PHARMAENGINE, INC. (TWO.4162)
4Q 2024 INVESTORS' CONFERENCE
2025/03/06

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This presentation contains certain forward-looking statements.

These forward-looking statements may be identified by words such as ‘believes,’ ‘expects,’ ‘anticipates,’ ‘projects,’ ‘intends,’ ‘should,’ ‘seeks,’ ‘estimates,’ ‘future,’ or similar expressions or by discussion of, among other things, strategy, goals, plans, or intentions. Various factors may cause actual results to differ materially in the future from those reflected in forward-looking statements contained in this presentation, among others:

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AGENDA

1. 2024 Operational Highlights
2. 2024 Operational Overview
3. R&D Pipeline Update
    a. PEP07
    b. PEP08
4. Vision for 2025
5. Q&A

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2024 Operational Highlights: Sustainable Growth and Enhanced Pipeline

COMMERCIAL

ONIVYDE®
Indication expansion

1. In 2024, ONIVYDE® regimen (NALIRIFOX) for 1L PDAC received sNDA approvals in major markets.
2. Applied for Taiwan's health insurance reimbursement in 2Q24.
3. Received US$50 million for ONIVYDE's second sales milestone.

*Not yet included in China's national medical insurance.

LIPORAXEL®

1. Signed distribution agreement with RMX for Taiwan market in Nov. 2024.

PIPELINE

New project R&D progress accelerated

1. PEP07 two Phase 1 clinical trials for hematologic/solid tumor cancers continue with dose escalation.
2. Preparing to submit IND for PEP08.
3. Other projects continue to move forward.

OPERATION

Operation with sustainable growth

1. 2024 cash and cash equivalents and current financial assets (>3 months time deposits) at amortized cost: NT$3.86bn.
2. FY2024 cash dividend: NT$6/share
3. Completed the initial phase of scope 3 GHG inventory, data to be presented in 2024 Sustainability Report.

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2024 OPERATIONAL OVERVIEW

Sales and Royalties Drive Long-Term Growth

NT$(000)

Item / Year	2018	2019	2020	2021	2022	2023	2024 YOY (%)
Taiwan Sales	87,384	180,389	214,828	235,469	277,594	278,547	279,990 (+1%)
Royalties from Europe and Asia	109,825	133,651	271,584	419,366	376,789	426,652	543,286 (+27%)
Milestone/Sub-license Revenue	96,221	0	569,600	0	0	62,470	1,700,028 (+2,621%)
Total	293,430	314,040	1,056,012	654,835	654,383	767,669	2,523,304 (+229%)

2024 Financial Results

NT$(000)	2024	2023	Amount Change	% Change
Operating revenue	2,523,304	767,669	1,755,635	229%
Operating costs	47,740	48,697	(957)	(2%)
Gross profit	2,475,564	718,972	1,756,592	244%
Sales expenses	37,605	38,538	(933)	(2%)
G&A expenses	117,767	92,970	24,797	27%
R&D expenses	267,025	310,281	(43,256)	(14%)
Total operating expenses	422,398	441,789	(19,391)	(4%)
Operating income	2,053,166	277,183	1,775,983	641%
Total non-operating income and expenses	109,829	60,791	49,038	81%
Income before income tax	2,162,995	337,974	1,825,021	540%
Income tax expense	411,965	63,324	348,641	551%
Profit for the period	1,751,030	274,650	1,476,380	538%
EPS (NT$)	12.19	1.91	10.28	538%

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R&D PIPELINE UPDATE

Pipeline Portfolio Focuses on Precision Oncology

Program		Indications	Lead	Preclinical	Phase I	Phase II	Phase III	Approval	Commercial Rights	Partner
ONIVYDE® (liposomal irinotecan)		1L/2L PDAC	Approval						Milestone Royalty (EU/Asia) Taiwan Sales	IPSEN Innovation for patient care
DDR & Synthetic Lethality	PEP07 (CHK1i)	AML/MCL							Global	Sentinel ONCOLOGY
		Solid tumors								
	PEP08 (PRMT5i)	MTAP-del cancers							Global	PEI Owned
	PEP09	Undisclosed							Global	Undisclosed
	PEP10	Undisclosed							Global	PEI Owned

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PEP07

PEP07: A Potential Best in Class CHK1 Inhibitor

Criterion	PEP07	ACR-368 (Prexasertib)	SRA-737	BBI-355
Development Phase	Phase I	Phase II	Phase I/II	Phase I/II
Potency*	Good	Excellent	Fair	Good
CHK1 vs CHK2 Selectivity	Excellent	Poor	Excellent	Fair
Oral Bioavailability	Good	Poor	Good	Good
BBB-Penetrating	Good	Good	Unknown	Poor
Indications	AML/MCL Solid tumors	Endometrial cancer Ovarian cancer Bladder cancer	Solid tumors	Solid tumors

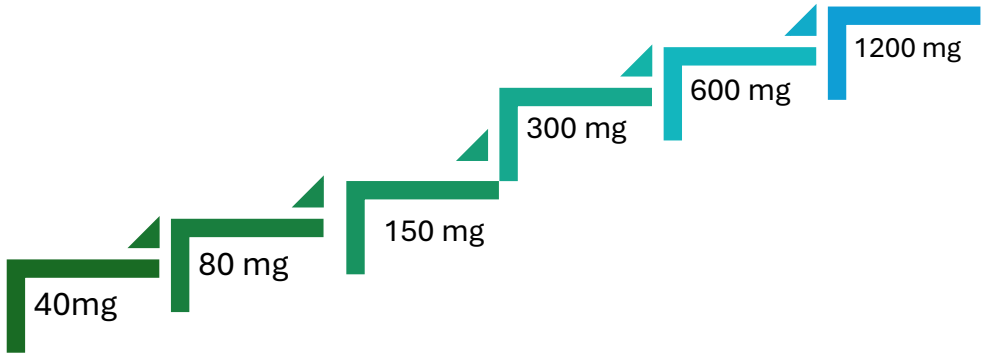
**Cell line model*

Excellent Good Fair Poor

PEP07: Phase I/Ib Development Strategy

Mono Dose Escalation in AML and MCL

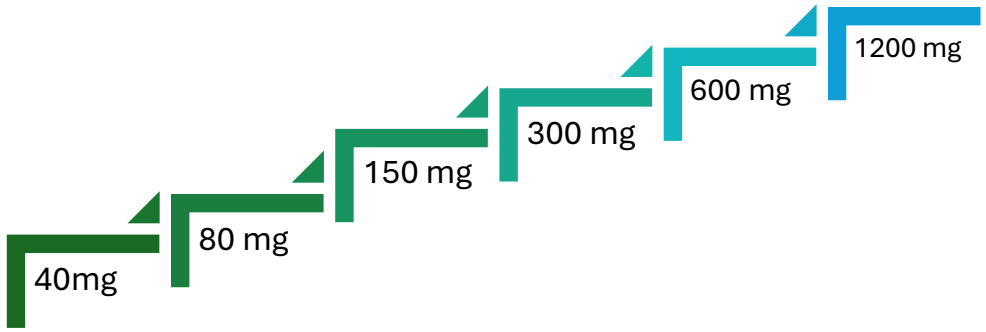
- Study design
  - ✓ Accelerated titration plus traditional 3+3 design
  - ✓ Once a DLT, or ≥ Grade 2 AE related to PEP07 at any dose level ➔ 3+3



Ph1b Combo, dose escalation/expansion in selected hematologic cancer; AML or MCL

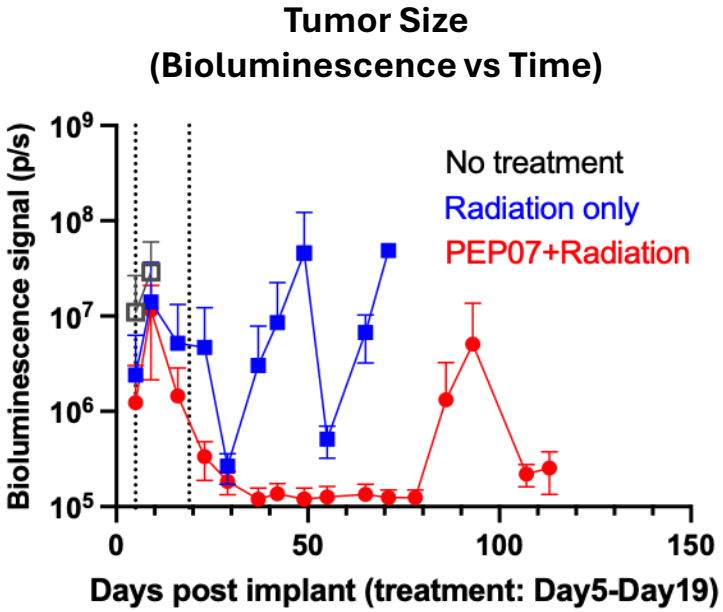
Mono Dose Escalation in Solid Tumors

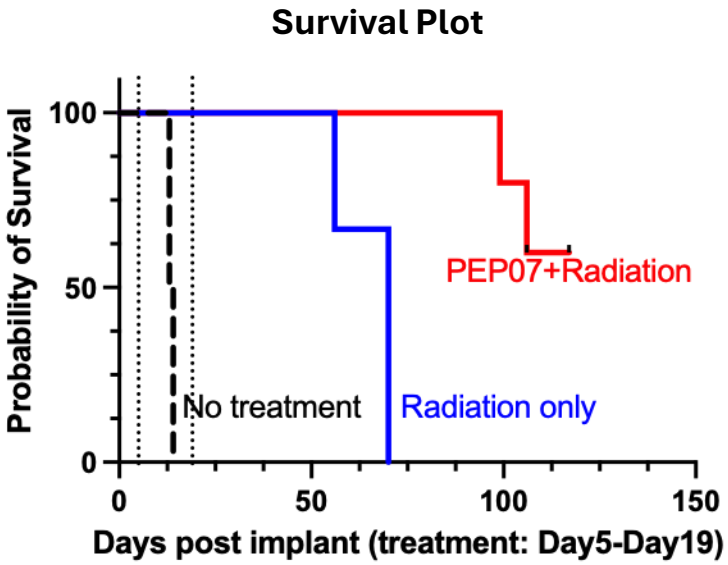
- Study design
  - ✓ Accelerated titration plus traditional 3+3 design
  - ✓ Once a DLT, or ≥ Grade 2 AE related to PEP07 at any dose level ➔ 3+3



Ph1b Combo, dose escalation/expansion in selected solid tumors

PEP07 Combined with Radiation Show Significant Efficacy in Orthotropic Brain Cancer Model





Other combination candidates including Standard of Care therapies or anti-body conjugate drugs in selective indications.

PEP07: Potential Indications and Market Value

Potential Indication	Cancer type	2022 Incidence*	Global Market Size^ 2023 ($ Bn)	Market Size CAGR 2024-2032^
High Potential	Acute Myeloid Leukemia	165,500	2.1	10.7%
	Gastric Cancer	968,350	4.7	13.5%
	Soft Tissue Sarcoma	42,500	1.4	8.5%
	GBM	321,476	2.9	8.6%
	SCLC	372,100	5.12	12.3%
	Ovarian Cancer	324,398	3.5	6.3%
Potential	NSCLC	2,108,000	19.56	9.28%
	Pancreas	510,566	3.0	13.2%

#Global DNA repair drugs market is forecasted to grow from US$6.79 billion in 2023 to US$29.69 billion in 2034, a CAGR of 14%.

* Globocan 2022
^Source: Global market insight
#Source: https://www.researchandmarkets.com/reports/5923234

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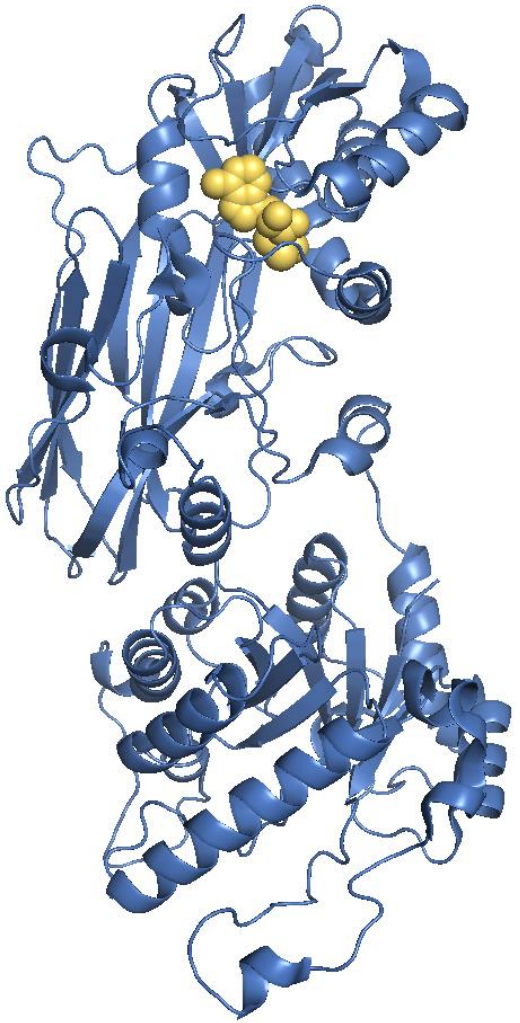
PEP08

Protein Arginine Methyltrasferase 5 (PRMT5) – Promising Target for Cancer Treatment

- PRMT5 plays critical roles in gene expression, RNA processing, DNA damage repair, and immune response.
- 1st generation PRMT5 inhibitors target PRMT5 in both cancer and normal cells. Since PRMT5 is an essential protein in human biology, lacking selectivity leads to narrow therapeutic window.
- MTAP homozygous deletion causes MTA accumulation in cells and is reported synthetical lethality with PRMT5 inhibition.
- MTAP homozygous deletion is observed in 10-15% of human cancers.
- An MTA co-operative PRMT5 inhibitor forms a ternary complex with PRMT5 and MTA which provides a unique mechanism to enhance both efficacy and safety in cancer treatments.

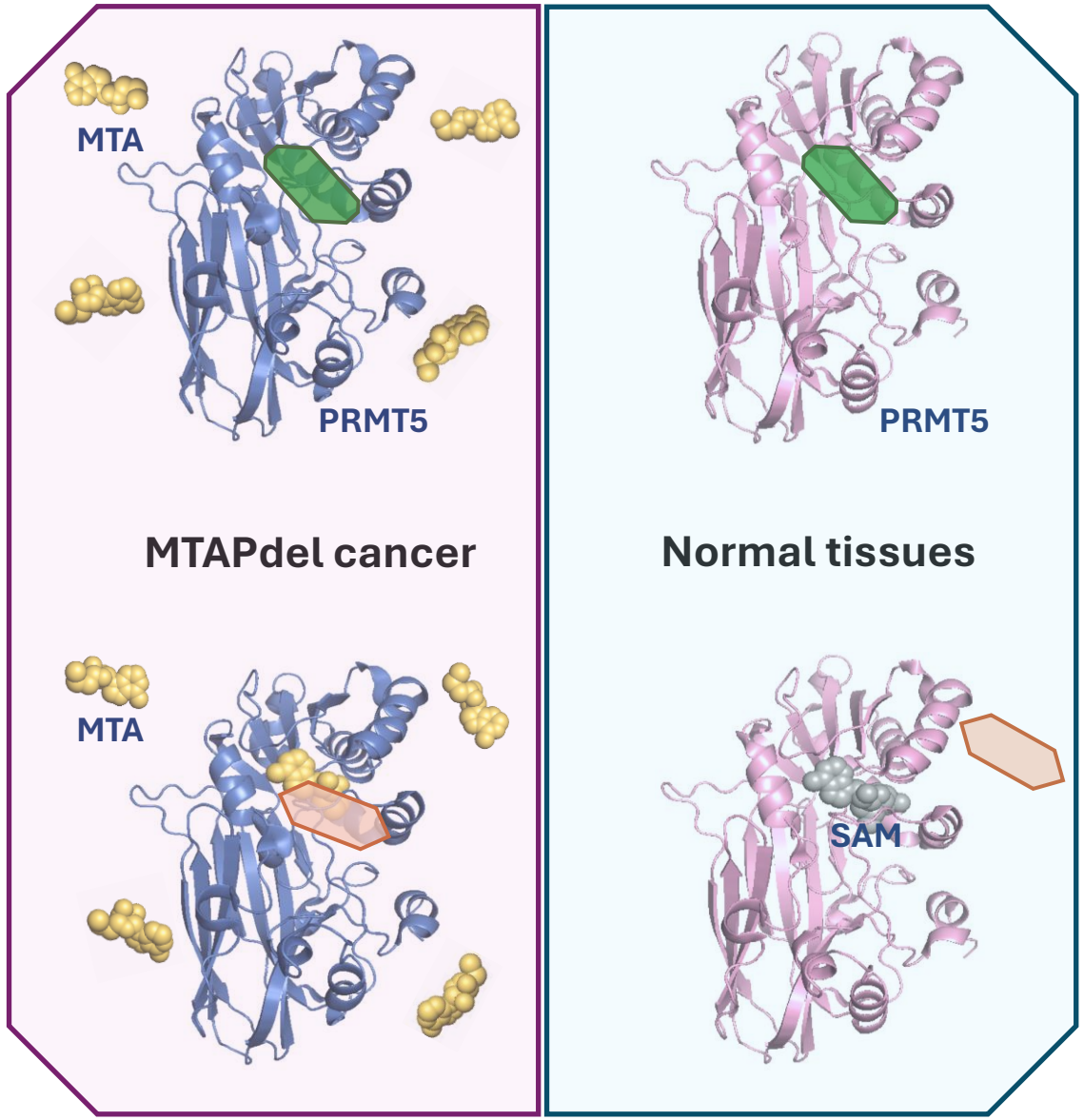


PRMT5:MTA
PDB: 7S1S

1st Generation PRMT5 vs 2nd Generation MTA co-operative PRMT5 Inhibitor

1st generation PRMT5i

2nd generation
MTA co-operative PRMT5i

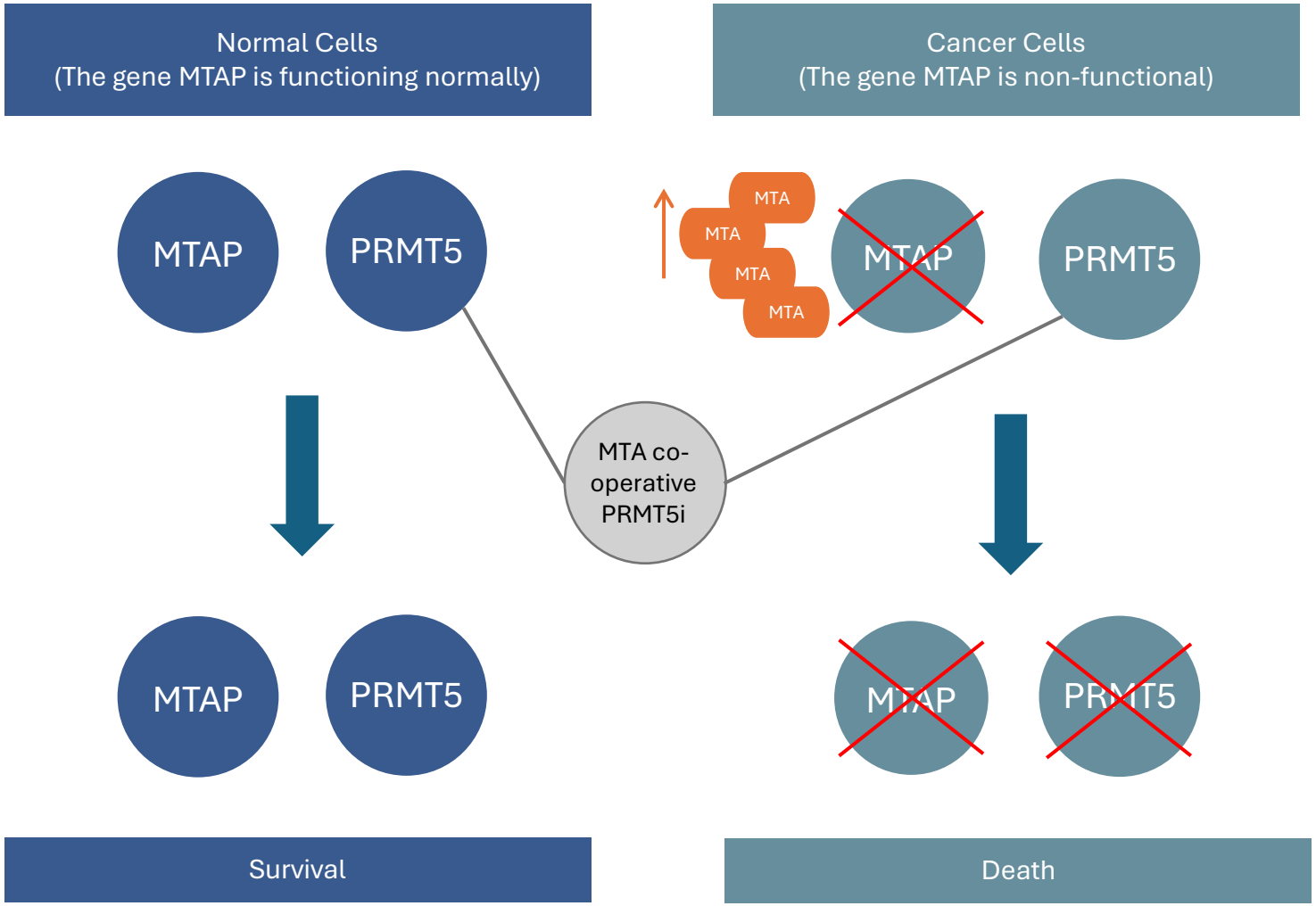


PDB: 7S1S

PDB: 5EML

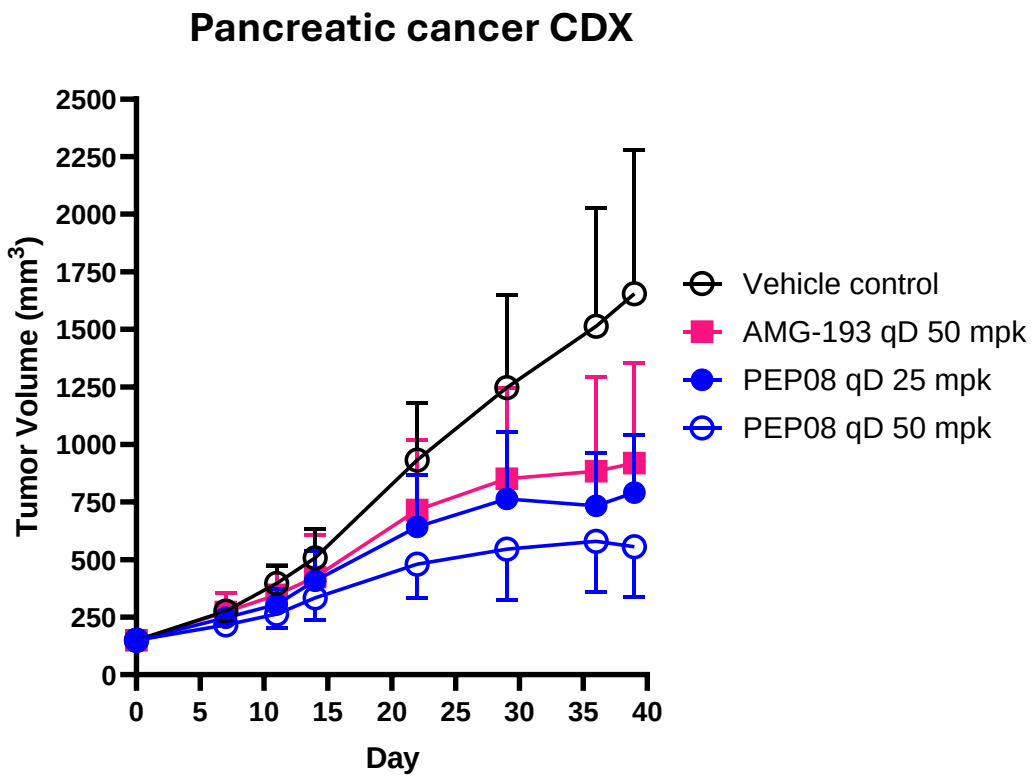
- Unlike 1st generation PRMT5 inhibitors bind PRMT5 unselectively in both cancer cells and normal tissues, 2nd generation, MTA co-operative PRMT5 inhibitors only target to MTAP deletion cancer cells due to the higher concentration of MTA in cancer cells.
- This unique mechanism provides excellent efficacy and improved therapeutic window.

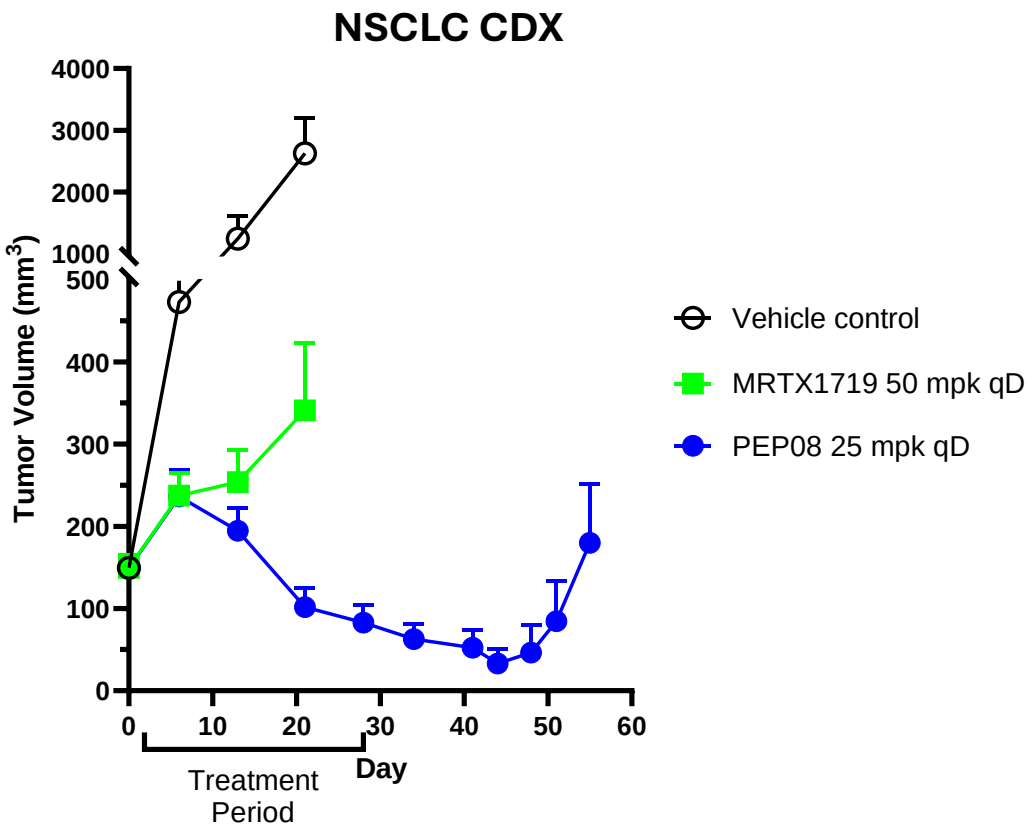
MTAP Deletion and Synthetic Lethality



MTA co-operative PRMT5 inhibitors only target to MTAP deletion cancer cells. Cancer cells with MTAP deletions are highly dependent on PRMT5 for survival, making them susceptible to synthetic lethality when PRMT5 is inhibited.

PEP08 Inhibits the Growth of MTAP-Deleted Tumors in Vivo





PEP08: A Potential Best in Class PRMT5 Inhibitor

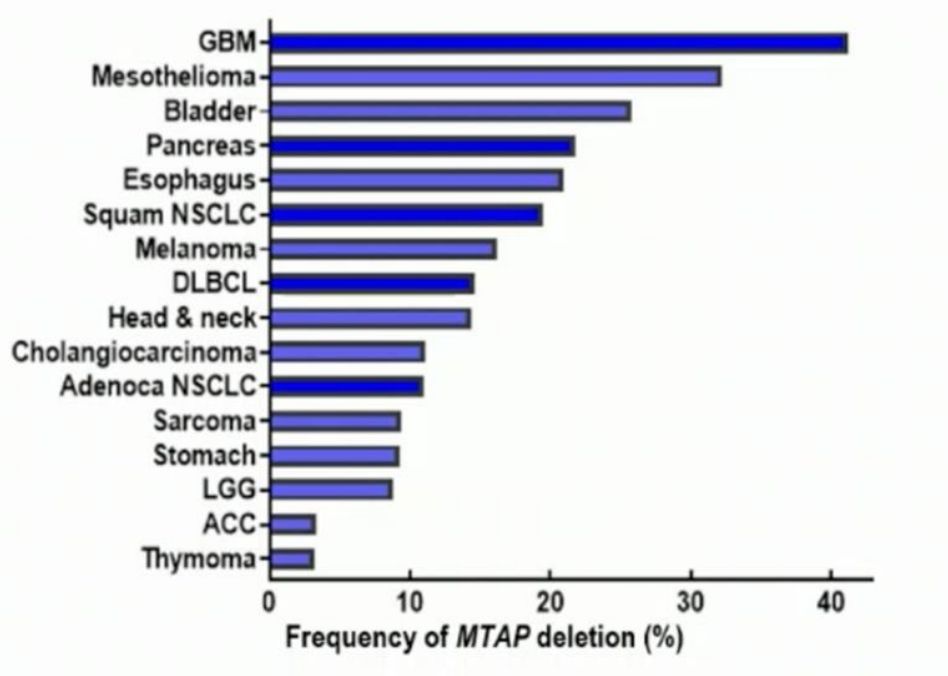
Criterion	PEP08	AMG-193	BMS-986504 (MRTX1719)	TNG462	AZ3470
Development Phase	IND-enabling	Phase 1/2	Phase 1/2	Phase 1/2	Phase 1/2
Potency*					
MTAP selectivity					
BBB-penetrating					
Indication	MTAP-deleted cancers				
	Solid tumors	NSCLC	NSCLC, PDAC Mesothelioma	NSCLC PDAC	Solid tumors r/r cHL

**Viability in vitro in MTAP del cell line model*

MTAP Deletion Frequency in Selected Tumors and its Market Size

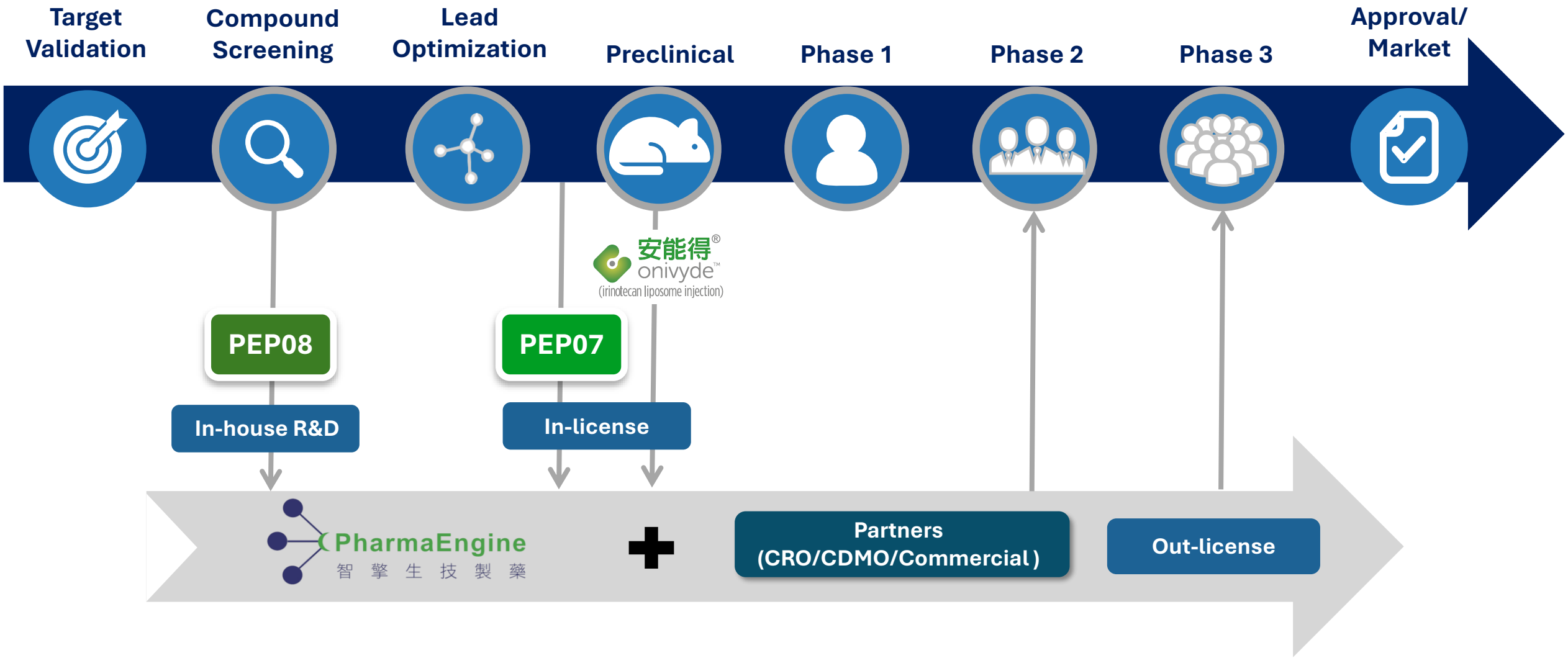
Cancer type	Incidence*	% of MTAP Deletion	Eligible Patients No.
GBM	321,476	42%	135,020
Bladder	613,791	25%	153,448
Pancreas	510,566	22%	112,325
NSCLC	2,108,000	13%	274,040
ESCC	510,716	10%	51,072
HNSCC	795,453	10%	79,545
Stomach	968,350	8%	77,468
DLBCL	193,553	15%	29,032
Total			911,950

* Globocan 2022



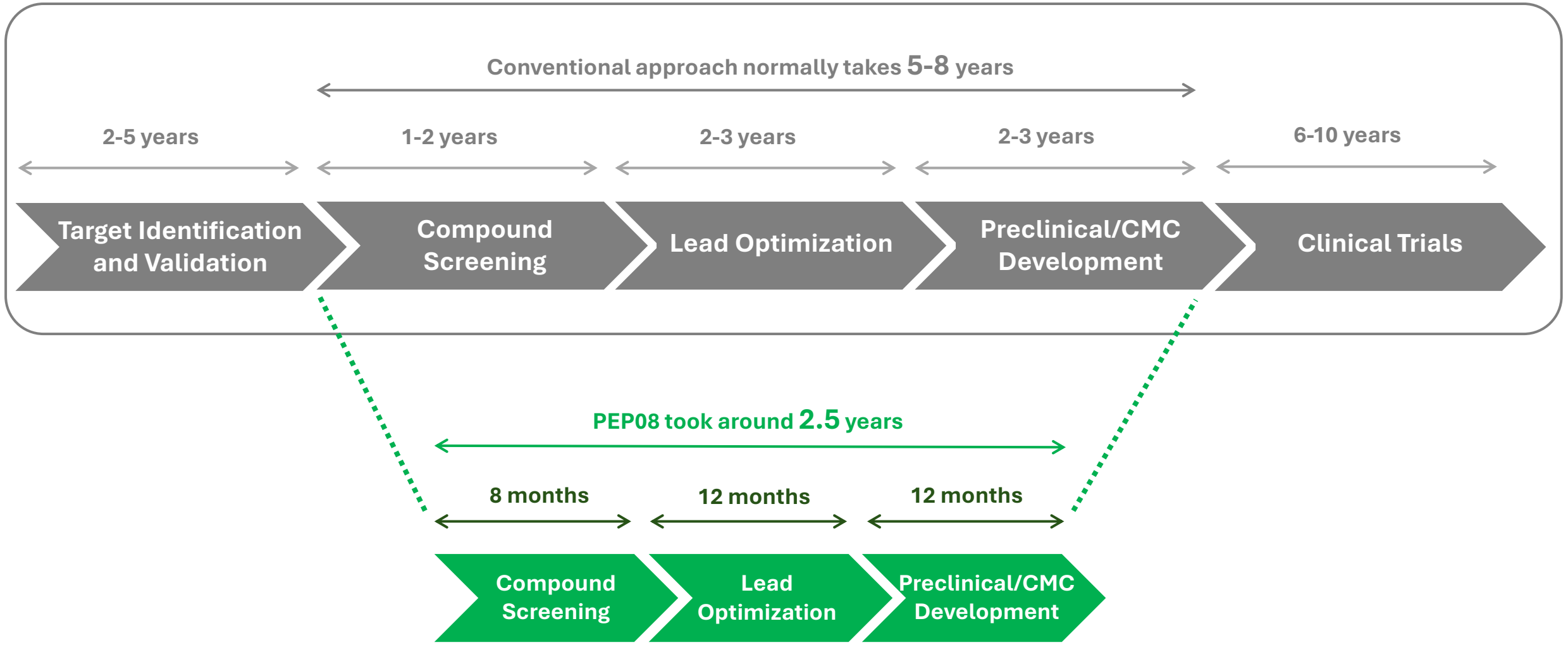
Source: 2024 ESMO poster

Virtual Pharmaceutical Company Business Model



Flexible, nimble, and science/data driven

Drug Development Acceleration Through PharmaEngine Core Values



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VISION FOR 2025

Vision for 2025

01 Complete dose finding for PEP07 phase 1 hematologic cancers and solid tumors

02 Submit IND for PEP08 (1H25)

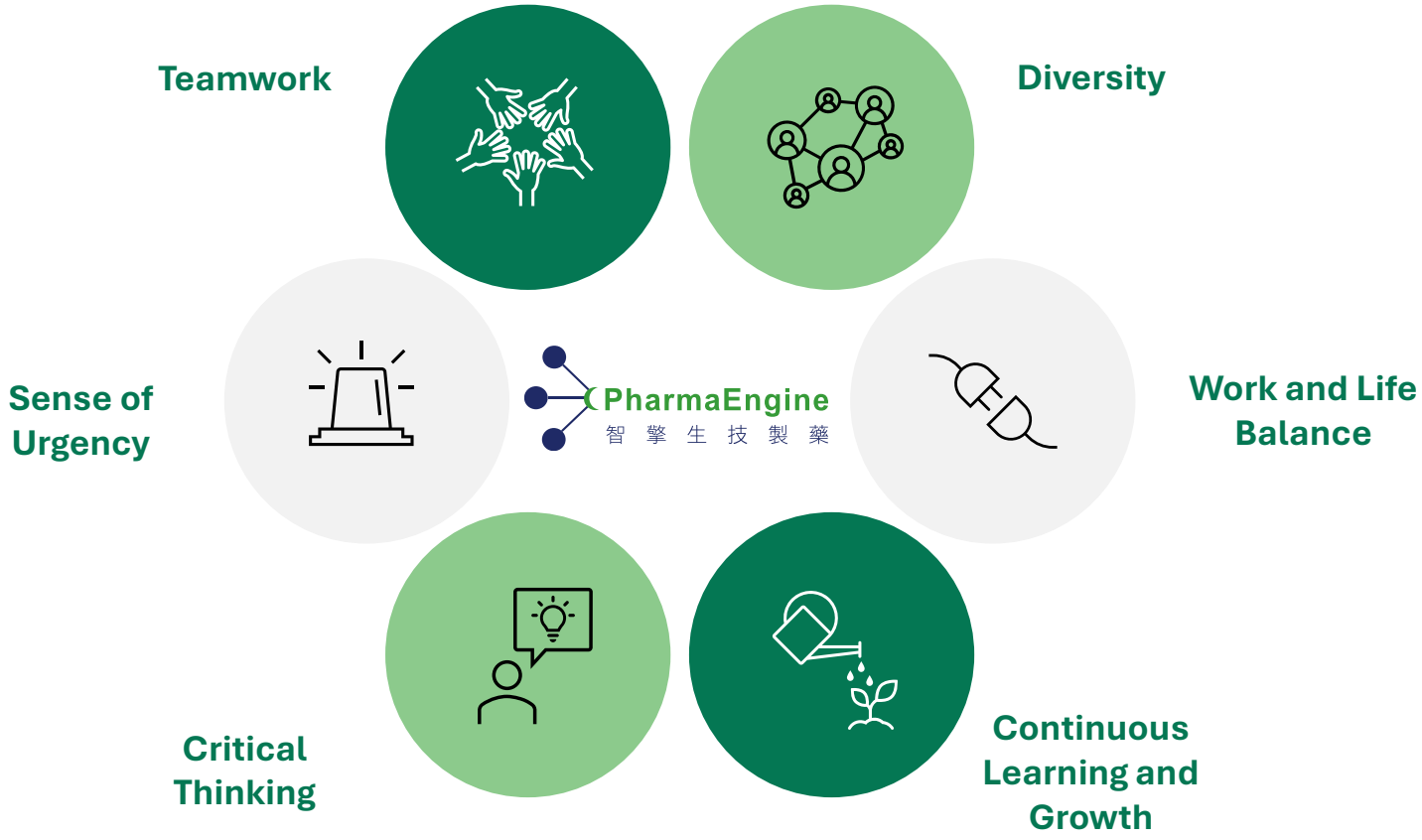
03 Continue to expand and advance early pipeline

04 Obtain Taiwan's NHI reimbursement for ONIVYDE® as 1L treatment of metastatic pancreatic cancer

05 Submit NDA for LIPORAXEL® in Taiwan

06 Begin incorporating green energy as 20% of our self-use electricity source, increase by 10% every year with the goal of reaching 70% green energy share by 2030

PharmaEngine Core Values



THANK YOU

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