ASX Announcement

Shareholder Newsletter

Melbourne, Australia; 16 December 2021: In accordance with ASX Listing Rule 15.2.1, attached is the *Shareholder Newsletter December 2021* sent to Shareholders of Starpharma Holdings Limited (ASX: SPL, OTCQX: SPHRY) today.

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® drug delivery and VivaGel®. Starpharma has developed VIRALEZE™, an antiviral nasal spray that is registered for sale in the Europe, Vietnam, India, Saudi Arabia, and New Zealand, and available outside Australia in certain markets online. VIRALEZE™ is not approved for sale or supply in Australia. SPL7013 is utilised in approved products - the VivaGel® condom and VivaGel® BV. VivaGel® 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®, is being used to improve pharmaceuticals, to reduce toxicities and enhance their performance. There are numerous internal and partnered programs underway to develop DEP® versions of existing drugs, particularly in the area of anti-cancer therapies. DEP® 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® 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
investor.relations@starpharma.com
4-6 Southampton Crescent
Abbotsford Vic 3067

Disclosure
This ASX Announcement was authorised for release by the Company Secretary.

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.

SHAREHOLDER

Newsletter

DECEMBER 2021

VIRALEZE™

›› VIRALEZE™ launches in Vietnam and Italy

VIRALEZE™ antiviral nasal spray was recently launched in Vietnam, following confirmation of the product's registration. The official launch events were attended by clinicians (including from Vietnam's National Institute of Hematology and Blood Transfusion, and the Nose and Throat Hospital), healthcare professionals, politicians, and media representatives from over 30 news channels. The launch generated significant media coverage across print and television.

Starpharma has signed a 5-year supply and distribution agreement for VIRALEZE™ in Vietnam, which includes a minimum commitment of at least 1 million units in the first year. Since October 2021, Starpharma has received VIRALEZE™ orders for Vietnam in excess of A$2 million. Vietnam has a population of approximately 98 million and is experiencing a significant Delta outbreak, with just over half of its population vaccinated[1].

VIRALEZE™ also recently launched in Italy through ADMENTA Italia's LloydsFarmacia. ADMENTA is a leading pharmaceutical retail and wholesale distribution company in Italy, and VIRALEZE™ will be available through their extensive LloydsFarmacia chain, which comprises 260 retail pharmacies, including 13 parapharmacies and 50 franchising pharmacies.

ADMENTA Italia

›› VIRALEZE™ active against Delta and other SARS-CoV-2 variants; Omicron testing planned

Starpharma has conducted extensive antiviral testing at The Scripps Research Institute in the US, which confirmed that SPL7013 has potent antiviral and virucidal activity against the Delta, Alpha, Beta, Gamma, and Kappa variants of the coronavirus, SARS-CoV-2.

The mechanism of action of SPL7013 in VIRALEZE™ means that mutations of the spike protein that make SARS-CoV-2 more infectious, as occurred for the Delta variant, appear to make the virus *more* susceptible to trapping and blocking by SPL7013.

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: SPL7013† Incubation Time	Percent Reduction of Infectious Virus vs Virus Control^					
	US	Alpha	Beta	Gamma	Delta	Kappa
30 seconds	>99.9%	>99.9%	>99%	>99%	>99.99%	>99.9%

† 10 mg/mL SPL7013; ^ virus without exposure to SPL7013

The broad-spectrum antiviral activity of VIRALEZE™ is proving to be an important advantage for the product, especially as new variants of SARS-CoV-2 continue to emerge. Early reports indicate that the Omicron variant is more infectious than other strains, including the Delta variant, and that the mutations leading to this increased infectiousness would make it bind more readily, or tightly, to cells.

Continues page 3.

VIRALEZE™ is not approved for sale or supply in Australia.

DEP® PLATFORM

›› Positive DEP® cabazitaxel phase 2 interim results in advanced prostate cancer

Starpharma recently reported positive interim results for DEP® cabazitaxel from the advanced prostate cancer patient cohort of its phase 2 trial^. One or more encouraging efficacy signals were observed in 100% of patients assessed following treatment with DEP® cabazitaxel.

Responses included:

- 64% of patients with assessable tumour lesions saw prolonged stable disease and significant reductions in tumour size for up to 36 weeks
- 90% of patients with assessable PSA (Prostate Specific Antigen) tumour biomarker levels had a reduction in PSA, with more than half of these patients achieving a reduction in PSA of at least 50%
- 83% of patients with secondary bone disease exhibited either no progression or an improvement in these lesions
- 56% of patients who were evaluable for all three of these measures had responses to all three

These positive interim results, which compare favourably to conventional cabazitaxel Jevtana®, are particularly significant given all patients in this cohort had late-stage prostate cancer and had failed multiple anti-cancer treatments (including taxanes), in addition to surgeries and radiation, prior to entering the DEP® cabazitaxel trial.

The comparative efficacy of patients in the DEP® cabazitaxel trial, compared to Jevtana®, is summarised below. In comparing this data, it is important to recognise that the patients in the DEP® cabazitaxel trial were far more heavily pre-treated than those in the Jevtana® trial, summarised below. In the DEP® cabazitaxel trial, 56% of patients had received at least 2 prior regimens of chemotherapy and 24% had received 3 or more, whereas for Jevtana® only 16% of patients had received at least 2 prior regimens of chemotherapy. Heavy pre-treatment with prior chemotherapy would be expected to reduce efficacy.

Efficacy measure	DEP® cabazitaxel (20 mg/m²)	Jevtana®† (20 mg/m²)
PSA reduction ≥50%	52.4%	29.5%
Partial response#	18.2%	18.5%
Bone disease (Improved/Stable)	83.3%	Not reported

Continues page 2.

*[1]https://covidvax.live/location/vnm; ^Starpharma Pty Ltd ASX announcement, 25 Nov 2021, https://starpharma.com/news/636; 25 Enrolled participants for DEP® cabazitaxel, 3 patients were not evaluable for efficacy: Jevtana N=598; * Excludes hormonal therapies; # - Partial Response: ≥ 30% reduction in measurable target tumour size; † - Eisenberger, M., et al., 2017, 35(28):3198-206.*

INTERNAL DEP® - CLINICAL

›› Positive DEP® cabazitaxel phase 2 interim results in advanced prostate cancer

Continued from page 1.

Prostate cancer is the 2nd most common cancer in males.[2] DEP® cabazitaxel is a patented, detergent (polysorbate-80) free, nanoparticle version of the conventional cancer drug, Jevtana®, which is a leading oncology agent used to treat advanced prostate cancer. The conventional cabazitaxel formulation (Jevtana®) has two US FDA-mandated 'black box' warnings in relation to severe hypersensitivity, which is associated with polysorbate-80 in the formulation, and neutropenia.

Patients treated with DEP® cabazitaxel also experienced significantly less severe bone marrow toxicity (myelosuppression), significantly lower rates of severe neutropenia and no instances of neutropenic sepsis, which are all associated with conventional cabazitaxel (Jevtana®).

The absence of detergent-like polysorbate-80 in the DEP® cabazitaxel formulation eliminated the need for prophylactic corticosteroids and antihistamines, and no anaphylaxis or severe hypersensitivity reactions were observed. The avoidance of long-term steroid use is also attractive, particularly in prostate cancer patients where bone health can be a significant issue.

"The trial results to date for DEP® cabazitaxel in heavily pre-treated prostate cancer patients are highly encouraging and indicate the potential of the product compared to standard cabazitaxel. The anti-cancer activity, together with less myelosuppression than standard cabazitaxel and a generally well-tolerated safety profile, mean this novel form of dendrimer-enhanced cabazitaxel represents a useful option for prostate cancer patients, including in older patients in whom DEP® cabazitaxel has been particularly well tolerated."

- Professor Anthony Joshua, Study Investigator from the Kinghorn Cancer Centre in Sydney, with a focus in prostate cancer

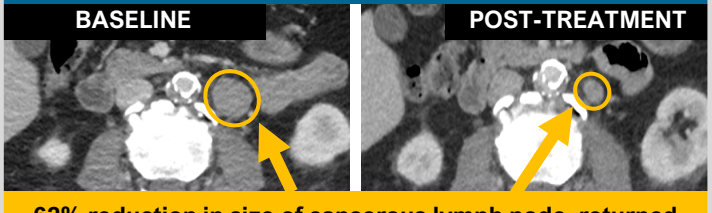
Clinical Case Study: DEP® cabazitaxel

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® 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, and thrombocytopenia.

CT Scans of Lymph Node metastasis



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

[2] *https://www.uicc.org/news/globocan-2020-new-global-cancer-data*

›› DEP® cabazitaxel continued

51 patients have now been recruited across all cancer types in the phase 2 DEP® cabazitaxel trial, which is being conducted at multiple sites in the UK and Australia. Recruitment of a small number of additional ovarian and gastro-oesophageal cancer patients continues following promising efficacy signals in both these tumours as well as prostate. Full results for the trial will be reported in the coming months.

A new patent in relation to DEP® cabazitaxel was granted by the US Patent and Trademark Office. This patent may be especially important, in the developing patent landscape for Jevtana® (cabazitaxel; Sanofi), to provide additional benefit and differentiation of DEP® cabazitaxel. This US patent covers a DEP® dendrimer conjugated to multiple cabazitaxel drug molecules via a particular releasable linker, with a patent term to 2039 and the potential for a further 5-year extension.

›› DEP® docetaxel | Phase 2 clinical program

65 patients have been recruited in the DEP® docetaxel clinical program (monotherapy and combination arms). The program continues to progress well with 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.

›› DEP® irinotecan | Phase 2 clinical program

The DEP® irinotecan clinical trial continues to progress well, with 61 patients now recruited, including patients with breast, colorectal, ovarian, pancreatic, lung and oesophageal cancer.

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.

DEP® irinotecan | Phase 1/2 combination arm

Based on the encouraging results with DEP® irinotecan monotherapy, and in parallel with ongoing phase 2 monotherapy investigations, Starpharma is progressing a phase 1/2 combination arm that will investigate DEP® irinotecan in combination with 5-FU + Leucovorin ('FOLFIRI').

FOLFIRI is a commonly used combination treatment regimen, particularly first-line, in colorectal cancer. Enrolment of patients in the DEP® irinotecan combination arm is expected to commence in the New Year.

INTERNAL DEP® - PRECLINICAL

Starpharma continues to advance a number of additional DEP® candidates toward the clinic, including DEP® gemcitabine. Key preclinical work is progressing well to facilitate DEP® gemcitabine's entry to a phase 1 clinical study. Development has also been undertaken for multiple DEP® candidates in the areas of radiopharmaceuticals and antibody drug conjugates (ADCs).

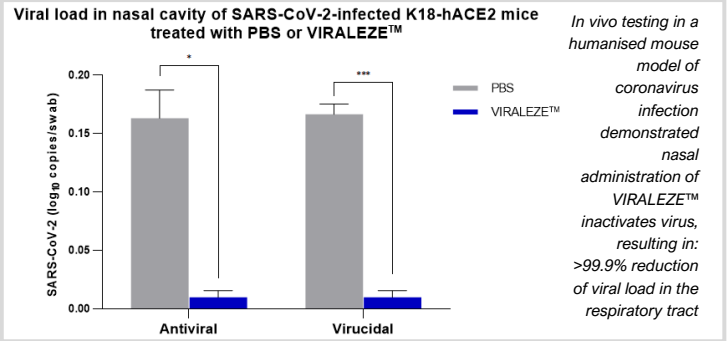
VIRALEZE™

›› VIRALEZE™ protects against SARS-CoV-2 in challenge model

Starpharma tested VIRALEZE™ in one of the few animal coronavirus challenge models endorsed by the World Health Organisation to accelerate the testing of vaccines and therapeutic agents for COVID-19. The rigorous coronavirus challenge study was conducted at The Scripps Research Institute in the US and showed that VIRALEZE™ administered nasally resulted in the following benefits:

- reduced viral load in the nasal cavity by >90%;
- reduced viral load in the lower respiratory tract (trachea, lungs) by >99.9%;
- significantly reduced pro-inflammatory cytokine production in VIRALEZE™-treated animals (compared to saline); and
- overall, led to a significant reduction in the extent and severity of SARS-CoV-2 replication and pathogenesis caused by SARS-CoV-2 infection via the nasal passages.

VIRALEZE™ significantly reduced SARS-CoV-2 viral load in the nasal cavity of treated animals by >90%, and these same animals remarkably had no infectious SARS-CoV-2 virus in either brain or liver. In contrast, all control animals had significant levels of virus in these organs.



In vivo testing in a humanised mouse model of coronavirus infection demonstrated nasal administration of VIRALEZE™ inactivates virus, resulting in: >99.9% reduction of viral load in the respiratory tract

The production of pro-inflammatory cytokines ("cytokine storm") in response to SARS-CoV-2 challenge, which can cause significant illness and death in humans after SARS-CoV-2 infection, was also significantly reduced in VIRALEZE™-treated animals compared to control animals.

The results of this VIRALEZE™ challenge study were published in a special issue of the international peer-reviewed journal, *Viruses*, titled, *Medical Interventions for Treatment and Prevention of SARS-CoV-2 Infections* (https://www.mdpi.com/1999-4915/13/8/1656).

In addition, data on SPL7013 and its virucidal activity in coronavirus SARS-CoV-2 was published in international journal, *Antiviral Research*. VIRALEZE™ was also featured in the October 2021 issue of *Nature Biotechnology*. SPL7013, the antiviral agent in VIRALEZE™, has a deep pedigree as an antiviral compound, with substantial published data on its potent, broad-spectrum antiviral activity, safety profile and protection in rigorous animal viral-challenge studies.

VIRALEZE™ well tolerated in clinical study

In August 2021, Starpharma announced the successful completion of a randomised double-blind, placebo-controlled, safety, tolerability, and pharmacokinetic study of VIRALEZE™ in healthy volunteers. The product was well tolerated with no notable or serious adverse events reported, and no participants discontinued product use. The study also confirmed that SPL7013 was not absorbed in the bloodstream following repeated nasal application.

VIRALEZE™ is not approved for sale or supply in Australia.

›› VIRALEZE™ active against Delta and other SARS-CoV-2 variants; Omicron testing planned

Continued from page 1.

The localised antiviral action of SPL7013 in the nose is another significant feature of VIRALEZE™. The level of virus in your nose once infected is particularly relevant for the Delta variant, where viral loads can be hundreds of times higher in the nasal cavity than they are with the original SARS-CoV-2 strain, resulting in increased transmissibility. With the Delta variant, viral loads remain extremely high, regardless of vaccination status.

Testing of SPL7013 against the Omicron variant is scheduled to occur at The Scripps Research Institute in the New Year.

›› VIRALEZE™ registered in Saudi Arabia, Vietnam, and New Zealand

Following on from the recent launches of VIRALEZE™ in Vietnam and Italy, VIRALEZE™ was recently registered in Saudi Arabia and New Zealand. The registration in Saudi Arabia is the first registration for VIRALEZE™ in the Middle East and is an important step for other countries in the region. Starpharma is advancing negotiations with a local distributor in Saudi Arabia and the GCC (Gulf Cooperation Council) region for VIRALEZE™, in addition to commercial discussions for distribution in Europe, Asia, and other regions. The product is available in certain markets online.

In the UK, Starpharma continues to liaise closely with the MHRA to address their requests and make the necessary changes in relation to promotional claims for VIRALEZE™ in packaging and promotional materials.

VIVAGEL® BV

›› Fleurstat BVgel featured in *Retail Pharmacy* publication

Leading industry publication, *Retail Pharmacy*, spoke with Dr Jeremy Paull, Starpharma's VP of Development and Regulatory Affairs, about the benefits of Fleurstat BVgel and to gain insight into how the unique bacterial vaginosis (BV) product works to relieve symptoms and how it may help women with BV.

Above: Retail Pharmacy article featuring Fleurstat BVgel, September 2021.

Starpharma and Mundipharma teams continue to progress regulatory activities for VivaGel® BV in a range of countries, as well as marketing activities with key opinion leaders in Europe. VivaGel® BV is currently registered in more than 45 countries.

FLEURSTAT BVGEL (VivaGel® 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).

PARTNERED DEP®

›› AZD0466 featured at ASH Meeting

AstraZeneca presented two scientific poster presentations at the prestigious American Society of Hematology (ASH) Annual Meeting in December 2021, showcasing their first DEP® oncology product, AZD0466.

AZD0466 is a novel drug-dendrimer conjugate of the highly potent Bcl-2/xL dual inhibitor AZD4320, developed under Starpharma's multi-product DEP® licence with AstraZeneca, and is currently in a global multi-centre phase 1/2 clinical trial. AZD0466 is a dendrimer nanoparticle formulation, which has resulted in an improved therapeutic index and enabled progression of this promising dual Bcl-2/xL inhibitor into clinical development. (Patterson et al, Nature Communications Biology 2021).

AstraZeneca's AZD0466 poster at ASH is titled 'NIMBLE: A Phase 1/2 Study of AZD0466 Monotherapy or in Combination in Patients with Advanced Haematological Malignancies'. It provides an overview of the phase 1/2 clinical study of AZD0466 in advanced hematological malignancies (blood cancers), which is actively enrolling patients at sites in the USA, South Korea and Australia, with plans to also recruit in Europe as part of the program's global expansion announced in February 2021. The second poster highlights a study of AZD0466 in combination with acalabrutinib to overcome therapeutic resistance in aggressive venetoclax-resistant mantle cell lymphoma (MCL) models conducted at the MD Anderson Cancer Center.

›› DEP® partnerships

In addition to its programs with AstraZeneca, Starpharma is progressing its other partnered programs, including its Antibody Drug Conjugate (ADC) program with Merck & Co Inc., DEP® anti-infective program with Chase Sun, and other named and unnamed partners. Additionally, further partnered DEP® programs, including in the area of radiopharmaceuticals, are at an advanced stage of negotiation.

AstraZeneca MSD 红日药业 CHASE SUN

IN THE MEDIA

›› VIRALEZE™ media launch in Vietnam

Vietnam national TV network ANTV and Hanoi TV reported on the media launch of VIRALEZE™ in Vietnam. The launch was also featured in a number of news articles.

›› DEP® cabazitaxel interim findings

Starpharma's recent findings from the prostate cancer cohort of its phase 2 trial of DEP® cabazitaxel were featured in several media outlets, including Gene Online, The British Herald, and Targeted Oncology.

›› *Australia Today* podcast

Steve Price interviewed Starpharma CEO Dr Jackie Fairley for his daily podcast *Australia Today* about VIRALEZE™.

OUTLOOK

›› VIRALEZE™

- Further roll-out of VIRALEZE™ Antiviral Nasal Spray in registered regions
- Further VIRALEZE™ registrations in other regions
- Further VIRALEZE™ launches in other regions
- Further distribution & marketing arrangements with commercial partners
- Continued testing of SPL7013 against SARS-CoV-2 variants & other respiratory viruses

›› VIVAGEL®

- Commercial roll-out of VivaGel® BV in Europe, Asia & other markets
- Further regulatory approvals & launches for VivaGel® BV, building revenues – milestones & sales/royalties

- VivaGel® BV - FDA review process
- Further VivaGel® BV licences
- VivaGel® condom approvals/launch in additional regions

- Further development/co-development of SPL7013

›› DEP®

- Progress and completion of DEP® docetaxel, DEP® cabazitaxel & DEP® 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
- Progress existing partnered DEP® programs, including with Merck & Co., Inc., Chase Sun, and other partners
- Execute/expand new DEP® partnerships/agreements
- Advance DEP® radiopharmaceuticals, DEP® ADCs & other DEP® candidates
- Advance value-adding DEP® combinations in clinic & other DEP® products

Starpharma Holdings Limited
(ASX:SPL; OTCQX:SPHRY)
ABN 20 078 532 180
4-6 Southampton Crescent
Abbotsford
Vic 3067
+61 3 8532 2700
www.starpharma.com

Nigel Baade
CFO/Company Secretary
+61 3 8532 2704
investor.relations@starpharma.com

Media: Grant Titmus
Sumit Media
+61 419 388 161
grant@sumitmedia.com.au