



PeptiDream (TSE : 4587)

Corporate Overview

October 2024

Forward-Looking Statements



This presentation contains forward-looking statements. These forward-looking statements are current plans, forecasts, assumptions and strategies based on currently available information. There are various inherent risks as well as uncertainties involved. The actual results of business performance may differ from those forecasts due to various factors.

These factors include, but are not limited to: (1) risks of delays, interruptions or failures associated with drug discovery and development; (2) risks of unexpected program disruptions or terminations due to changes in client policies; (3) risks associated with manufacturing products and the procurement of raw materials; (4) the impact of reduced competitiveness due to the competitors and competing technologies; (5) declining product sales capabilities; (6) adverse rulings in infringements or significant litigation against our Group's intellectual property rights; (7) adverse changes in economic conditions and related laws and regulations; and (8) fluctuations in interest rates and currency exchange rates.

The information in this material with respect to drugs (including those under development) is not intended to provide advertising or medical advice.

This material is intended to provide information on our Group's business and is not intended to solicit investment in securities.

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The Largest Biotech Company in Japan

- The PeptiDream Group is a drug discovery company (**PeptiDream**) with a vertically integrated radiopharmaceutical company (**PDRadiopharma**) focused on the discovery, development, and commercialization of peptide-based therapeutics, peptide-drug conjugates, and radiopharmaceuticals (*radiotherapeutics/radiodiagnostics*)
- Combined company has 750+ employees, spanning discovery, development, manufacturing, regulatory, and sales in Japan
- Growing revenue and profitability since 2011



The Global Leader in the Discovery of Peptide Therapeutics

- **PeptiDream** (*established in 2006*) is largely credited with establishing the macrocyclic peptide field – high global reputation across the pharma industry.
- Collaborations with the majority of the worlds pharmaceutical companies



Leading Targeted-radiopharmaceutical Position in Japan

- PDRadiopharma (*established in 1968*) is one of two radiopharmaceutical companies licensed to operate in Japan (*currently sells 8 radiotherapeutic and 21 radiodiagnostic products in Japan*)
- Ideally positioned to capture a large share of the radiopharmaceutical field in Japan, while contributing through partnerships globally



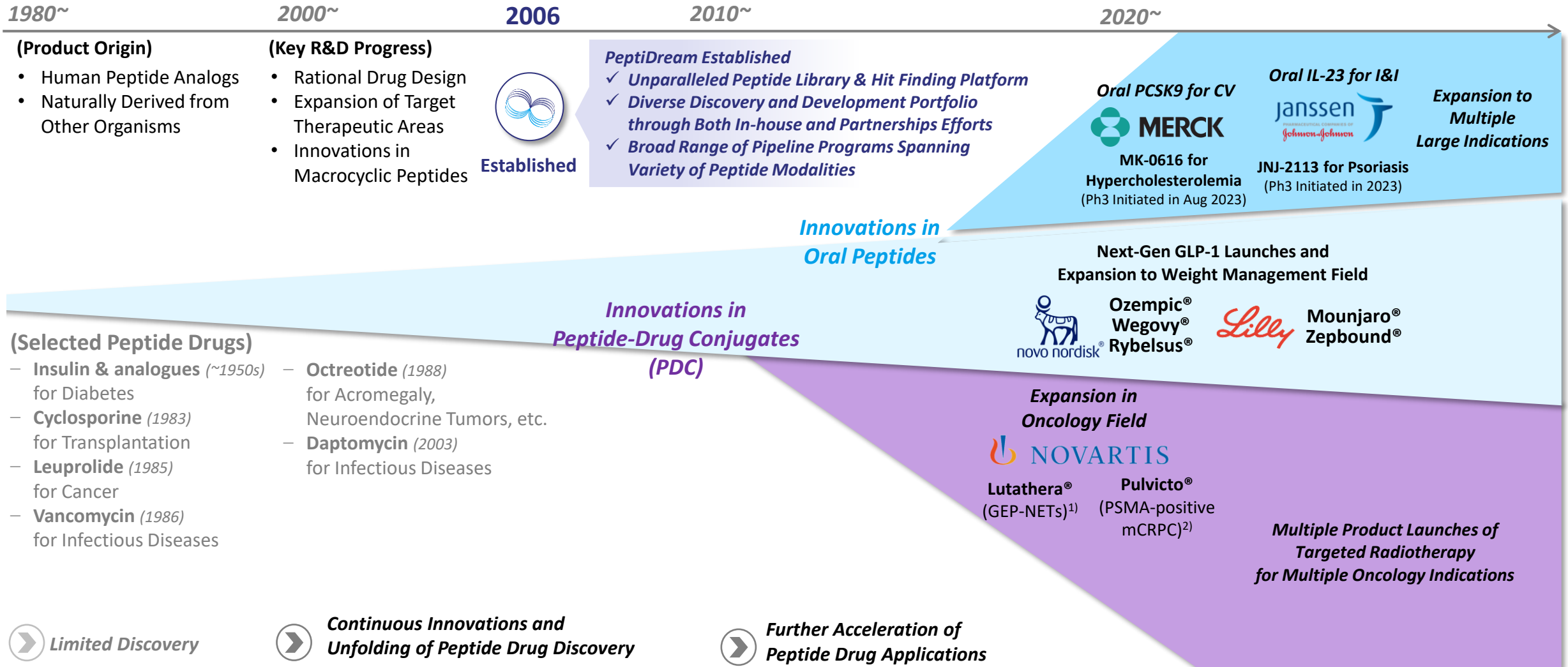
PeptiDream
PDRadiopharma

TSE Prime: 4587



Peptide Therapeutics – Next Generation Modality

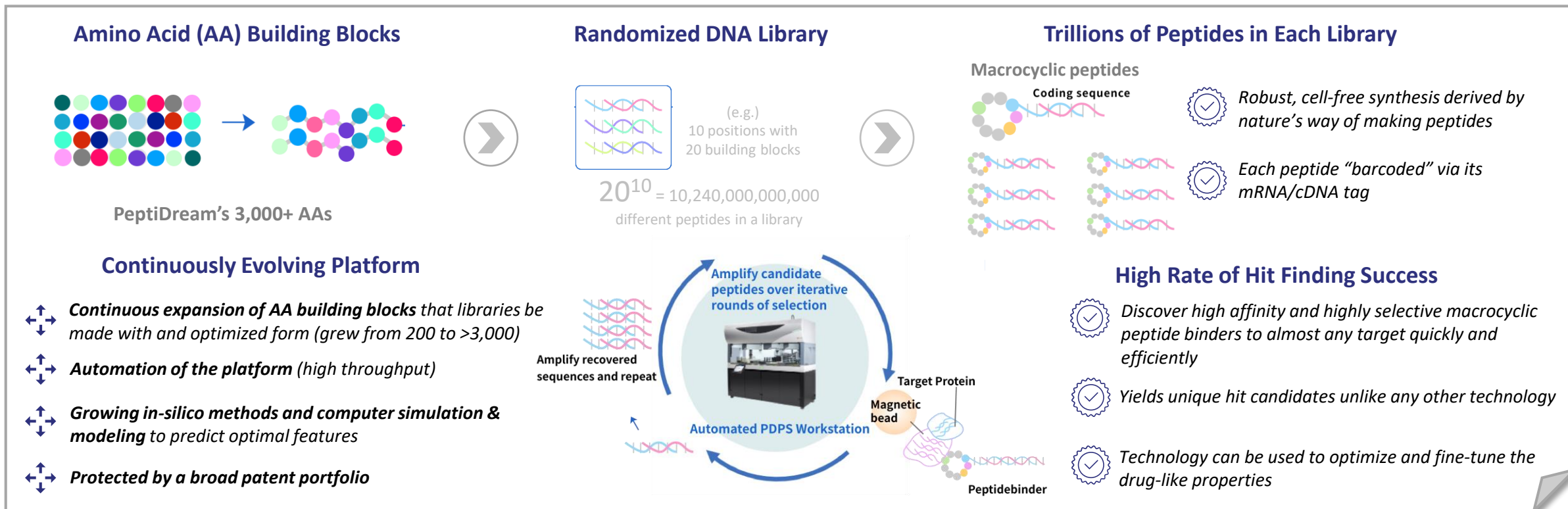
Evolution of Peptide Drug Discovery



Note: 1) GEP-NETs: Gastroenteropancreatic-neuroendocrine tumors, 2) mCRPC: metastatic Castration-resistant Prostate Cancer
Merck & Co., Inc., Rahway, NJ, USA

PeptiDream – The Epicenter of Peptide Drug Discovery

PeptiDream's Evolving Proprietary PDPS Drug Discovery Platform



(2006)



Few big pharma engaged in peptide drug discovery

(Today)



Every big pharma engaged in peptide drug discovery

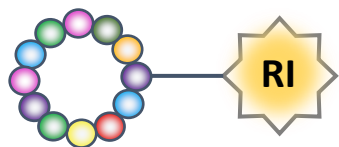
PeptiDream has played a significant role in advancing Peptide Drug Discovery

Our Key Areas of Focus

Radiopharmaceuticals (RI) Targeted Radio Therapy

Cancer Targeting Peptide Ligand + Radioisotope (RI)

*Tumor
Targeting
Peptide*



Diagnostic Radionuclides

¹⁸F
Fluorine

⁶⁸Ga
Gallium

⁶⁴Cu
Copper

Therapeutic Radionuclides

¹⁷⁷Lu
Lutetium

⁹⁰Y
Yttrium

²²⁵Ac
Actinium

²¹¹At
Astatine

²¹²Pb
Lead

*Combining the powerful tumor targeting ability of
macrocyclic peptides with the cell killing ability of RI*

*Focused on Rapidly Growing a Deep Pipeline of Targeted
Therapeutics and Diagnostics*

Non-Radiopharmaceuticals

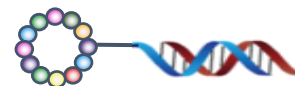
Peptide Therapeutics



*Broad range of disease and
therapeutic applications*

Peptide Drug Conjugates (PDCs)

Tissue Targeting Peptide



Oligonucleotides

Tumor Targeting Peptide



Small Molecules

Target Binding Peptide



Others

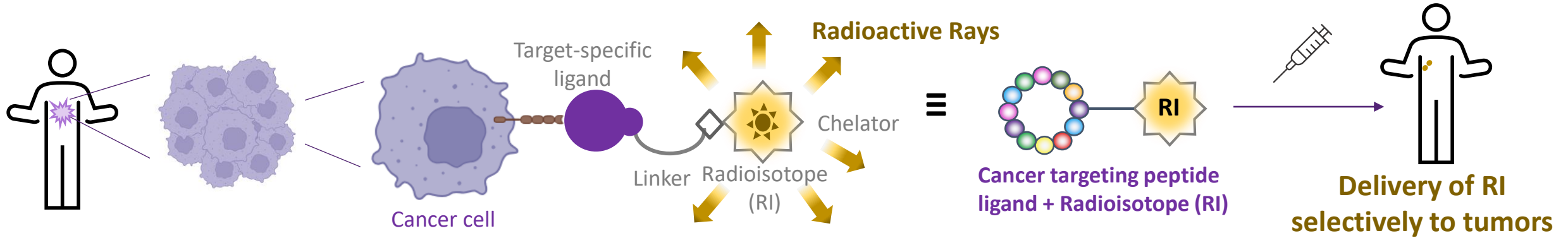
Peptide Targeted delivery of various non-RI payloads

*Growing the Next-Generation of Oral Peptide Therapeutics
and Non-RI Peptide Drug Conjugates*

Radiopharmaceuticals

Targeted Radiotherapies – Revolutionizing How We Treat Cancer

Concept of Targeted Radiotherapy




Radioisotope: Alpha (α) and Beta (β) Isotopes

Radioisotopes kill cancer cells via DNA strand breaks

α emitters

²²⁵Ac Actinium ²¹¹At Astatine ²¹²Pb Lead

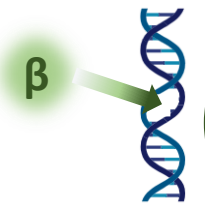


✓ Higher LET* (80-100 kEv/ μ m) (double strand breaks)

✓ Shorter range (20-80 μ m)

β emitters

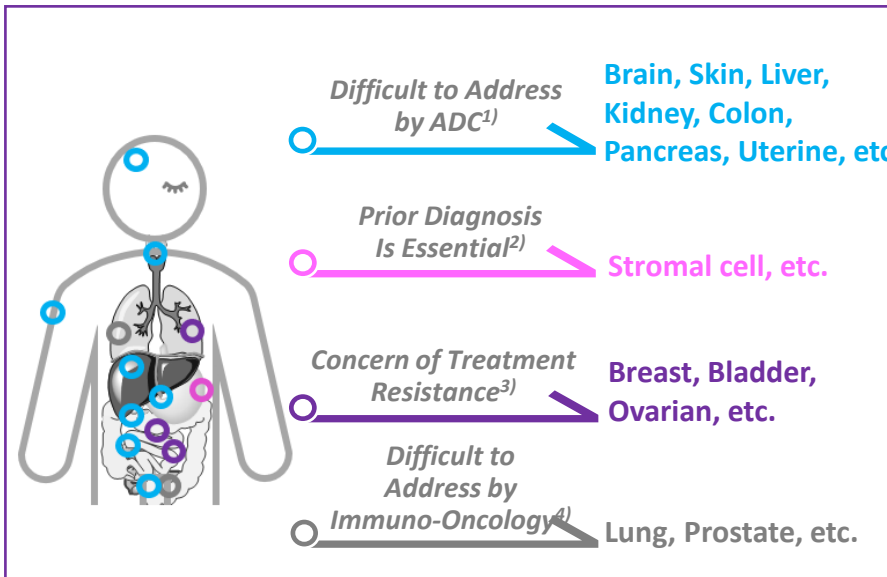
¹⁷⁷Lu Lutetium ⁹⁰Y Yttrium



✓ Lower LET (0.2-0.5 kEv/ μ m) (single strand breaks)

✓ Longer range (2-11.5mm)

Advantages of Targeted Radiotherapy

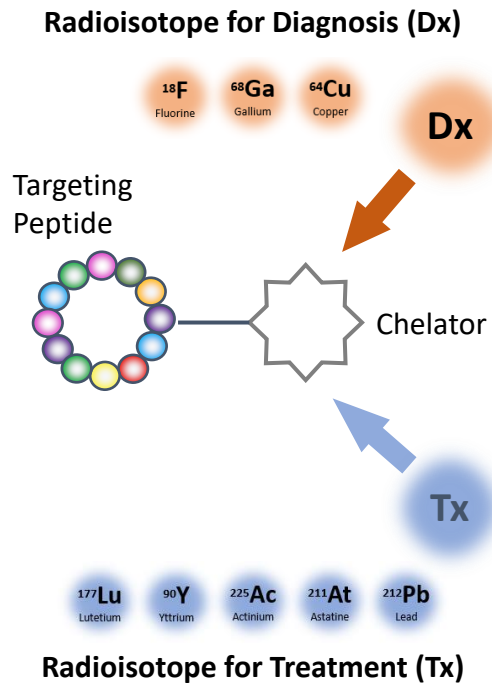


Why Peptide As Ligand

- ✓ High Affinity and Specificity for Target Receptor
- ✓ Favorable Pharmacokinetics (PK) Profile
- ✓ Fast Renal Clearance
- ✓ Lower Immunogenicity and Toxicity
- ✓ Versatility and Ease of Synthesis/ Modification

Power of Combining Diagnostic and Therapeutic

Theranostics (Thx)

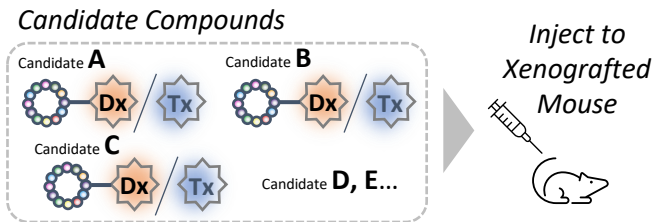


The same peptide-conjugate can be utilized for both diagnosis and treatment by just changing the RI

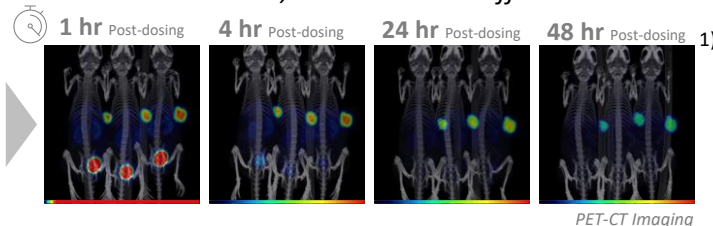
RI-Specific Quickest Path to Product Development

Pre-Clinical Development

“Rapid Validation”



Evaluate Clear Detection of Tumor, Rapid Renal/Blood Clearance, Specific Distribution in Tumor, and Anti-tumor Effects

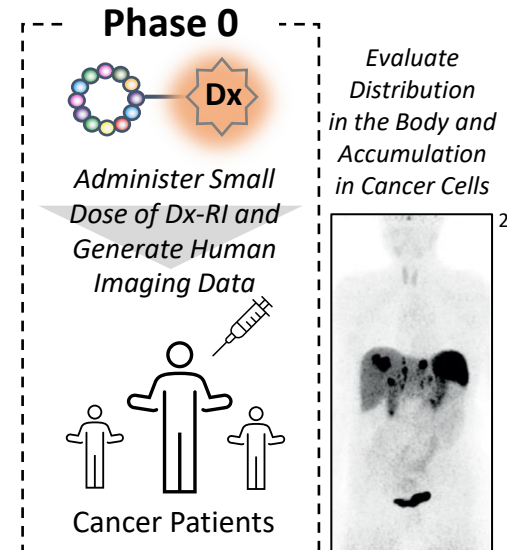


Rapidly establish tumor targeting and in vivo efficacy of best peptide candidate in animal tumor models



Human ePoC

“De-risk”

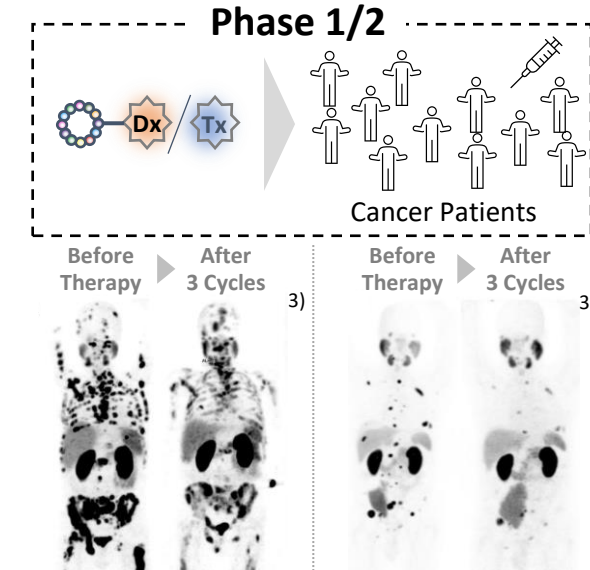


Simpler mechanism of Tx-RI, confirmation of Dx-RI's delivery to the cancer lesion increases the certainty of drug efficacy and safety



Clinical Development

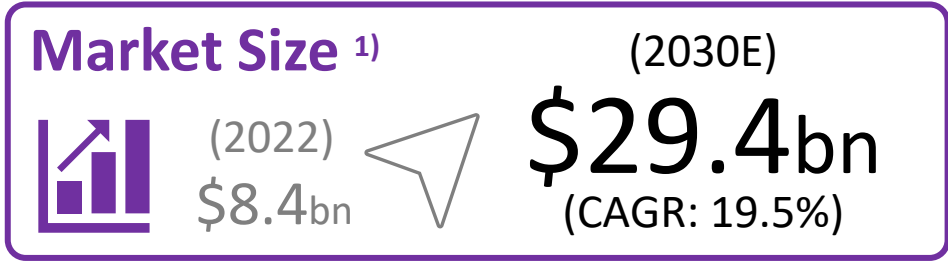
“Accelerate”



More efficiently design Ph1/Ph2 studies by leveraging Ph0 results

Unique Theranostic approach of targeted-radiopharmaceuticals, allows for the quickest path to human ePoC, accelerating overall product development

Rapidly Growing Targeted Radiotherapy Field



PeptiDream – The Center of Innovation in RI Targeted Therapy

- Accelerating entry of biopharma into RI therapies field, through a sequence of acquisitions
- PeptiDream has been chosen as key collaboration partner by a multitude of leading players in this field and continues to build extensive partnered and internal pipeline programs

Compelling Therapeutic Approach

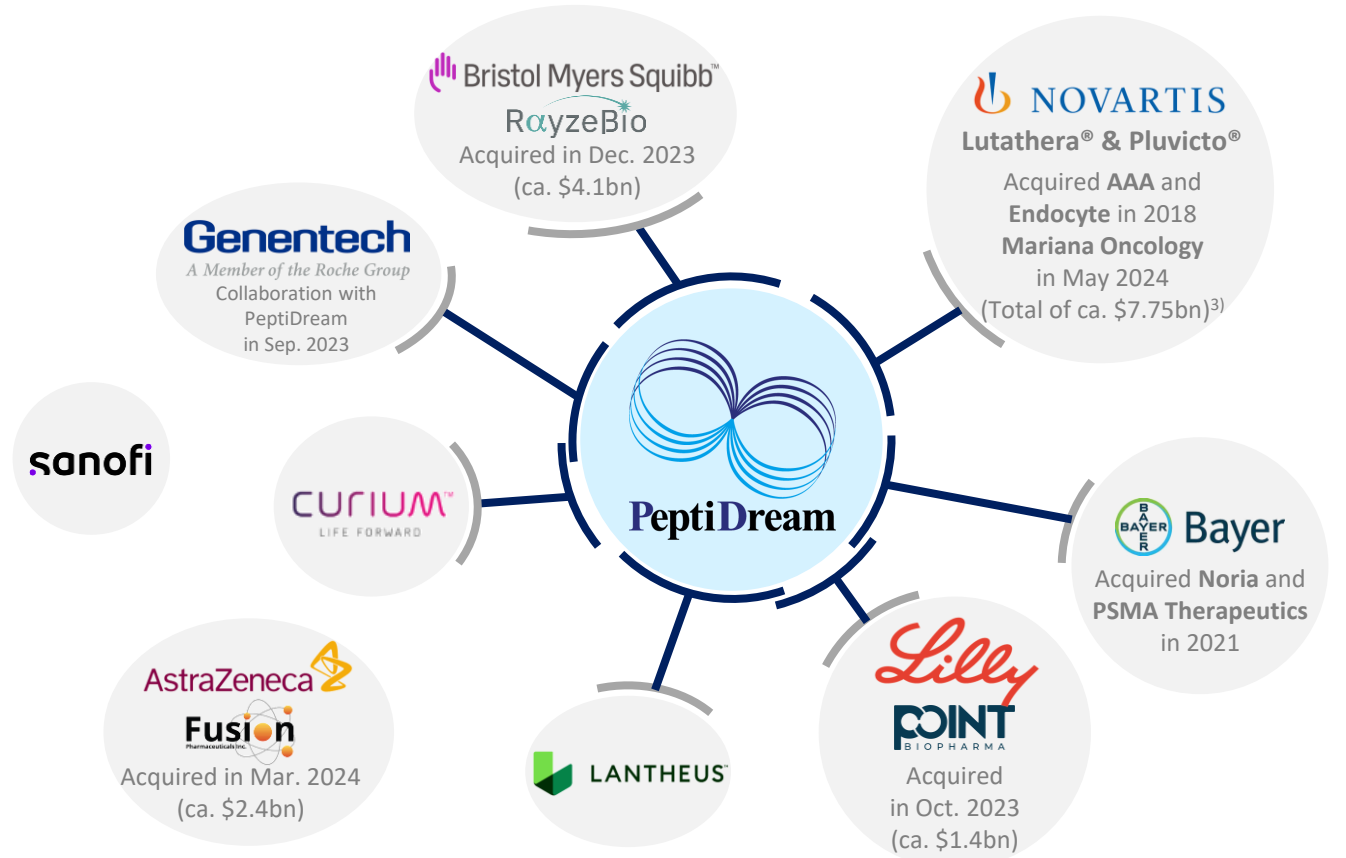
- Simple, Powerful MoA**
 - Limited treatment resistance
 - Overcoming tumor heterogeneity
- True Precision Medicine**
 - “See it & Treat it” by Theranostics
 - Efficient & accurate screening of patients



Clinical & Commercial Success Driving Further Excitement, Investment and Market Entry

Lutathera[®] Approval (2018): Neuroendocrine Tumors
(First key Targeted RI therapy that established the market)

Pluvicto[®] Approval (2022): Prostate Cancer
(Annualized \$1bn+ Sales in 2024²⁾; aims multibillion blockbuster in mid-to-long term)



Note: 1) Market size estimates based on Fortune Business Insights (Nuclear Medicine Market Size, Share & COVID-19 Impact Analysis 2023-2030), 2) 2024 Q1 Sales of \$310mm (+47% in Q1) and 2024 Q2 Sales of \$345mm (+44% in Q2), annualized sales estimate of \$1bn plus sales range, 3) Including potential milestone payments

Radiopharmaceuticals – PeptiDream Group

Uniquely Positioned with Multiple Paths to Drive Value Creation



RI Market Landscape

Japan

Only 2 Licensed RI Companies

High Barrier to Market Entry

- Strict Regulations/ Compliance
- Supply Chain Requirement, etc.

Partnering with a Local Company is Essential for Global Pharma to Commercialize Their RI Products

Global

Growing Demand of RI

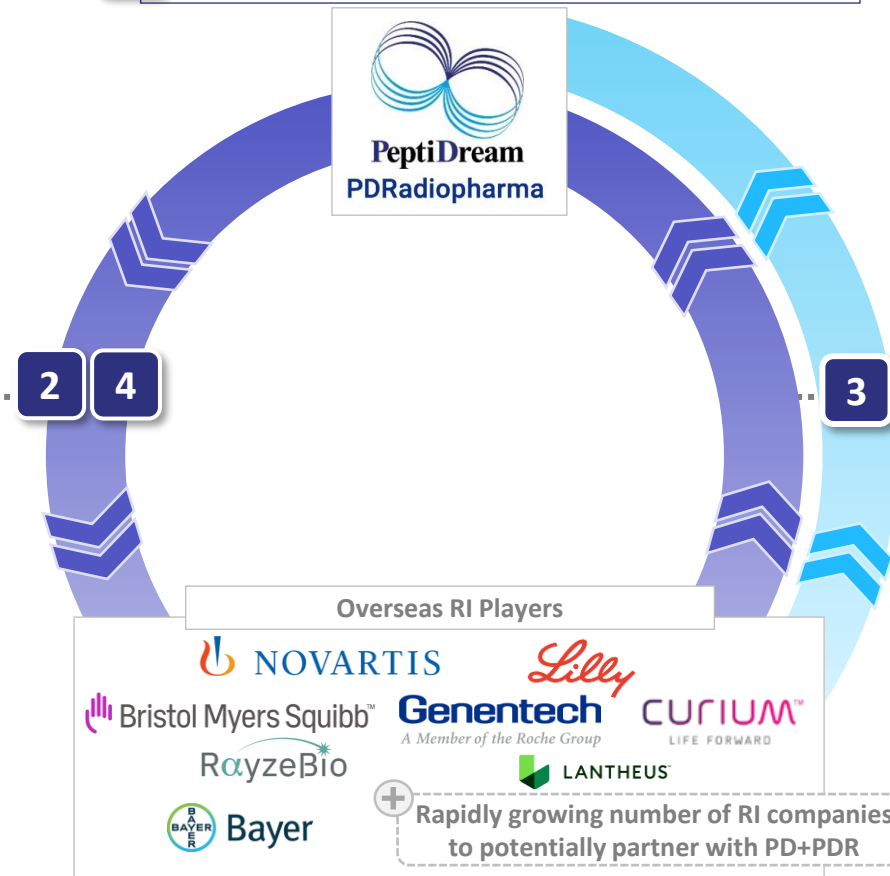
Expanding Dx & Tx Applications

Challenges by Each Region

- Regulations/ Compliance
- Supply Chain Requirement

PeptiDream + PDR Business Model

1 Discovery → Commercialization



Execution Strategy

1 Develop In-house Programs

2 Develop Collaboration Programs

- Leverage partners clinical data to bridge into Japan Market (Data Bridging)

3 In-licensing/Service Agreements

- PD/PDR provides overseas companies with access to Japan RI markets

4 Out-licensing ex-Japan Rights

- Out-licensing PD in-house programs
- PD provides collaboration partners with ex-Japan Global rights
 - PDR develops for Japan market

PDRadiopharma: Current Key Products Overview



Current Key Marketed Products

Brain

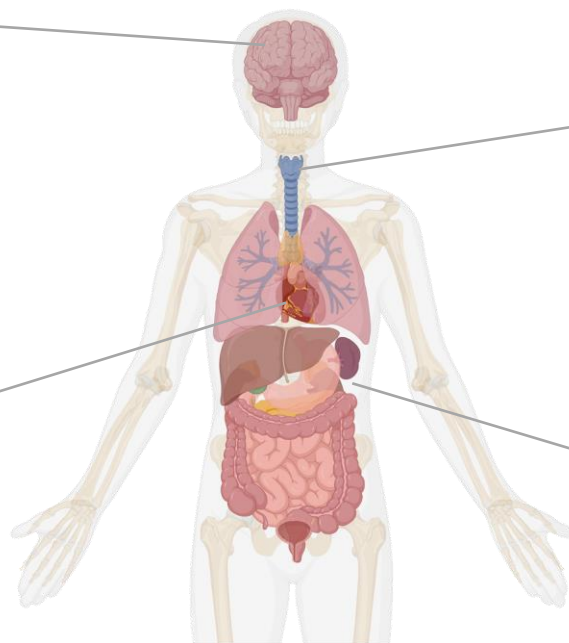
■ AMYVID®	PET	¹⁸ F	Visualization of beta amyloid plaques in the brain of patients with MCI or suspected to have dementia due to Alzheimer's Disease
□ Tauvid®	PET	¹⁸ F	(Filed) Imaging Tau pathology in Alzheimer's Disease
■ Neurolite	SPECT	^{99m} Tc	Cerebral Blood Flow

Heart

■ MyoMIBG®	SPECT	¹²³ I	Heart Disease/ Pheochromocytoma/ Neuroblastoma/ PD/ DLB
■ Cardiolite®	SPECT	^{99m} Tc	Heart Disease/ Hyperparathyroidism
■ TI201	SPECT	²⁰¹ Tl	Heart Disease

Bone

■ Techne® MDP	SPECT	^{99m} Tc	Bone Scintigraphy
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■ Therapeutics ■ Diagnostics

Cancer

■ FDG	PET	¹⁸ F	Malignant Tumor/ Heart Disease/ Intractable Partial Epilepsy/ Large-vessel Vasculitis
■ Raiatt MIBG	-	¹³¹ I	MIBG avid Pheochromocytoma/ Paraganglioma

Thyroid

■ Sodium Iodide Capsule	-	¹³¹ I	Hyperthyroidism/ Primary and Metastatic Thyroid Cancer
■ Ultra-Techne Kow®	SPECT	^{99m} Tc	Thyroid Disease/ Brain Diseases/ Salivary Gland Disease

Kidney/ Urinary Tract

■ Techne® DTPA	SPECT	^{99m} Tc	Renal Scintigraphy
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Neuroendocrine

■ OctreoScan	SPECT	¹¹¹ In	Somatostatin Receptor Scintigraphy
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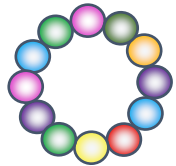
Pipeline Overview (Radiopharmaceuticals)

	Disease Area	Pipeline	IND-enabling / Ph0	Ph1	Ph2	Ph3	Partner	Development Stage		
								(Japan)	(Overseas)	
Theranostics / Therapeutics	Malignant Brain Tumors	⁶⁴ Cu-ATSM	[Progress bar: IND-enabling / Ph0 to Ph3]					LM	Ph3 Ongoing	—
	Prostate Cancer	¹⁷⁷ Lu/ ⁶⁴ Cu-PSMA I&T	Japan (Bridging Study (Planning)) [Progress bar: IND-enabling / Ph0 to Ph3]					CURIUM™ LIFE FORWARD	Bridging Study Prep.	(Curium) Ph3 Ongoing
	Malignant Glioma	¹⁷⁷ Lu/ ⁶⁸ Ga-Integrin (FF58)	[Progress bar: IND-enabling / Ph0 to Ph1]					NOVARTIS	—	Ph1 Ongoing
	Hepatocellular Carcinoma	²²⁵ Ac/ ⁶⁸ Ga-GPC3 (RYZ801/811)	[Progress bar: IND-enabling / Ph0 to Ph1]					RayzeBio A Bristol Myers Squibb Company	Global Study Prep.	Ph0 / IND-filing
	Renal Cell Carcinoma	²²⁵ Ac/ ⁶⁴ Cu-CA9 (PD-32766)	[Progress bar: IND-enabling / Ph0 to Ph1]					(In-house)	Ph0 / IND-enabling	—
	Oncology	Novartis Program #2	[Progress bar: IND-enabling / Ph0 to Ph1]					NOVARTIS	—	IND-enabling study
	Solid Tumor	²²⁵ Ac-Cadherin3	[Progress bar: IND-enabling / Ph0 to Ph1]					PPMX PENSIS PROTEOMICS	Ph1 back to Pre-clinical	—
	Oncology	RayzeBio Program #2	[Progress bar: IND-enabling / Ph0 to Ph1]					RayzeBio A Bristol Myers Squibb Company	—	Selected Clinical Development Candidate
	Oncology	Novartis Program #3	[Progress bar: IND-enabling / Ph0 to Ph1]					NOVARTIS	—	IND-enabling study
Diagnostics	Alzheimer's Disease	¹⁸ F-flortaucipir (Tauvid®)	[Progress bar: IND-enabling / Ph0 to Ph3]					Lilly	Ph3 Completed	Marketed
	Various Cancers	¹⁸ F-PD-L1 (BMS-986229)	[Progress bar: IND-enabling / Ph0 to Ph1]					Bristol Myers Squibb	—	Ph1 Completed

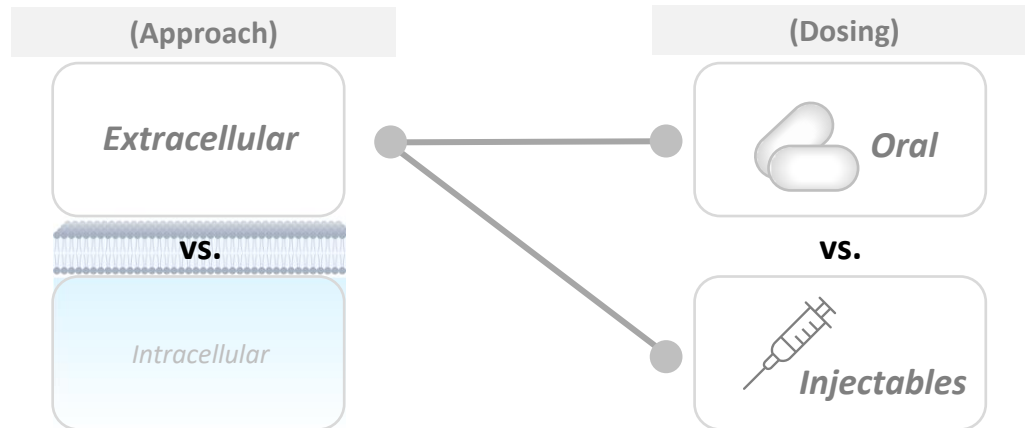
Note: Above list only includes major pipeline programs in IND or later stages. PeptiDream is engaged in various pre-clinical programs as well

Non-Radiopharmaceuticals – Program Overview

Peptide Therapeutics



- ✓ Excellent affinity & selectivity
- ✓ *Unique epitopes & MOAs*
- ✓ *Differentiating PK & ADME characteristics*
- ✓ **Oral Administration** & other routes possible
- ✓ *Enable small molecule discovery*



Broad range of disease and therapeutic applications

Other Targeted Peptide Conjugates

Oligonucleotides
(siRNA / ASO / HDO)



Tissue Targeting

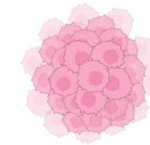


- ✓ Brain, Kidney, Heart, Muscle, Lung, etc.

Small Molecules
(Cytotoxic Compounds)

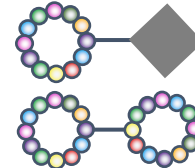


Tumor Targeting

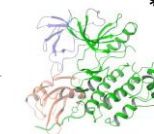


- ✓ PDCs as a compelling alternative to ADCs

Others



Target Binding Peptide



- ✓ Enables new therapeutic modalities
 - Multi-functional Peptide Conjugates (MPCs)
 - Protein Degraders
 - Immune Recruiters, etc.

Peptide targeted delivery of various non-RI payloads

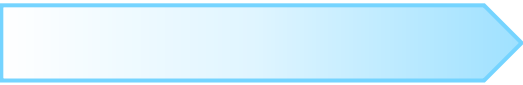

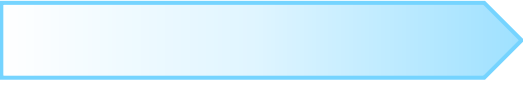

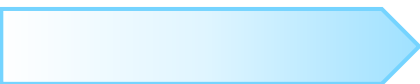
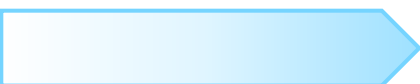

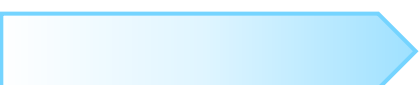

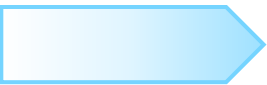

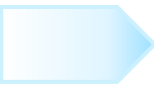



Selected Partners for Non-RI Programs



Biohaven



Pipeline Overview (Non-Radiopharmaceuticals)

	Disease Area	Pipeline	IND-enabling	Ph1	Ph2	Ph3	Partner	(Japan)	(Overseas)	
Clinical Programs	Acromegaly	GhR Antagonist (AZP-3813)							—	Ph1 Completed
	Oncology	PD-L1 Inhibitor							—	Ph1 Completed
	Multiple Myeloma	CD38-ARM™ (BHV-1100 + NK)						Biohaven	—	Ph1a/1b Ongoing
	Not Disclosed	Merck Program #1							Not Disclosed	Ph1 Ongoing
	Inflammatory Diseases	Merck Program #2							Not Disclosed	Ph1 Ongoing
	COVID-19	S2-protein Inhibitor (PA-001)							Clinical Research Completed	IND-filed
Selected PC Programs	Obesity/ SMA/DMD/ Muscle Disorders	Myostatin Inhibitor						 (In-house)	Pre-clinical Obesity & Bioavailability	—
	Allergic Diseases	KIT Inhibitor (MOD-B)							IND-enabling study	—

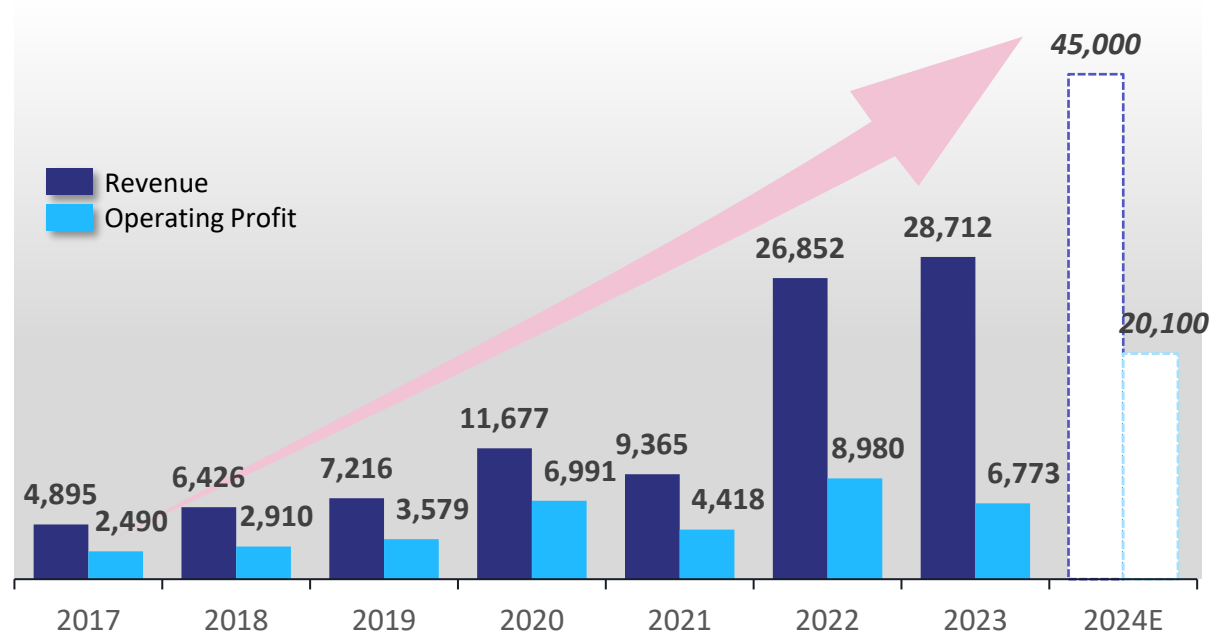
Note: Above list only includes major pipeline programs in clinical stage and selected pre-clinical stage; 1) Merck & Co., Inc., Rahway, NJ, USA

PeptiDream Financial Performances and Future Catalysts



Financial Performance

- Consistent revenue and profit growth
- Reinvesting profits to further grow the business and pipeline
- Goal of JPY 100bn in revenue by 2030



Market Capitalization¹⁾
(As of Sep 30, 2024)

JPY 350.1 bn

Note: From FY2019, fiscal year end changed from June 30 to December 31. The financial performance between 2019/7 and 2019/12 (6 months) are excluded from this figure.

1) FactSet, 2) Merck & Co., Inc., Rahway, NJ, USA

Future Catalysts

✓ Achievements
Made Year-to-date

Progress of On-going & New Clinical Programs

- ✓ **ATSM (PeptiDream/LM) into Ph3 (Jun. 2024)**
- ✓ **PeptiDream's CA9 into Ph0 (Jun. 2024)**
- ✓ **Novartis RI-PDC Program #3 into IND-enabling Studies (Jul. 2024)**
- ✓ **Merck Non-RI Program #2 into Ph1 (Jun. 2024)**



- AZP-3813 (Amolyt/AZ) into Ph2**
- GPC3 (RayzeBio/BMS) into Ph1**
- RI-PDC Program #2 (Novartis) into Ph1**
- Additional RI-PDC programs – New Clinical Candidates (RayzeBio/BMS, and PeptiDream)**
- Myostatin Inhibitor (in-house): Obesity Study Readouts**

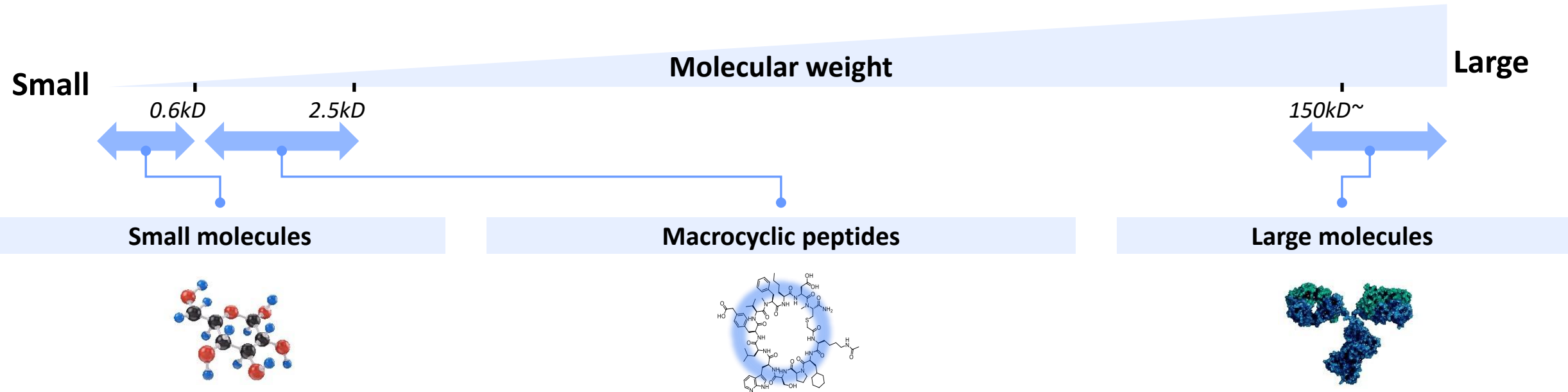
Other Catalysts

- New deals and partnerships:
 - ✓ **Expanded partnership with Novartis on Apr 30th, 2024**
\$2.7 Billion (\$180million upfront)
 - Development of new radiopharmaceuticals in Japan, new partnering and in-licensing of late-stage clinical assets
 - ✓ **Curium ¹⁷⁷Lu/⁶⁴Cu-PSMA I&T on Oct 1st, 2024**

Appendix

Macrocyclic Peptides as an Expanding Drug Class

Macrocyclic Peptides Have Positive Features of Both Small & Large Molecules



- Good at recognizing binding pockets but not PPIs or shallow surfaces
- Orally bioavailable
- Membrane permeable
- Near limitless targets
- However difficult and time consuming to find

- ✔ *High affinity and specificity*
- ✔ *Good at inhibiting PPIs*
- ✔ *Good at recognizing shallow interacting surfaces and binding pockets*
- ✔ *Oral bioavailability possible*
- ✔ *Near limitless targets*
- ✔ *Relative ease and speed in finding a suitable hit*

- High affinity and specificity
- Good at inhibiting PPIs
- Good at recognizing shallow interacting surfaces of proteins
- Not oral – limited targets
- Relative ease and speed in finding a suitable hit

Leadership Team at PeptiDream



Representative Director, President, CEO
Patrick C. Reid, Ph.D.

- Co-founder of PeptiDream, after working as Associate Professor at University of Tokyo
- CSO, Head of R&D until 2017
- CEO at PeptiDream 2017 to current
- Ph.D. in Biochemistry from Dartmouth Medical School



Director, COO
Keiichi Masuya, Ph.D.

- Joined PeptiDream in Jul 2014, previously Head of PPI Drug Discovery at Novartis International AG
- Director at PeptiGrowth, Representative Director and President at PeptiAID
- Ph.D. in Chemistry from Tokyo Institute of Technology



Director, CFO
Kiyofumi Kaneshiro, Ph.D.

- Joined PeptiDream in Jan 2018, previously Partner and Managing Director at the Boston Consulting Group
- Director of PDRadiopharma
- Ph.D. in Oncology from University of Tokyo



Chief Medical Officer
President and Representative Director of PDRadiophama
Masato Murakami, M.D., Ph.D., MBA

- Joined PeptiDream in Jan 2022, previously Vice President of the Global Precision Medicine Department at Daiichi-Sankyo
- M.D. from Tokai University School of Medicine (trained pathologist)
- Ph.D. in Medicine from University of Tokyo



Chief Scientific Officer
Christian Cunningham, Ph.D.

- Appointed as Chief Scientific Officer of PeptiDream in Apr 2024, previously Distinguished Scientist & Director of the Department of Peptide Therapeutics at Genentech
- Ph.D. from the University of California, San Francisco, and completed a postdoc at Stanford University



Head of Business Development
Yen Ting Chen, Ph.D.

- Joined PeptiDream in May 2022, previously Vice President at Locust Walk Japan
- Ph.D. in Chemistry from Brown University



Head of IR & Public Affairs
Yuko Okimoto, Ph.D.

- Joined PeptiDream in May 2020, previously Director at Global Investment Banking Division of Mizuho Securities
- Ph.D. in Chemistry from University of Tokyo

External Directors at PeptiDream



**Independent External Director
(Auditing Committee Member)**

Michio Sasaoka, Ph.D.

- Joined PeptiDream in May 2012, after working at Massachusetts Institute of Technology as Postdoctoral Research Associate, Otsuka Chemical Co., Ltd. as Director of Explorative Laboratory
- Currently Independent Outside Director (Auditing Committee Member) at PeptiDream



**Independent External Director
(Auditing Committee Member)**

Junko Utsunomiya (Attorney)

- Joined PeptiDream in Mar 2021, after working at Nagashima Ohno & Tsunematsu, Utsunomiya Shimizu & Haruki Management Legal Office as a founding partner
- Currently Independent Outside Director (Auditing Committee Member) at PeptiDream



**Independent External Director
(Auditing Committee Member)**

Toshio Nagae

- Joined PeptiDream in Sep 2015, after working at Shionogi & Co., Ltd., Sanofi K.K. as Executive Officer of Aventis Pharma, York Pharma K.K as President and Representative Director
- Currently Independent Outside Director (Auditing Committee Member) at PeptiDream



**Independent External Director
(Auditing Committee Member)**

Yukinori Hanafusa (Certified Public Accountant)

- Joined PeptiDream in Mar 2016, after working at Aoyama Audit Corporation, Accounting Works Co., Ltd. as Founding Representative Director, ARCLAND SERVICE HOLDINGS CO., LTD as Director
- Currently Independent Outside Director (Auditing Committee Member) at PeptiDream



Mission of PeptiDream Group

*Discovering the next generation of
transformational medicines*