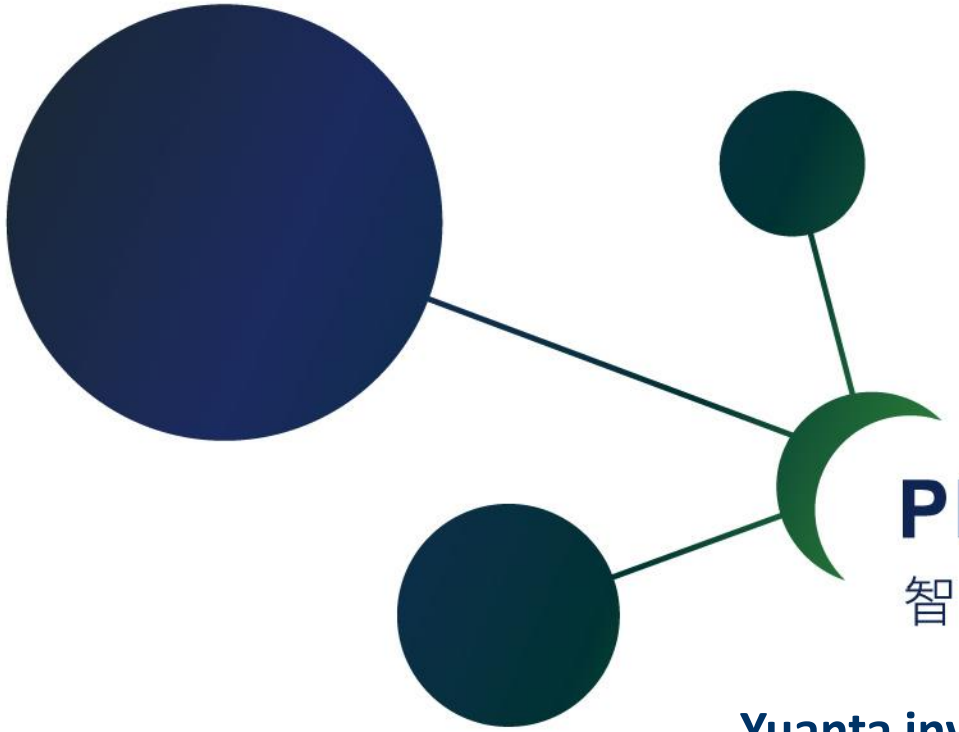

PharmaEngine

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Yuanta investor conference 4162.TWO

2022/03/10

Hong-Ren Wang, Ph.D.

President and CEO

Disclaimer

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Agenda

1. FY21 Operational Highlights
2. FY21 Operational Overview
3. Research and development
   - ONIVYDE®
   - PEP07 (SOL-578)
4. Vision for 2022
5. Q&A

Management Team with International Experience

President & CEO

Dr. Hong-Ren Wang

15+ years of pharmaceutical industry experience. In addition to new drug development, worked on novel drug delivery/device combination through drug evaluation, PK/device combination modeling, and novel formulation design.

- Ph.D. in Materials Science and Engineering from Massachusetts Institute of Technology, Cambridge, Massachusetts, USA.
- Worked with Transform Pharmaceuticals, Vertex Pharmaceuticals, Microchips Biotech and Proteostasis Therapeutics with increasing responsibilities.
- Broad industry experience of selection and development of new chemical entities (NCEs) from preclinical to NDA/MAA applications including three FDA/EMA approved commercial products. (Incivek, Kalydeco, and Orkambi)

International Drug Development Consultants

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Hagop Youssoufian, MSC, MD
Former Chief Medical Officer at BIND Therapeutics

Alex Vo, Ph.D.
Executive Director, DMPK, Preclinical Science, Atea Pharmaceuticals

Chia-Chi Lin, MD
Professor, Graduate Institute of Clinical Medicine, NTUCM ; Attending Physician, NTUH

Chiao-Wen Chen, Ph.D
Executive Director, Institute for Drug Evaluation Platform, Development Center of Biology

Steven Witowski, Ph.D.
Principal of Witowski CMC Consulting, LLC

Dan Belmont, Ph.D.
Former Vice President, Head of Pharmaceutical Development at Vertex Pharmaceuticals, President of Full Sails Consulting LLC.

Cynthia Gao, MBA
Associate Director, US Commercial Distribution Quality, Biogen and Founder of Pharma Quality 360

Wen-Cherng Lee, Ph.D.
Former Biogen Director, former EVP, Chemistry of Kangpu Biopharmceuticals

Keep Deliver Sustainable Growth and Enhanced Value in 2021

Commercial

1. ONIVYDE® 2L PDAC treatment got reimbursements in Korea.
2. ONIVYDE® EU/Asia Royalties with strong growth momentum.
   - ➢ Sales in Japan staggering growth
3. ONIVYDE® 2L SCLC/1L PDAC phase III trial enrollment completed.

Pipeline

1. PEP07 preclinical progress as expectation
2. Early stage projects entering evaluation

Operation

1. +20% non-GAAP revenue as RD expenses
2. FY21 Cash and cash equivalents:
   - ➢ NTD$3.8 bn
3. Long-lasting dividend payout :
   - ➢ NTD$ 2.7/share (+8% YoY) 2021

FY21 Operational Overview

ONIVYDE® EU/Asia Royalties with strong growth momentum

Sales and Royalties Drives Long-term Growth

NTD $(000)

Items / Year	2017	2018	2019	2020	2021	20/21 YoY (%)
Taiwan Sales	40,651	87,384	180,389	214,828	235,469	9.6%
Royalties from Europe and Asia	63,526	109,825	133,651	271,584	419,366	54.4%
Milestone	749,500	96,221	0	569,600	0	-
Total	853,677	293,430	314,040	1,056,012	654,835	(40.8%)

5 yr CAGR. 42% (ex. milestone)

Taiwan Sales belongs to PharmaEngine, Inc.

Tiered royalties (high single – low double digit) in Europe/Asia (excl. TW) from Servier/IPSEN

FY21E Financial Results

NTD$ (000)	2021	2020	Amount Change	% Change
Operating revenue	654,835	1,056,012	(431,273)	(38)
Operating costs	37,073	37,234	(161)	(0.4)
Gross profit	617,762	1,018,778	(401,016)	(39)
Sales expenses	36,731	37,115	(384)	(1)
G&A expenses[1]	81,885	76,230	5,440	7
R&D expenses	136,887	95,728	41,159	43
Total operating expenses	255,073	209,073	46,000	22
Operating income	362,689	809705	(447,016)	(55)
Total non-operating income and expenses[2]	182,706	(57,230)	239,936	N.A.
Income before income tax	545,395	752,4745	(207,079)	(28)
Income tax expense	119,364	148,194	(28,830)	(19)
Profit for the period	426,031	604,281	(178,250)	(29)
Common stock	1,465,968	1,465,968	-	-
EPS(NT$)	2.95	4.15	(1.2)	(29)

1. Impairment loss (impairment gain and reversal of impairmen tloss) determined in accordance with IFRS 9: NTD$ 215K
2. non-operating income increased by PEP503 settlement: US$ 6.5M (NTD$ 182M)

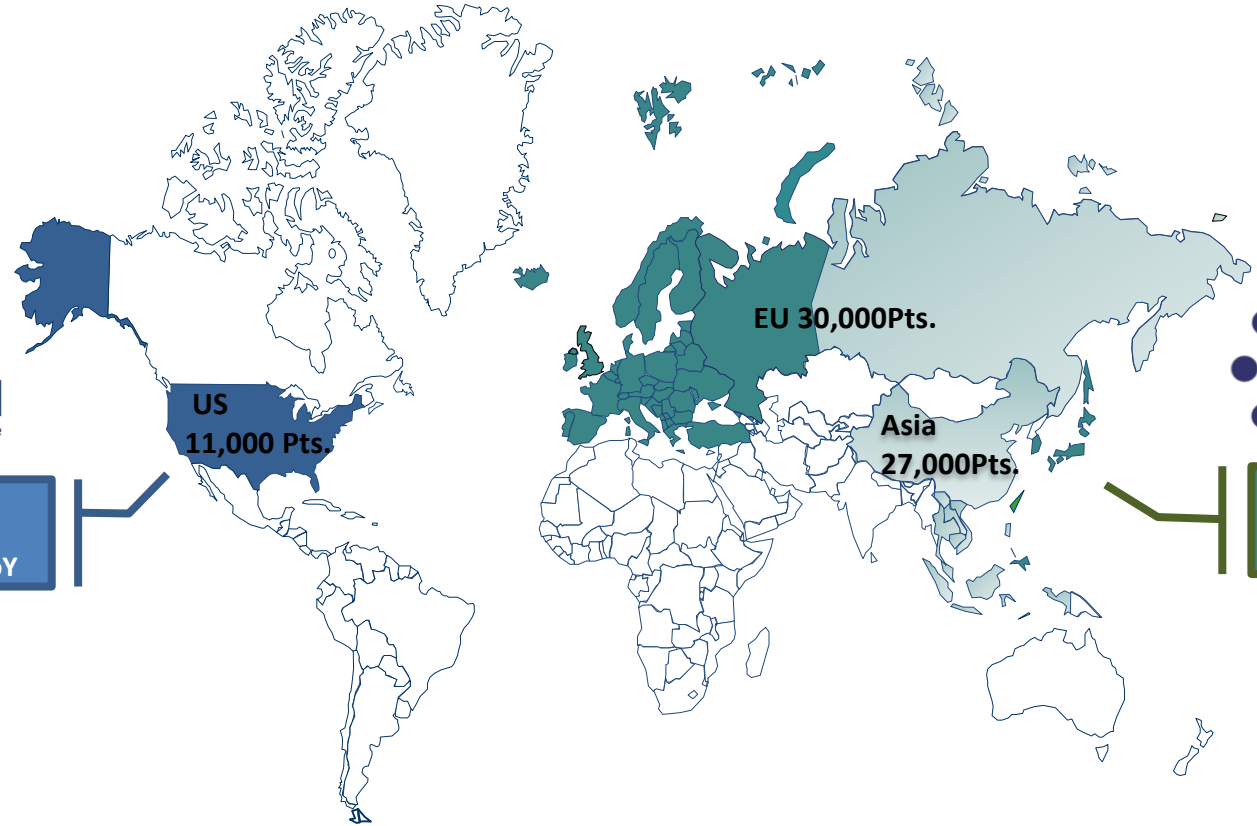
Research and development

ONIVYDE® with favorable Life Cycle Management

PEP07 (SOL-578) preclinical progress as expected

Multiple projects entering evaluation process

ONIVYDE® Has Strong Growth Momentum in Global at 2L PDAC



IPSEN
Innovation for patient care

FY21 US Sales

US$ 145M, +7% YoY

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FY21 Sales & Royalties

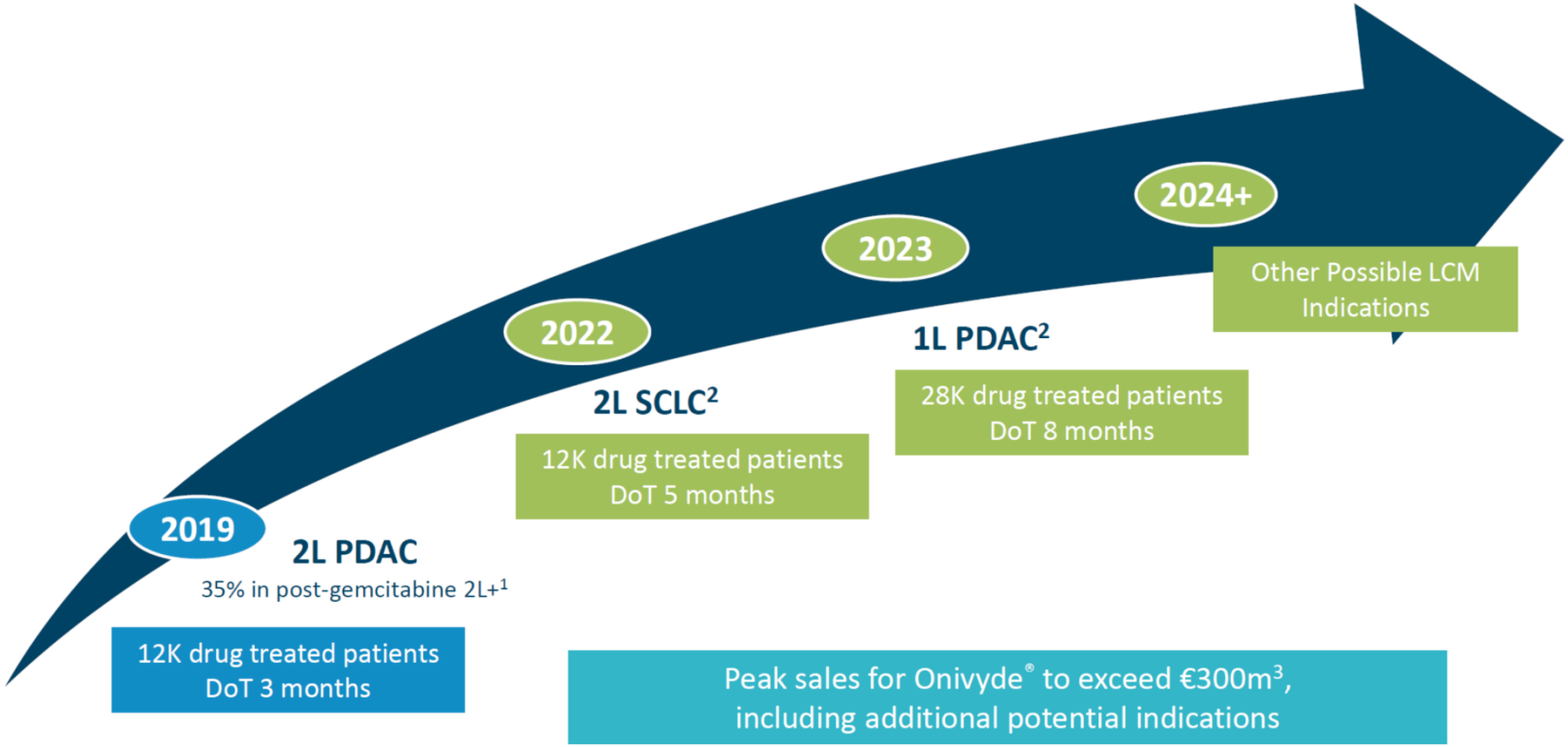
US$ 22.3M, +34.6% YoY

Approved

Yet approved

Patients are prescribed 3-4 vials of Onivyde every two weeks, with an average four-month regimen. Source: WHO ; Ipsen FY2021 earnigns

ONIVYDE® LCM: Expansion into New Tumor Types Globally



LCM: Life cycle management; PDAC: Pancreatic ductal adenocarcinoma; SCLC: Small cell lung cancer; DoT: Duration of treatment; 1L: First line; 2L: Second line; 1. IQVIA APLD claims, September 2020 ; 2. Expected submission dates ; 3. Risk adjusted; IPSEN Capital Market Day 2020

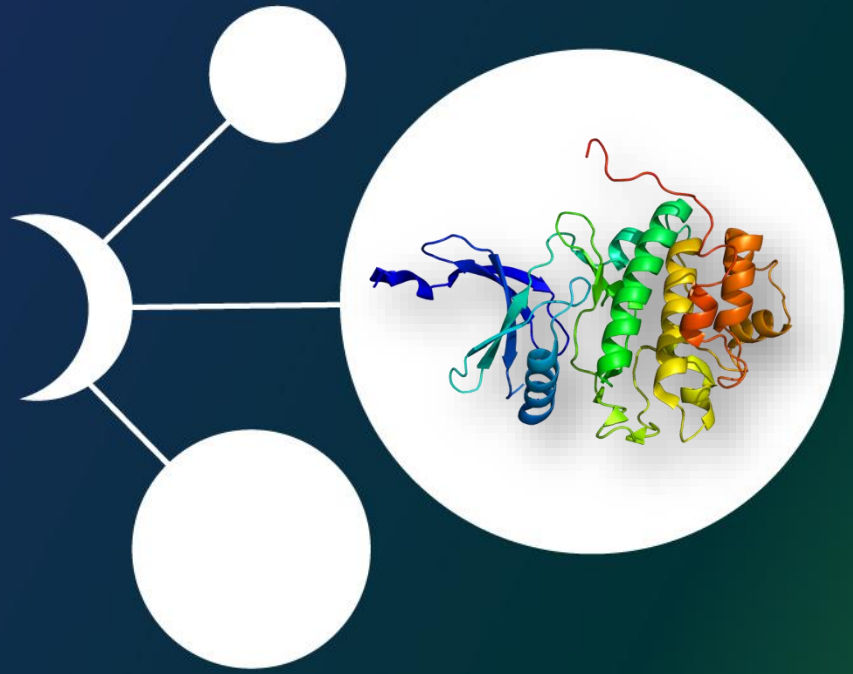
ONIVYDE® : Potential to Establish Standard of Care in Hard to Treat Cancers

1L PDAC	2L SCLC
5Y survival rate only 7%	5Y survival rate only 6%
Significant need for more effective therapies with reduced toxicity	Very few FDA approved therapies, highlighting need for new options
Ability to build on successful approvals for 2L PDAC & leverage our global partners to establish new SoC	Improved toxicity profile versus SoC chemotherapies with severe side effects
Existing commercial infrastructure & medical capabilities by our global partners	Strong leverage of current organization by our global partners

Source: IPSEN Capital Market Day 2020

PEP07 (SOL-578)

Preclinical progress as expectation



International Collaboration

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Sentinel ONCOLOGY

Founded	2005
Location	Cambridge, UK
Type	Privately Held
Focus	Oncology, Drug Discovery, Medicinal Chemistry & Collaboration
Partnerships	PHORMOST DRUGGING THE UNDRUGGABLE; SeattleGenetics; CASCADIAN THERAPEUTICS

Robert Boyle
CEO & Board of Directors

Stuart Travers
COO & Board of Directors

PEP07 (SOL-578) – Best in Class CHK1 Inhibitor

PEP07 (SOL-578) is a brain penetrating oral inhibitor which is more potent, selective and specific.

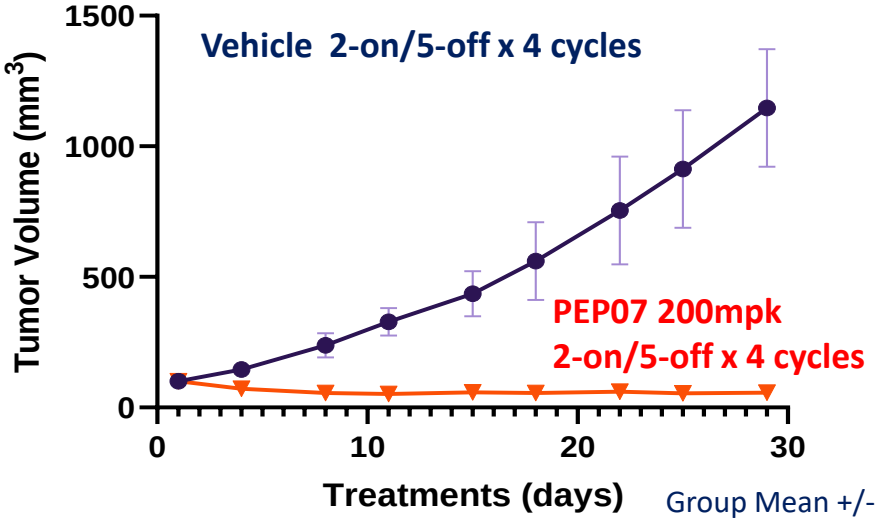
	Drug	Potency	Selectivity	Specificity	Oral Bioavailability
Eli Lilly	LY2606368				
Genetech	GDC-0575				
Sierra Oncology	SRA-737				
Esperas Pharma	LY2880070				
PEI/Sentinel	PEP07/SOL-578				

Excellent Good Fair Poor Unknown

PEP07 (SOL-578) : Significant Efficacy in Hematologic Malignancies as Monotherapy and Combination therapy

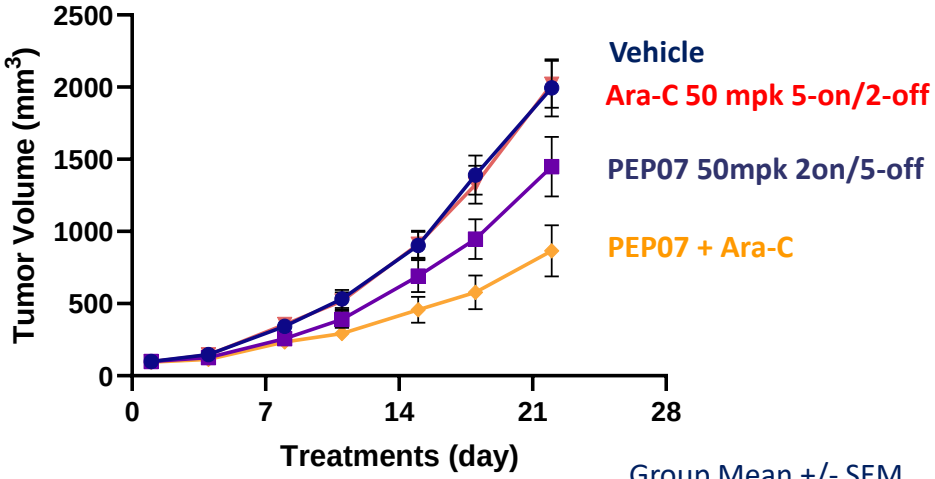
Acute Myeloid Leukemic (AML)

Ara-C Sensitive



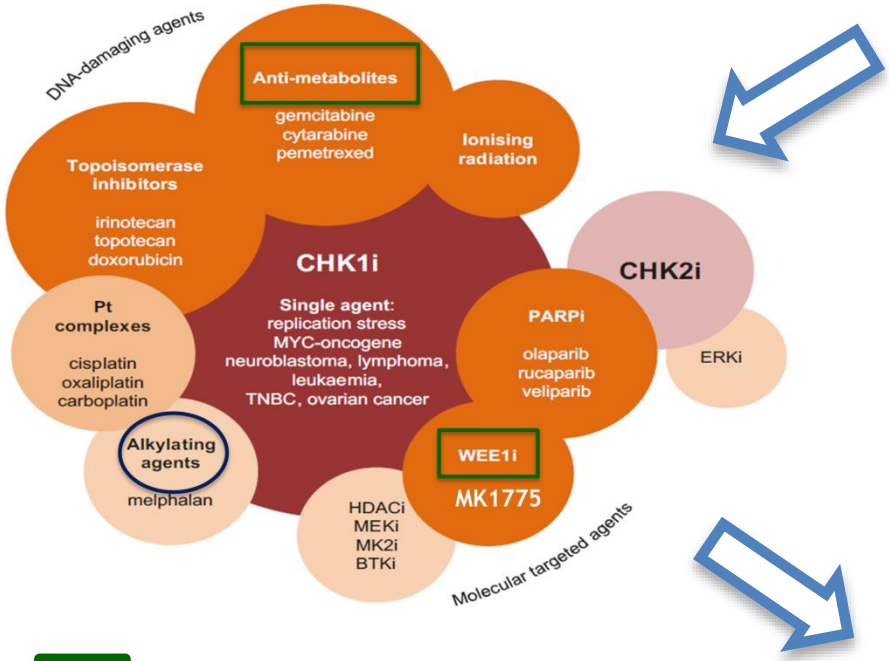
Group Mean +/- SEM
n=8/group

Ara-C Resistant



Group Mean +/- SEM
n=8/group

PEP07 (SOL-578) for Potential Combination Therapies



: Synergistic effect verified in PEP07
: Additive effect observed in PEP07

In vitro Combo treatment

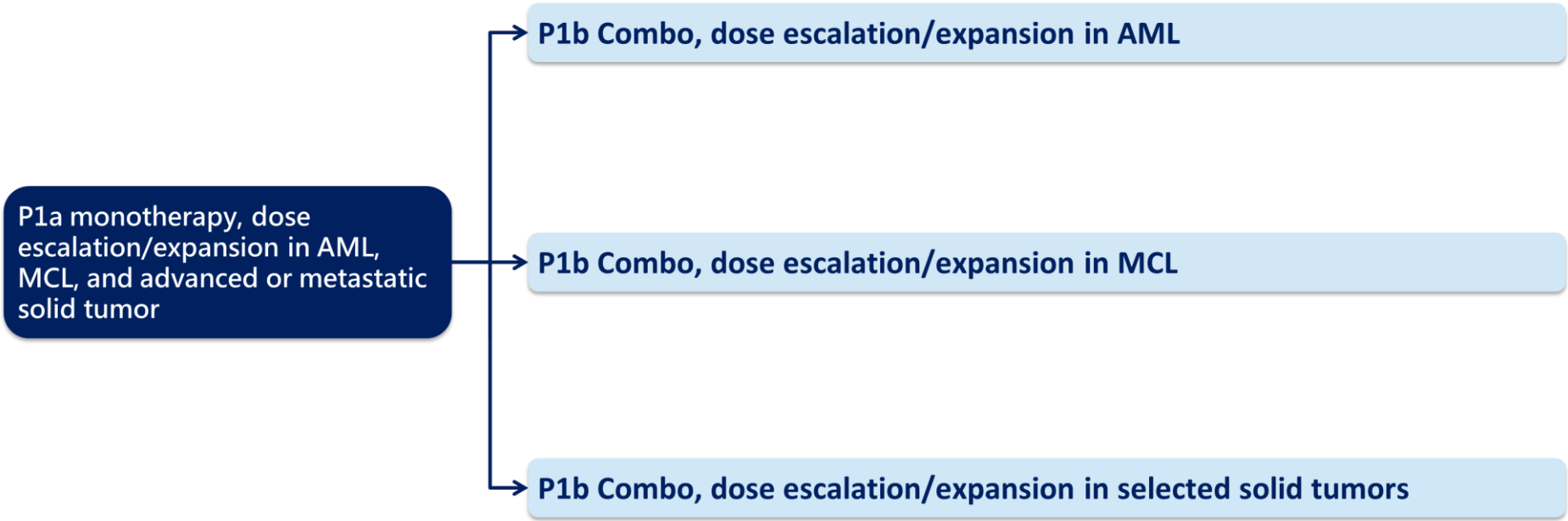
SoC agents	Indication	Cell line
Ara-C	AML	MV4-11 / THP-1
Gemcitabine	NSCLC	NCI-H1703
5-Fu	Esophagus	KYSE-270
5-Fu	Stomach	MKN-45, SNU-16, SNU-5,
5-Fu	CRC	DLD-1, HT-29, SW480
TMZ	Brain	IMR-32
Sorafenib	RCC	A498

Green: Synergism ; Blue: Additivity

Clinical Trial Designs and Indications Guidance

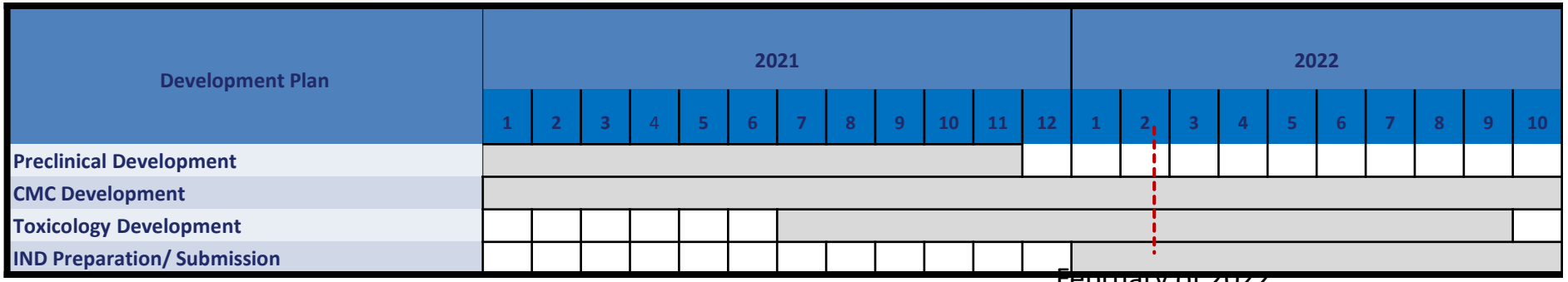
Targeting the DNA Damage Response for Anti-Cancer Therapy 241-276, 2018

PEP07 (SOL-578) Early Clinical Development Plan



Preclinical biomarker study is ongoing for further design of clinical trials

PEP07 (SOL-578) IND Development Plan



Preclinical

Anti-tumor efficacy in two AML models and MCL model
Synergistic with Ara-C including Ara-C resistance model
Efficacy study for solid tumors ongoing
Biomarker evaluation ongoing

CMC

Identified novel salts
Kg-scale ready for GMP production

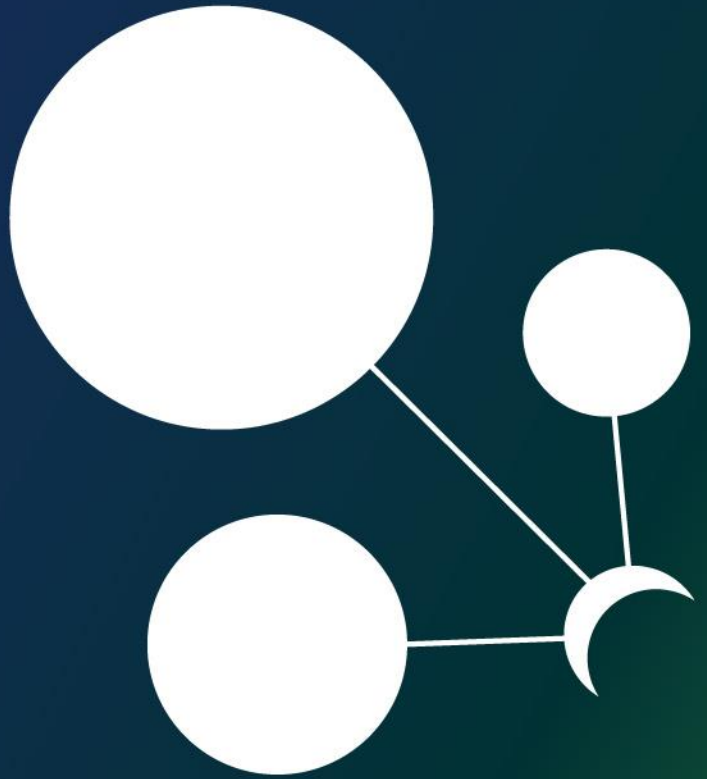
Toxicology

GLP study initiated

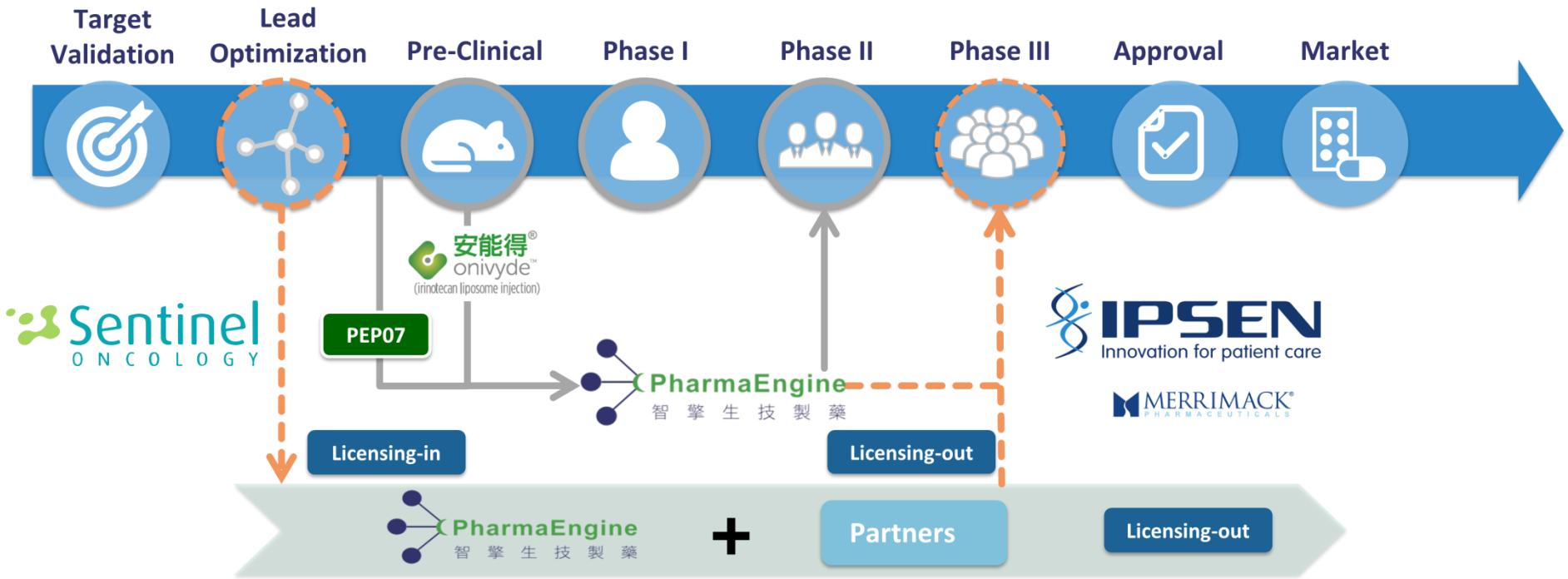
IND Prep. & Sub.

Target submission on 2022Q3

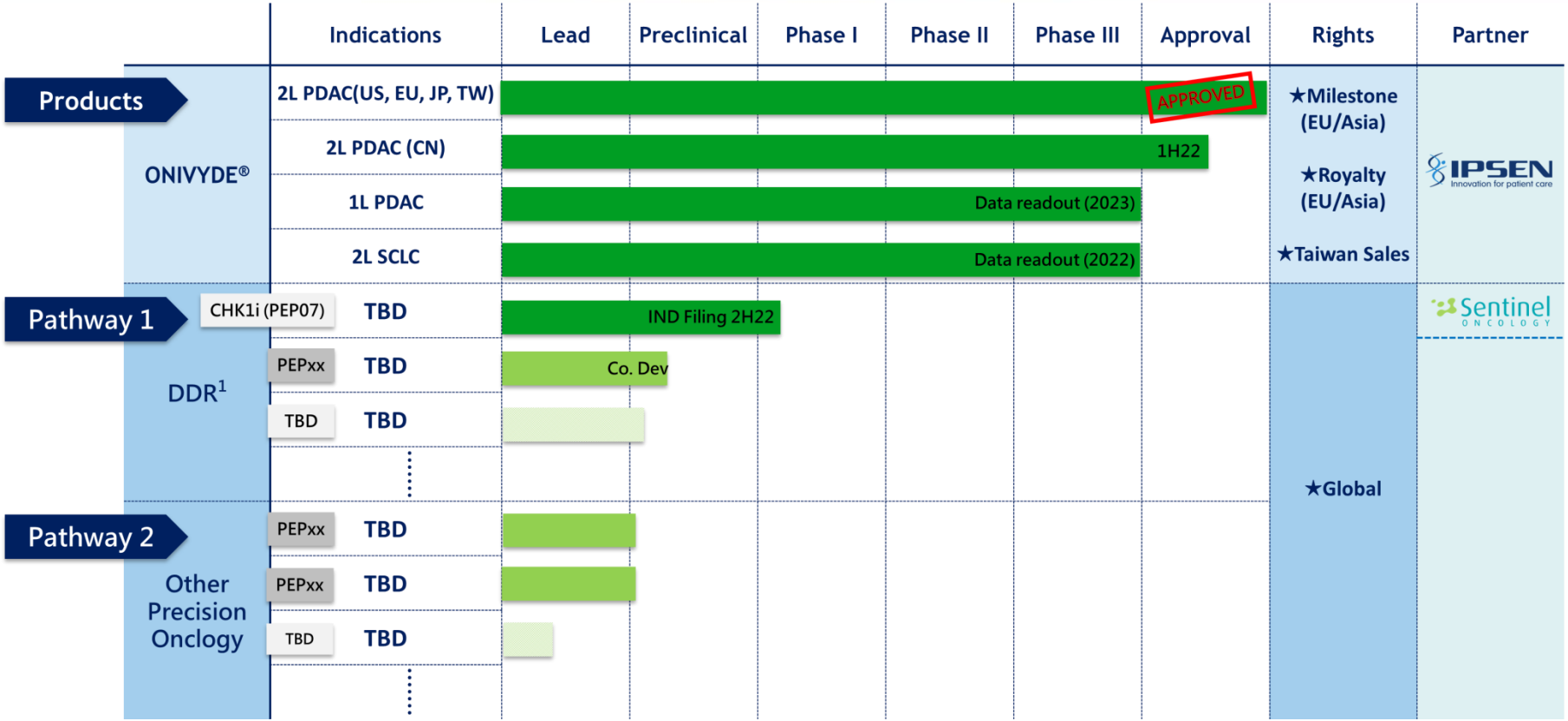
Vision for 2022



Virtual Pharmaceutical Company Business Model



Pipeline Portfolio



1. DDR: DNA Damage Response (BRCA1/2, CHK1/2, WEE1, etc…)

2022: Year of Revitalization and Marching Forward

Growth through ONIVYDE® life cycle management

1. 2L PDAC get approval and reimbursement in additional countries
2. 2L SCLC Phase III data readout
3. 1L PDAC Phase III data readout (2022/2023)

Advancement and growth of early-stage pipeline

1. PEP07 IND/CTA submission and approval
2. 2nd DDR project
3. Other precision oncology projects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