franceutication Franceutication			
Novartis & Advanced Accelerator Applications (acquisition) <b>US\$3.9B,</b> <i>Oct 2017</i>	Novartis & Endocyte (acquisition) <b>US\$2.1B,</b> <i>Oct 2018</i>	Lantheus & Progenics (acquisition) <b>US\$641M,</b> <i>Oct 2019</i>	Telix & China Grand (licence) <b>AU\$40M,</b> <i>Nov 2020</i>	Fusion & Ispen (product acquisition) <b>€417.5M,</b> Jan 2021			

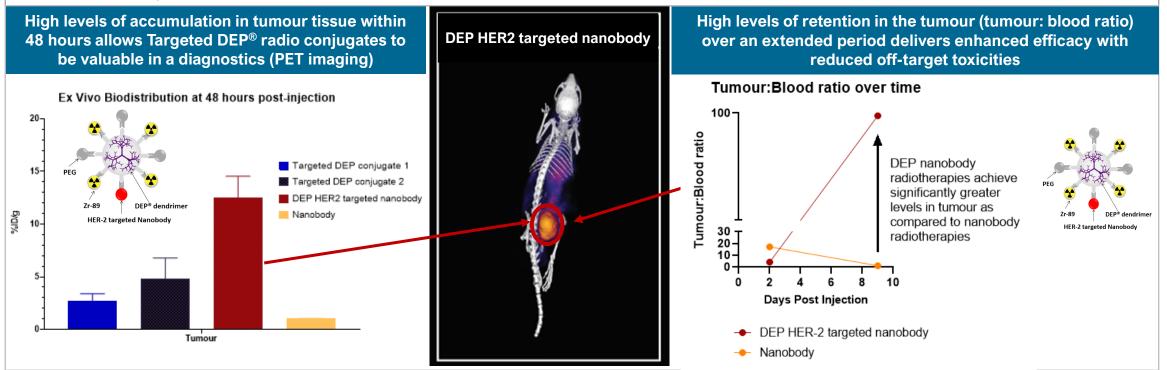






#### **Targeted DEP<sup>®</sup> theranostics offer multiple benefits:**

- Flexibility in size and structure of nanoparticle (allowing different targeting groups and pharmacokinetics)
- Enhanced tumour accumulation due to the EPR effect (10x nanobody alone)
- Enhanced tissue targeting and retention due to specific receptor binding (and internalization)
  - Enhanced entry and specific accumulation allows for enhanced PET visualization (diagnostic)
  - Enhanced accumulation and cellular internalization in tumours delivers enhanced efficacy and less off-target toxicity



Data determined using both in vivo and ex vivo PET imaging of HER-2 positive SKOV3 ovarian mouse xenografts

Starpharma has developed multiple novel radiotheranostic (radiodiagnostics and radiotherapeutics) candidates

**DEP<sup>®</sup>** lutetium

model<sup>1</sup>

Lu-177

1000

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DEP<sup>®</sup> lutetium showed significant anticancer

100% survival in a human prostate cancer

activity, with tumour regression

DEP<sup>®</sup> dendrimer

Mean % Change Tumour Volume

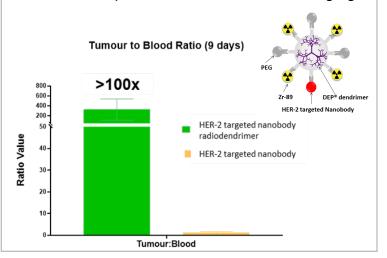
Days Post Injection



#### **DEP**<sup>®</sup> radiodiagnostic

#### **DEP<sup>®</sup> HER2-zirconium**

- DEP<sup>®</sup> HER2-zirconium achieved significant tumour accumulation: >100x in tumour vs. blood in a human HER2-positive ovarian cancer model
- DEP<sup>®</sup> HER2-zirconium accumulation in tumour is significantly greater than nanobody alone products due to dendrimer delivery advantages (EPR effect)
- DEP<sup>®</sup> HER2-zirconium pharmacokinetics allow for optimal visualization in PET imaging



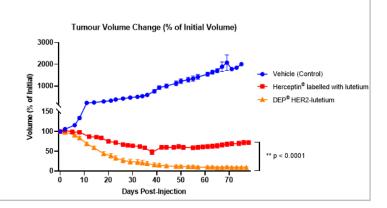
#### **DEP<sup>®</sup>** radiotherapeutics

#### **DEP<sup>®</sup> HER2-lutetium**

DEP<sup>®</sup> HER2-lutetium:

- Achieved complete tumour regression
- Outperformed Herceptin<sup>®</sup> labelled with lutetium, in a human HER2-positive breast cancer model
- Was extremely well tolerated

Jr DEP° HER2-LUTETIUM Lu-177 DEP° dendrimer HER-2 targeted Nanobody



EPR: Enhanced permeation and retention effect

<sup>1</sup> 100% survival to >66 days

p<0.0001

LUTETIU

# VIRALEZE<sup>™</sup> antiviral nasal spray is virucidal, inactivating >99.9% of SARS-CoV-2 (the coronavirus that causes COVID-19)



- Broad-spectrum antiviral nasal spray containing 1% SPL7013, shown in laboratory studies to inactivate respiratory viruses, including >99.9% of coronavirus SARS-CoV-2 (Paull, 2021)
- Virucidal, irreversibly and rapidly inactivating >99.9% of multiple variants of coronavirus/SARS-CoV-2, including Delta
- SPL7013 also irreversibly inactivates a broad spectrum of respiratory viruses
- VIRALEZE<sup>™</sup> is registered for sale in the UK/Europe & India
- VIRALEZE<sup>™</sup> is partnered with LloydsPharmacy in the UK; ADMENTA Italia Group in Italy; and HealthCo/TBL & Nam Thanh Medical in Vietnam
- VIRALEZE<sup>™</sup> regulatory submissions (including TGA) made, others in progress and commercial discussions for multiple countries well advanced





VIRALEZE<sup>™</sup> is not approved for sale or supply in Australia.

### **VIRALEZE™** advantages

- Broad-spectrum, works against multiple strains of SARS-CoV-2 and multiple respiratory viruses
- Virucidal, irreversibly and rapidly inactivating >99.9% of coronavirus/SARS-CoV-2 within one minute (Paull, 2021)
- Potent antiviral activity against multiple strains of SARS-CoV-2, including 'Variants of Concern', Delta, Alpha, Beta and Gamma
- Ability to inactivate virus either before or after exposure
- Well-tolerated; acts locally in the nasal cavity and is not absorbed into the bloodstream<sup>^</sup>
- Provides a moisturising and protective barrier to help keep nasal tissue hydrated
- Room temperature storage, easy and convenient for regular use

<sup>^</sup>Starpharma completed a double-blinded, placebo-controlled safety study to support marketing of VIRALEZE<sup>™</sup>. The study involved 40 healthy volunteers, using the product 4 times a day for 14 days. VIRALEZE<sup>™</sup> was well tolerated by all participants, with no notable or serious adverse events reported. Results confirmed that SPL7013 is not absorbed into the bloodstream following nasal application - potential for systemic effects is negligible.

Paull J.R.A., et al. Virucidal and antiviral activity of astodrimer sodium against SARS-CoV-2 in vitro. Antiviral Res 2021;191:105089 (https://doi.org/10.1016/j.antiviral.2021.105089)



VIRALEZE<sup>™</sup> antiviral nasal spray launched in UK/EU 1HCY21, further registrations achieved, and further launches to follow





## **VIRALEZE™** distribution and supply



- VIRALEZE<sup>™</sup> is manufactured in Europe utilising an existing qualified contract manufacturing organisation (CMO)
- Starpharma's CMO has flexible manufacturing facilities and they have built additional capacity to meet demand
- Starpharma has worked with existing raw material suppliers and has built inventory of components and raw materials



VIRALEZE<sup>™</sup> is not approved for sale or supply in Australia.

#### **VIRALEZE™** distribution and supply in Vietnam

- Starpharma signed an initial supply contract and received first orders for 100,000 units and is well advanced in negotiations of an ongoing distribution agreement
- Starpharma has already filled its first order of VIRALEZE<sup>™</sup> antiviral nasal spray for Vietnam with product having arrived in Vietnam ready for launch
- A portion of VIRALEZE<sup>™</sup> of the initial orders will be donated to hospitals and organisations in Vietnam



- Registration of VIRALEZE™ in Vietnam is well advanced
- Vietnam is experiencing a widespread Delta outbreak has a population of ~100M and low levels of vaccination with ~50% of its population fully vaccinated

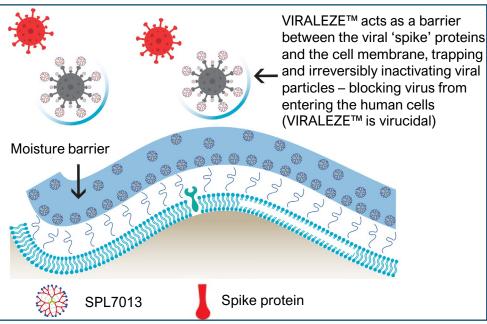


Examples of Starpharma's partners' marketing and launch materials for VIRALEZE™ in Vietnam



## How VIRALEZE<sup>™</sup> works and why it maintains activity despite mutations

- SARS-CoV-2 infects human cells by using the characteristic viral surface proteins, or "spikes", to attach to receptor proteins on the surface of human cells
- Antiviral agent in VIRALEZE<sup>™</sup>, SPL7013, irreversibly traps viral spike proteins, inactivating virus and preventing infection



VIRALEZE<sup>™</sup> (SPL7013) has potent and virucidal activity against multiple variants of SARS-CoV-2



- Antiviral testing has confirmed SPL7013 (VIRALEZE<sup>™</sup> antiviral agent) has potent (>99%) virucidal activity against the Delta, Alpha, Beta and Gamma variant strains of SARS-CoV-2 coronavirus in laboratory studies
- The broad-spectrum antiviral activity of VIRALEZE<sup>™</sup> is an important advantage for the product, especially as new variants of SARS-CoV-2, including the latest Omicron Variant of Concern, continue to emerge<sup>^</sup>
- SPL7013 mode of action and activity has not been adversely impacted by mutations in the spike proteins, i.e., SPL7013 is less susceptible to "escape", which can occur with products based on more specific binding mechanisms

Mutations that make SARS-CoV-2 more infectious (bind more tightly to cells) appear to make the virus *more susceptible* to trapping by SPL7013

Virus:	Ρε	ercent Reduc	tion of Infect	tious Virus v	s Virus Contr	ol	]
SPL7013 <sup>†</sup> Incubation Time	US	Alpha	Beta	Gamma	Delta	Карра	💙 Scripps Research
30 seconds	>99.9%	>99.9%	>99%	>99%	>99.99%	>99.9%	
<sup>†</sup> 10 mg/mL SPL7	013; ^ virus with	out exposure to	SPL7013	•			1

"It is particularly exciting to see a product with this level of virucidal activity, especially against these Variants of Concern...The latest data are consistent with our previous data showing robust antiviral and virucidal effects of SPL7013 against the US strain of SARS-CoV-2 and suggests a mechanism of action that is not impacted by mutations affecting the virus spike proteins."

- Professor Philippe Gallay, Scripps Research institute

# SPL7013 has potent antiviral activity across a wide range of respiratory viruses

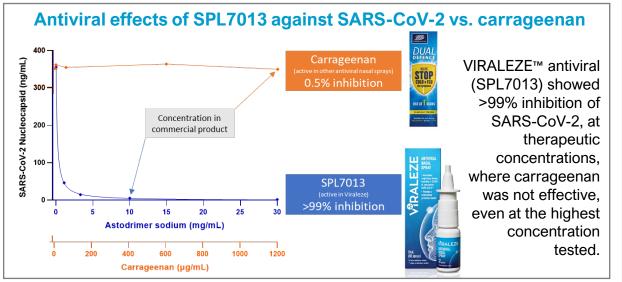
 Extensive research has been conducted at The Scripps Research Institute in the US and is published in the prestigious, peer reviewed scientific journal, Antiviral Research



- A 1% w/w concentration of SPL7013 (the concentration found in VIRALEZE<sup>™</sup>) has been shown to inactivate >99.9% of SARS-CoV-2 within 30 seconds; maintains its antiviral effects when applied either before or after exposure to virus
- SPL7013 has been shown to have potent antiviral effects against influenza viruses and RSV as well as other respiratory viruses that have caused pandemics - SARS, MERS, and Swine Flu (H1N1)

#### The antiviral effect of SPL7013 compares favorably with other antiviral



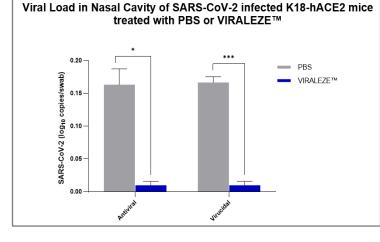


#### VIRALEZE<sup>™</sup> protects *against infection* in SARS-CoV-2 challenge model



VIRALEZE<sup>™</sup> protected animals and significantly reduced their viral load in a WHO recommended, humanized animal model of SARS-CoV-2 infection published in the peer-reviewed journal, *Viruses* 

- VIRALEZE<sup>™</sup> administered nasally reduced viral load by >99.9% in the lungs and trachea (vs. saline control) of animals challenged with SARS-CoV-2
- Viral load in the nasal cavity of animals treated with VIRALEZE<sup>™</sup> was also significantly lower (>90%) compared with the control animals
- VIRALEZE<sup>™</sup> treated animals had no infectious virus detected in brain or liver, in contrast to all control animals
- Pro-inflammatory cytokines (IL-6, IL-1α, IL-1β, TNFα and TGFβ) in serum, lung and trachea were significantly lower in VIRALEZE<sup>™</sup> treated animals v. saline







https://www.mdpi.com/1999-4915/13/8/165

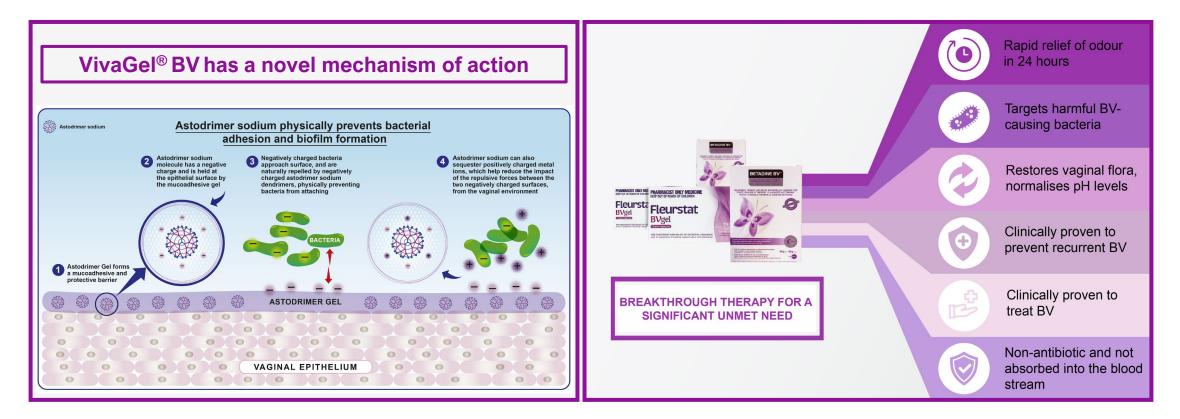
Figure 2. The number of SARS-CoV-2 (USA-WA1/2020) viral genome copies (qRT-PCR) on Day 7 per nasal swab from K18-hACE2 mice treated with PBS or VIRALEZE™ nasal spray and infected with SARS-CoV-2 (USA-WA1/2020) (Antiviral) or infected with SARS-CoV-2 (USA-WA1/2020) inoculum preincubated with PBS or VIRALEZE™ nasal spray (Virucidal). Columns and error bars represent mean ± SEM. \* p < 0.05, \*\*\* p < 0.001, paired t-tests.

Source: Testing conducted at The Scripps Research Institute 2: Paull, J.R.A., et al. 2020. Virucidal and antiviral activity of astodrimer sodium against SARS-CoV-2 in vitro. https://papers.csm.com/sol3/papers.cfm?abstract\_id=3830085

# VivaGel<sup>®</sup> BV - a breakthrough product for the treatment of BV and prevention of recurrent BV



- Bacterial vaginosis or BV is the most common vaginal infection worldwide, affecting 1 in 3 women
- BV is caused by an imbalance of naturally occurring normal bacterial vaginal flora and can lead to a range of medical issues
- BV treatment has typically involved antibiotics (e.g., metronidazole). Antibiotic resistance is a problem and antibiotics have unpleasant side effects and there is demand for alternative approaches. Other current BV therapies do not prevent BV recurring



# VivaGel<sup>®</sup> BV is licensed in >160 countries around the world and approved in >45 countries with multiple other submissions underway





Launched in the UK, Europe, Asia, South Africa, Australia & NZ



Further launches and regulatory submissions progressing in multiple regions

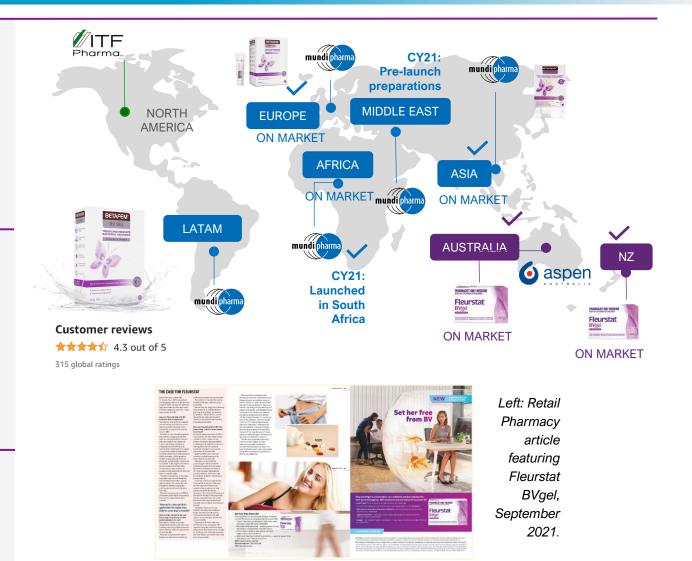


Global market for BV treatment est. to be US\$750M and prevention est. to be US\$1B annually

COVID-19 had a significant impact on healthcare provision and marketing:

- · Overloaded healthcare systems diverted from standard activities
- · Reduced access to medical consultations, including women's health
- · Face-to-face consultations significantly decreased
- Marketing activities significantly curtailed
- Individuals have avoided seeking treatment for health problems due to lockdowns and avoidance of medical settings

In the US, a formal dispute resolution process is ongoing with the FDA as part of the regulatory process for VivaGel<sup>®</sup> BV, and COVID-19 has had an impact on timing. VivaGel<sup>®</sup> BV's Fast Track status & QIDP (qualified infectious disease status) remain on foot based on potential for VivaGel<sup>®</sup> BV to address a serious infection and significant unmet need in BV. ITF Pharma licence remains on foot.



## VivaGel<sup>®</sup> Condom



- The VivaGel<sup>®</sup> condom incorporates SPL7013 antiviral, which has demonstrated activity in HIV, HSV-2, HPV
- Starpharma continues to support its marketing partners, Okamoto (Japan/Asia), LifeStyles, and Sky and Land (China), to progress registration and commercialisation of the VivaGel<sup>®</sup> condom.
- In 2021, the VivaGel<sup>®</sup> condom was launched in Europe under the LifeStyles brand name Absolute<sup>™</sup> Dual Protection.
- Starpharma continues to progress regulatory activities in other regions







## Key value drivers and outlook - DEP<sup>®</sup> platform





→ Progress and completion of DEP<sup>®</sup> docetaxel, DEP<sup>®</sup> cabazitaxel & DEP<sup>®</sup> irinotecan phase 2 trials; progress value-adding combination studies



→ AZD0466 clinical progress, expansion of trial sites recruitment & receipts of milestones



→ AstraZeneca: Exercise of Option Agreement &/or deals for further compounds



AstraZeneca

**MSD** 

→ Progress with existing partnered DEP<sup>®</sup> programs, including with Merck & Co., Inc., & Chase Sun

→ Execute/expand new DEP<sup>®</sup> partnerships/agreements

→ Advance DEP<sup>®</sup>
 radiopharmaceuticals, DEP<sup>®</sup> ADCs
 & DEP<sup>®</sup> antivirals

→ Advance value-adding DEP<sup>®</sup> combinations in clinic & other DEP<sup>®</sup> products

## Key value drivers and outlook - VIRALEZE<sup>™</sup> and VivaGel<sup>®</sup> BV







→ Further VIRALEZE<sup>™</sup> registrations in other regions

→ Further VIRALEZE<sup>™</sup> launches in other regions



 $\rightarrow$  Further distribution & marketing arrangements with commercial partners

→ Continued testing of SPL7013 against SARS-CoV-2 variants & other respiratory viruses



→ Commercial roll-out of VivaGel® **BV** in Europe, Asia & other markets

 $\rightarrow$  Further regulatory approvals & launches for VivaGel<sup>®</sup> BV; building revenues – milestones & sales/royalties

 $\rightarrow$  VivaGel<sup>®</sup> BV – FDA review process



PHARMACIST ONLY MEDICIN

Fleurstat





→ VivaGel<sup>®</sup> condom approvals/launch in additional regions

→ Further development/ co-development of SPL7013 e.g., potentially for ocular use











## **Starpharma's Commitment to ESG**



100%



Appropriate systems in place to comply with relevant Federal, State, and Local environment regulations



**Starpharma** is committed to conducting its operations in an environmentally responsible manner

Starpharma has adopted documented procedures and processes to ensure all waste products are disposed of strictly in accordance with relevant environmental regulations.

#### SOCIAL



• 🗫 >40% of roles. including leadership roles are held by female

Starpharma's supplier code includes a wide range of business practices to provide suppliers with clear expectations regarding their conduct

**17 countries represented** by a small, diverse group of employees



#### **Compliance with**



#### **GOVERNANCE** No breaches of:

- Code of Conduct - Anti-bribery





Starpharma is committed to the principles underpinning best practice in corporate governance, with a commitment to the highest standards of legislative compliance and financial and ethical behaviour.

- Whistleblowing

'Having a diverse workforce drives better outcomes for our business and provides the company with greater breadth of experience and ideas'.



**Download Report** 

The very nature of Starpharma's products affords the opportunity of changing lives for the better



#### **For Investor Relations Queries Contact:**

Dr Jackie Fairley, CEO +61 3 8532 2704 investor.relations@starpharma.com

4-6 Southampton Crescent Abbotsford Vic 3067

www.Starpharma.com

ASX:SPL OTC:SPHRY