

### Australian Microcap Conference Presentation

**Melbourne, Australia; 29 October 2024: Starpharma** (ASX: SPL, OTCQX: SPHRY), an innovative biotechnology company with two decades of experience in advancing dendrimer technology from the lab to the patient, provides a copy of the presentation delivered by CEO Cheryl Maley at the Australian Microcap Investment Conference in Melbourne today.

#### About Starpharma

Starpharma ASX: SPL, OTCQX: SPHRY) is an innovative biotechnology company with two decades of experience in advancing dendrimer technology from the lab to the patient. Our mission is to help patients with significant illnesses, such as cancer, achieve improved health outcomes and quality of life through the application of our unique dendrimer technology.

Dendrimers are precise, synthetically manufactured, nanoscale molecules. Their unique properties—including their size, structure, high degree of branching, polyvalency, and water solubility—are advantageous in medical and pharmaceutical applications.

Starpharma's portfolio of dendrimer-based products includes three clinical-stage DEP<sup>®</sup> (dendrimer enhanced product) assets, preclinical radiopharmaceutical assets, research collaborations, and three commercially marketed over-the-counter (OTC) products.

For more information about Starpharma, visit www.starpharma.com or connect with Starpharma on LinkedIn.

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#### Starpharma Holdings Limited

Cheryl Maley, Chief Executive Officer Justin Cahill, 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 Chair, Mr Rob Thomas.

#### 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.





## Delivering Meaningful Patient Outcomes with Advanced Dendrimer Technology

Microcap Investment Conference | 29 October 2024 CEO, Cheryl Maley

### **Disclaimer and Forward-Looking Statements**

This presentation contains forward-looking statements that involve risks and uncertainties. Although we believe that the expectations reflected in the forward-looking statements are reasonable at this time, Starpharma can give no assurance that these expectations will prove to be correct. Actual results could differ *materially* from those anticipated. Reasons may include risks associated with drug development and manufacture, risks inherent in the regulatory processes, delays in clinical trials, risks associated with patent protection, future capital needs or other general risks or factors.



## Our Mission

"To help patients with significant illnesses, such as cancer, achieve improved health outcomes and quality of life through the application of our unique dendrimer technology."



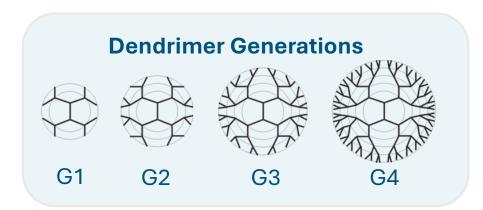
Starpharma is an Innovative Australian Biotechnology Company with 20 Years of Experience in Advancing Dendrimer Technology from the Lab to the Patient

Ticker Symbol	ASX: SPL OTCQX: SPHRY
Industry/Sector	Healthcare, Pharmaceuticals, Biotechnology
Market Capitalisation	~A\$40M
Share Price	~A\$0.10
Total Ordinary Shares On Issue	417M
Cash Balance (30 June 2024)	A\$23.4M Excludes the FY25 R&DTI receipt of \$5.5M (Sept 2024)



## Starpharma – Founders and Experts in Dendrimer Drug Delivery

Dendrimers are highly branched (tree-like) macromolecules with a well-defined, 3D structure



- Concentric layers of lysine monomers
- Drugs, payloads, and/or targeting moieties attached via tailored linker strategies to achieve enhanced tumour targeting and pharmacokinetics (PK)
- Easily scalable, precisely manufactured, and Good Manufacturing Practice (GMP) certified



#### **Clinically validated technology**

More than 350 patients treated with DEP<sup>®</sup> across multiple clinical programs.



#### Strong intellectual property position

19 active patent families with over 150 granted patents and more than 40 patent applications pending.



**Uniquely experienced team** Expertise in dendrimer science. Staff of ~40 people.



#### Pipeline of products and partnerships

Portfolio includes clinical-stage assets, early-stage research, partnerships, and commercial products.



# Starpharma's Proprietary DEP® Technology Has the Potential to Address Limitations of a Wide Range of Diagnostics and Therapies



**The Problem** 

Despite advancements in medical diagnosis and treatment, many challenges remain. These include the risk of misdiagnosis, poor drug solubility, and toxic excipients in formulations, all of which can contribute to variability in patient outcomes, unwanted side effects, and a reduced quality of life for patients.

### DEP® Nano molecule DEP® dendrimer Drug/Payload (e.g., Cytotoxic or Radioisotope) Linker / Chelator PEG Targeting moiety

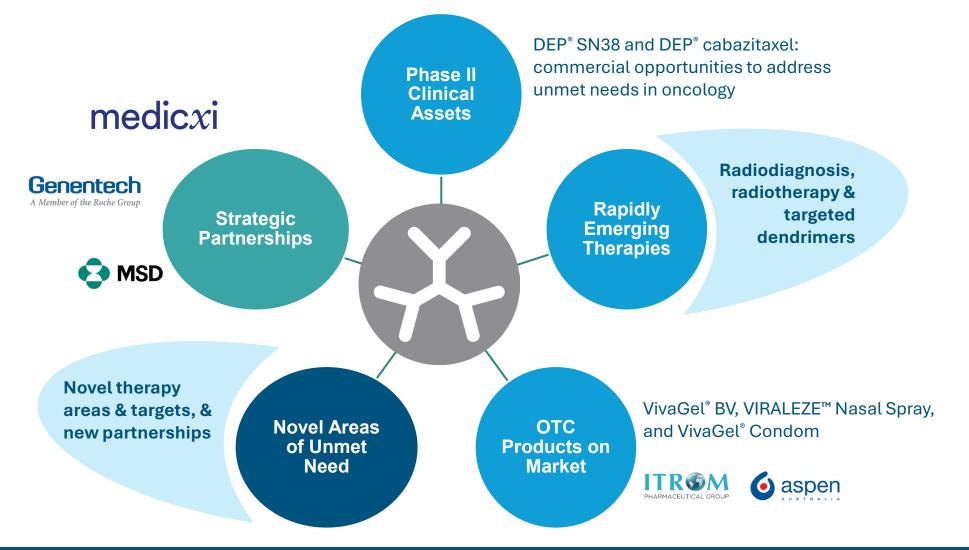


### **The Solution**

By applying Starpharma's DEP® technology in developing diagnostics and treatments, we aim to effectively address these limitations. With our technology, we can optimise formulations, enhancing drug solubility, and minimising toxic excipients, ultimately leading to better patient outcomes and an improved quality of life.



Starpharma's DEP<sup>®</sup> Platform Technology: Versatile and Multifunctional for Delivery of Therapeutics and Diagnostics *Multiple Revenue Streams: Maximising Shareholder Returns* 



starpharma

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### Recent Strategic Review Confirmed Three Key Focus Areas to Optimise Shareholder Returns

## Maximise DEP<sup>®</sup> asset value

01

Prioritising DEP<sup>®</sup> SN38 and DEP<sup>®</sup> cabazitaxel

02

Accelerate early asset development

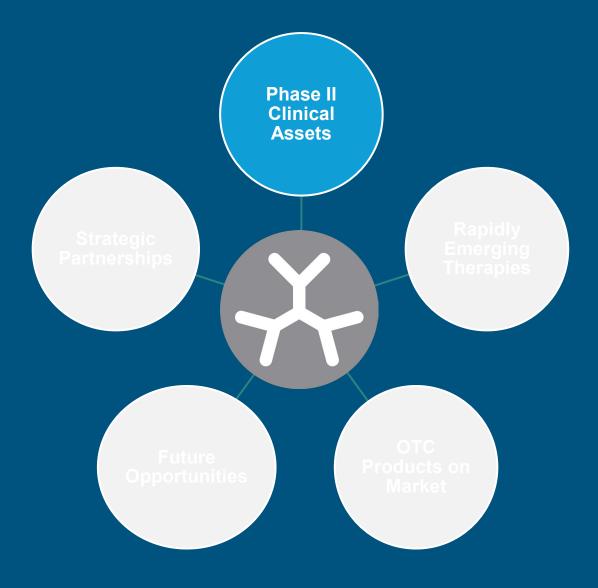
Advancing DEP<sup>®</sup> radiopharmaceuticals and partnerships 03

Build long-term sustainability

Increasing revenue, strengthening IP position, and fostering a high-performance culture

starpharma

## Maximise DEP<sup>®</sup> Asset Value





## Starpharma's Oncology Portfolio: Addressing Areas of High Unmet Clinical Need

### Three Clinical Assets and Three Pipeline Assets

Product	Target indication	Research	Preclinical	Phase I	Phase II	Strategy	
DEP <sup>®</sup> SN38	Ovarian and colorectal	Phase II results reported				License/co-develop – ovarian, colorectal	
DEP <sup>®</sup> cabazitaxel	Prostate and ovarian	Phase II results reported				License – prostate, ovarian	
DEP <sup>®</sup> HER2 radiodiagnostic	Diagnostic					Optimise and accelerate to clinical	
DEP <sup>®</sup> HER2 radiotherapeutic	Solid cancers					Advance to clinical	
DEP <sup>®</sup> HER2 ADC	Solid cancers					Advance to preclinical	
DEP <sup>®</sup> docetaxel	Pancreatic and other cancers	Phase II results reported			Lower priority		

## Every Moment Matters When Advanced Cancers Lead to Increased Mortality Risks

Colorectal Cancer (colon cancer or bowel cancer)



- 3<sup>rd</sup> most common cancer worldwide and 2<sup>nd</sup> leading cause of cancer-related deaths worldwide.
- Often diagnosed at advanced stages when treatment options are limited.

#### **Ovarian Cancer**

- 300,000 new cases each year and almost as many deaths.
- Resistance to platinum-based chemotherapy is a key challenge.
- PROC have a median overall survival of approximately 12-18 months.







## DEP® SN38: Starpharma's Lead Clinical Candidate for Treatment of Advanced Colorectal Cancer and Platinum-Resistant/Refractory Ovarian Cancer

DEP® SN38 is a patented anticancer drug developed by Starpharma. It contains 'SN38', the active metabolite of irinotecan, a well-known cancer drug for treating colorectal cancer.



### Limitations of Irinotecan:

- Active moiety, SN38, cannot be delivered directly because it is toxic and insoluble.
- Irinotecan needs to be converted in the liver to SN38, which leads to significant variability in effectiveness from patient to patient, and results in excretion of toxic by-products into the gut.
- Significant gastrointestinal side effects include severe diarrhea (10 or more stools per day), nausea, and vomiting.



### Solution Provided by DEP<sup>®</sup> SN38:

- DEP<sup>®</sup> SN38 achieves solubilisation and allows for direct delivery of SN38, avoiding the need for metabolic conversion in the liver.
- As a result, DEP<sup>®</sup> SN38 achieves greater tumour targeting while significantly reducing severe gastrointestinal side effects.
- Platinum-resistant ovarian cancer and/or advanced colorectal cancer are both areas of unmet clinical need.



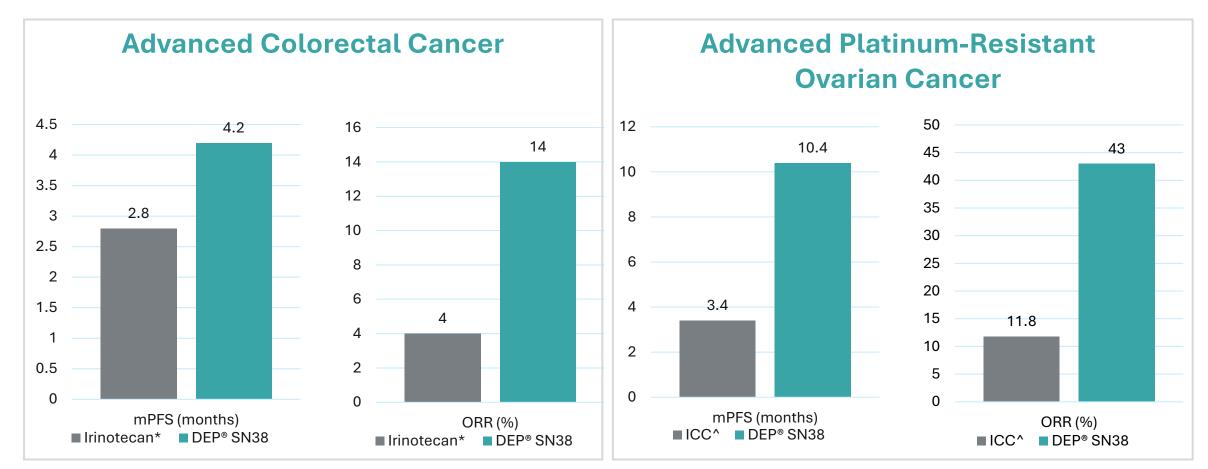
## DEP<sup>®</sup> SN38 Phase I/II Trial Patients – Advanced, Heavily Pre-treated, and Most CRC Patients had Progressed Following Prior Treatment with Irinotecan

ASELINE CHARACTERISTICS		COLORECTAL	OVARIAN	PANCREATIC	BREAST	OTHER <sup>1</sup>	TOTAL
Subjects enrolled (n, %)		55 (48%)	23 (20%)	15 (13%)	8 (7%)	13 (11%)	114 (100%)
Subjects ongoing (n, %)		0 (0%)	1 (4%)	0 (0%)	0 (0%)	0 (0%)	1 (1%)
Age (years)	Median (range)	59 (31-78)	64 (42-74)	65 (48-76)	53 (42-66)	60 (38-73)	61 (31-78)
	Male	24 (44%)	0	8 (53%)	0	9 (69%)	41 (36%)
Sex (n, %)	Female	31 (56%)	23 (100%)	7 (47%)	8 (100%)	4 (31%)	73 (64%)
	0	23 (42%)	6 (26%)	6 (40%)	2 (25%)	-	40 (35%)
ECOG PS	1	32 (58%)	17 (74%)	9 (60%)	6 (75%)	2	74 (65%)
	III	2 (4%)	4 (17%)	0 (0%)	0 (0%)	2 (15%)	8 (7%)
Stage at diagnosis	IV	53 (96%)	19 (83%)	15 (100%)	8 (100%)	11 (85%)	106 (93%)
	Irinotecan	54 (98%)	0 (0%)	11 (73%)	0 (0%)	3 (23%)	68 (60%)
Prior systemic therapy (n, %)	Platinum	29 (53%)	23 (100%)	9 (60%)	0 (0%)	12 (92%)	73 (64%)
(11, 70)	Taxanes	0 (0%)	23 (100%)	2 (13%)	7 (88%)	9 (69%)	41 (36%)
Prior lines of therapy	Median (range)	4 (2-9)	6 (3 to 9)	2 (2 to 5)	7 (3 to 12)	3 (1 to 6)	4 (1 to 12)



## DEP<sup>®</sup> SN38 Phase II Study Shows Favourable Efficacy Data in Late-Stage Patients

### **Results Presented at the 2024 ASCO Annual Meeting**



Data for DEP® SN38 in combination with 5-FU/LV.

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Full Phase II results reported in ASX Announcement dated 27 May 2024;

**starpharma** \*From published data on irinotecan in combination with 5-FU/LV, Tournigand et al., *Clin Oncol*, 2023, 41(19):3469-3477.

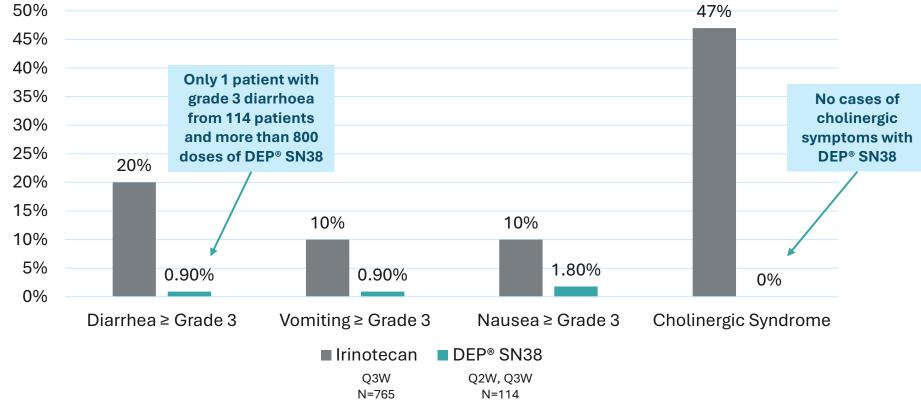
^From published data on ICC (investigator chemotherapy of choice) (pegylated liposomal doxorubicin, paclitaxel, or topotecan), Pujade-Lauraine E, et al., *J Clin Oncol*, 2014, 32(13):1302-1308.

ANNUAL MEETING

### DEP® SN38 Well-tolerated with Mostly Mild/Moderate Gastrointestinal AEs, No Cholinergic Toxicity Results Presented at the 2024 ASCO Annual Meeting



Gastrointestinal Toxicity Profile Significantly Improved with DEP® SN38 Treatment, Compared to Published Data on Irinotecan\*



## Starpharma's DEP<sup>®</sup> Technology is Designed to Improve Patient Outcomes with Enhanced Drug Performance: Better Efficacy and Reduced Side Effects

### Key Benefits of Starpharma's DEP® Technology Demonstrated in Ph II Clinical Studies



Improved Treatment Effectiveness with Better Drug Targeting and Prolonged Drug Activity



Favourable Drug Distribution, Metabolism and Excretion (Pharmacokinetics and Bioavailability)



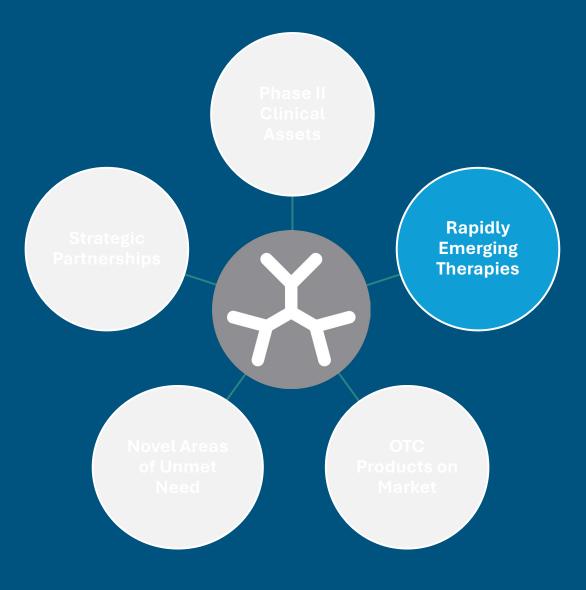
Reduced Side Effects Leading to a Better Treatment Experience for Patients



Applicable to a Wide Range of Therapeutic Areas, Treatment Modalities & Applications, Including Radiotheranostics, ADCs & Drug Rescue



## Accelerate Early Asset Development



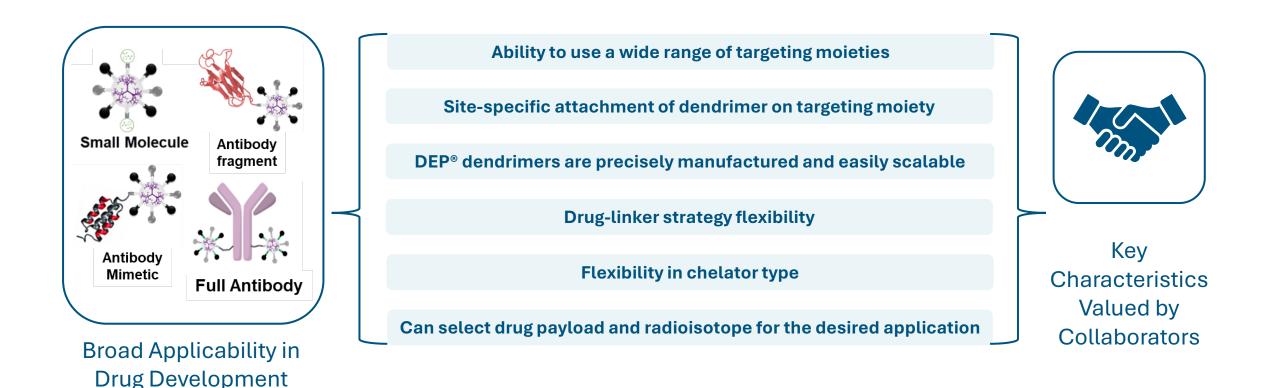


## Starpharma's Oncology Portfolio: Addressing Areas of High Unmet Clinical Need

### Three Clinical Assets and Three Pipeline Assets

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## Benefits of Starpharma's DEP® Platform Technology Extend to Radiopharmaceuticals



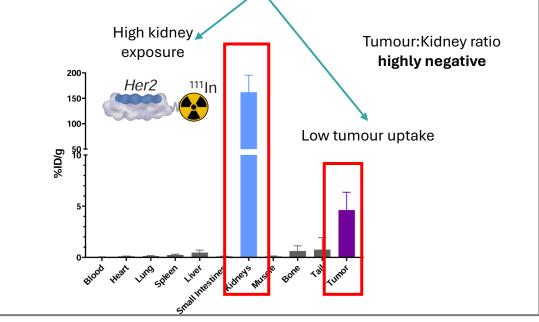


## Addressing the Biodistribution Challenges of Current Approaches with DEP<sup>®</sup> Radiotheranostics



### Biodistribution Challenges with Current Approaches:

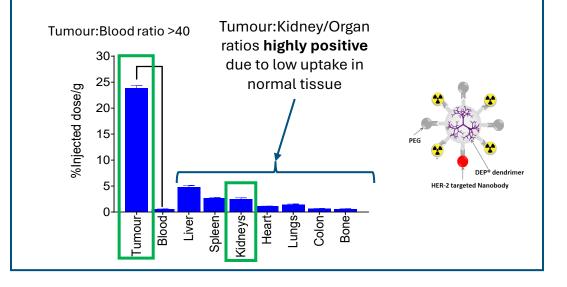
Rapid kidney clearance can lead to low tumour uptake and imaging contrast issues, as well as a potential risk of off-target organ toxicity.





## Starpharma's DEP<sup>®</sup> Technology Solution:

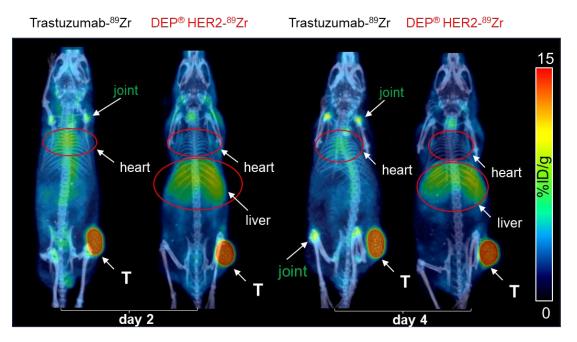
DEP<sup>®</sup> is designed for optimal biodistribution to limit kidney radiation, ensure rapid tumor uptake with fast clearance, enhance tissue contrast, and minimise offtarget toxicity.





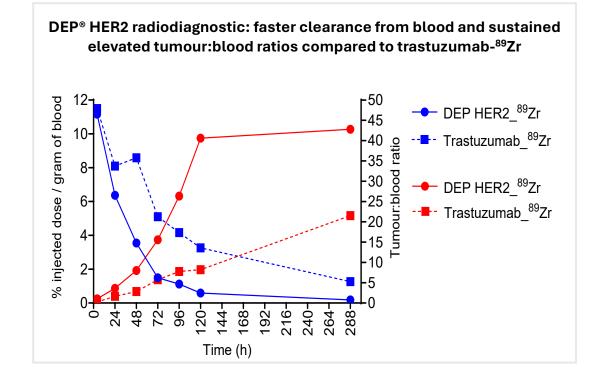
LHS Image from Lizak et al, 2024, SNMMI presentation – DLL3 Radio-DARPin in tumor mouse model

## DEP<sup>®</sup> HER2 Radiodiagnostic Shows Promise with Excellent Imaging Contrast Between Tumour and Normal Tissue



Maximum intensity projection (MIP) PET-CT images of BT474 HER2<sup>+</sup> tumour-bearing mice dosed with either DEP<sup>®</sup> HER2-<sup>89</sup>Zr or trastuzumab-<sup>89</sup>Zr

Radio-conjugates administered at t=0 Representative mice shown at Day 2 (left side) or Day 4 (right side) after injection Scale bar (% ID/g) is shown to the right



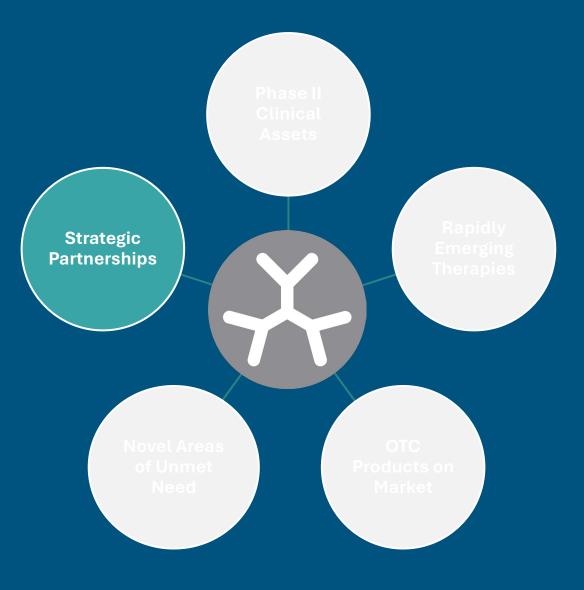


### Significant Commercial Activity in Novel Areas Continues Radiopharmaceuticals Have Seen Over \$12 Billion in Deals During 2023-24



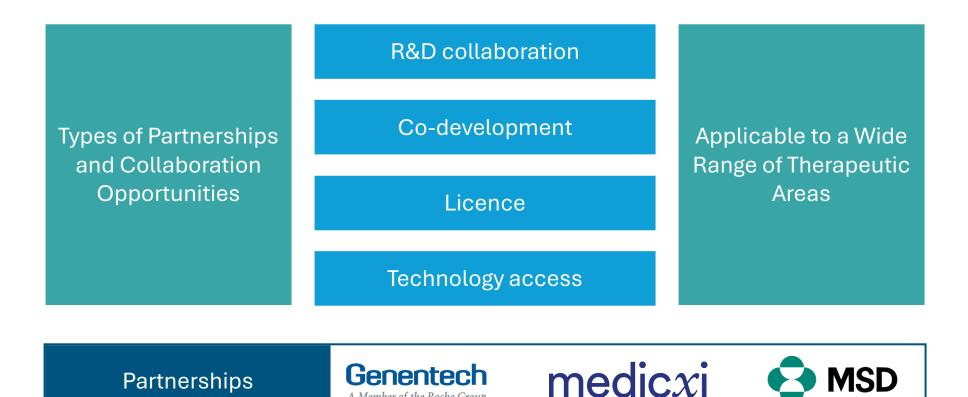


## Accelerate Early Asset Development





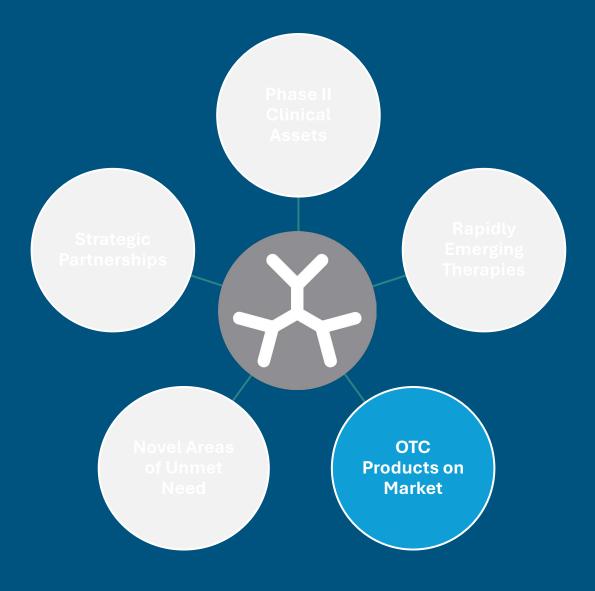
## **Extensive Partnership Experience, Broad DEP<sup>®</sup> Application Opportunity and a Flexible Approach to Collaboration**



A Member of the Roche Group



## Build Long-term Sustainability





## Novel Products In Market Generating Revenue: VivaGel<sup>®</sup> BV and Viraleze<sup>™</sup> Nasal Spray

VivaGel<sup>®</sup> BV – a non-antibiotic topical gel for the treatment of bacterial vaginosis (BV) and prevention of recurrent BV

• Registered in more than 40 jurisdictions, including in the UK, Europe, Southeast Asia, South Africa, Australia and New Zealand.



Viraleze<sup>™</sup> - a topical antiviral barrier nasal spray for colds and respiratory viruses, including coronaviruses

• Registered in more than 35 jurisdictions\*, including in Europe, the UK, and Asia.





## Well Positioned to Accelerate Product Pipeline and Strategic Growth Initiatives

3-Year Summary	FY24 \$M	FY23 \$M	FY22 \$M
Revenue and other income	9.8	4.3	5.2
Loss for the period	(8.2)	(15.6)	(16.2)
Net operating cash outflows	(7.0)	(14.3)	(13.2)

### **Multiple Revenue Streams**

- Licenses and Milestone Payments
- Marketed Products: VivaGel<sup>®</sup> BV and Viraleze<sup>™</sup>
- R&D Income

### Cash at 30 June 2024: \$23.4M\*

8 quarters cash on hand per June 2024 quarter end 4C

\*Excludes the FY24 R&DTI refund of A\$ 5.5M received in Sept 2024



### **Starpharma Investment Highlights**

Over 20 years of experience in advancing dendrimer technology from the lab to the patient.

> ✓ Clinical and commercial validation of platform technology.





### **3 Clear Strategic Priorities**

1) Maximising DEP<sup>®</sup> asset value, 2) Accelerating early asset development, and 3) Building long-term sustainability

#### **3 Phase II Clinical Assets**

Phase II results reported for dendrimer-based chemotherapeutics with global potential.



### **3 Novel Assets in Development**

Pipeline of targeted radiopharmaceuticals and DEP<sup>®</sup> ADCs addressing unmet needs in oncology.

#### **3 Commercial Products**

Dendrimer-based OTC products targeting unmet needs in infectious diseases and women's health.

### **3 Strategic Partnerships**

Collaborations with globally successful companies targeting novel areas in oncology.





## Thank you.

#### **Investor Relations**

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