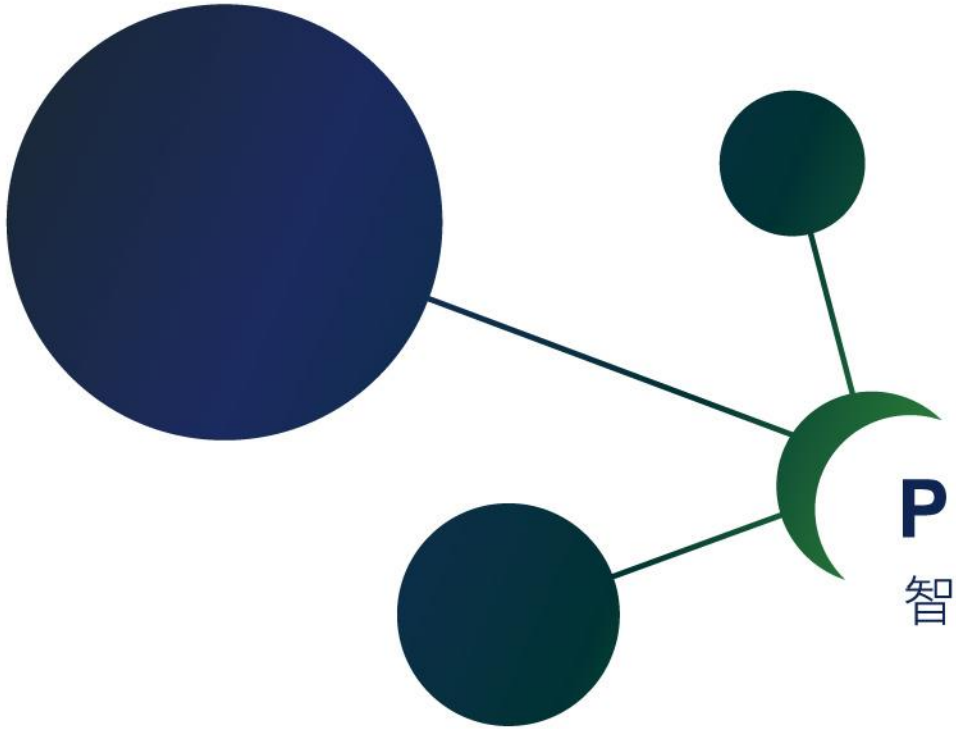

PharmaEngine

智 擎 生 技 製 藥

2022 QIC Healthcare Forum

Hong-Ren Wang, Ph.D.

President and CEO

Disclaimer

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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:

1. Pricing and product initiatives of competitors
2. Legislative and regulatory developments and economic conditions
3. Delay or inability in obtaining regulatory approvals or bringing products to market
4. Fluctuations in currency exchange rates and general financial market conditions
5. Uncertainties in the discovery, development, or marketing of new products or new uses of existing products, including without limitation negative results of clinical trials or research projects, unexpected side effects of pipeline or marketed products
6. Increased government pricing pressures
7. Interruptions in production
8. Loss of or inability to obtain adequate protection for intellectual property rights
9. Litigation
10. Loss of key executives or other employees
11. Adverse publicity and news coverage

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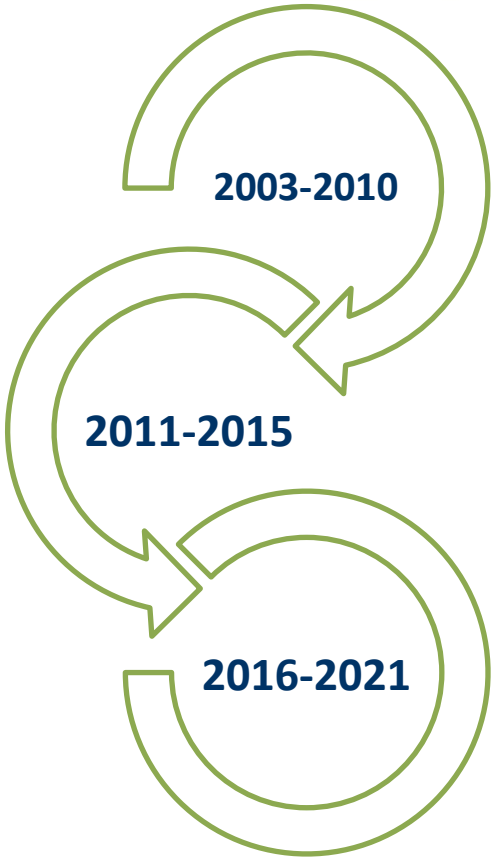
Mission

Unlock value for promising therapeutic candidates & Extend patients' lives

Vision

Top tier innovative oncology drug development company in Asia

2022 Marks PharmaEngine's 20th Year Committing to Oncology New Drug Development



2003- 2010

- Founded the Company
- Licensed-in PEP02 for Asia territory in 2003
- Expanded PEP02 license to the EU territory in 2005
- Completed PEP02 Phase 2 study for 2nd-line PDAC in the US and TW in 2010

2011-2015

- Licensed-out PEP02 (ONIVYDE®) in 2011
- IPO at Taipei Exchange in 2012
- Turned profitable since 2014
- ONIVYDE® as First US FDA approved cancer drug from Taiwan in 2015
- ONIVYDE® listed as SoC for 2L PDAC in ESMO clinical guideline since 2015

2016-2021

- ONIVYDE® listed as SoC for 2L PDAC in NCCN clinical guideline since 2016
- Built a marketing & sales team in Taiwan in 2016
- First sales milestone achievement in 2020
- Exclusive collaboration with Sentinel Oncology for PEP07 in 2020

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, Taiwan

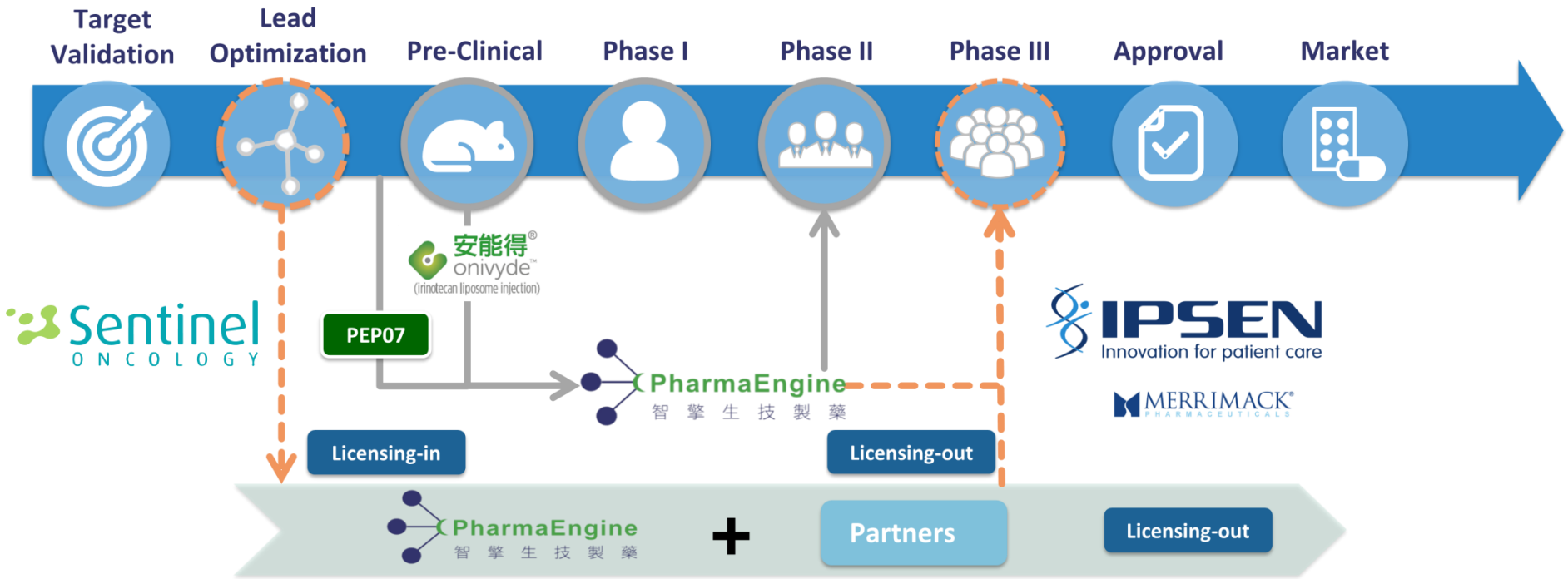
Steven Witowski, Ph.D.
Principal of Witowski CMC Consulting, LLC

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

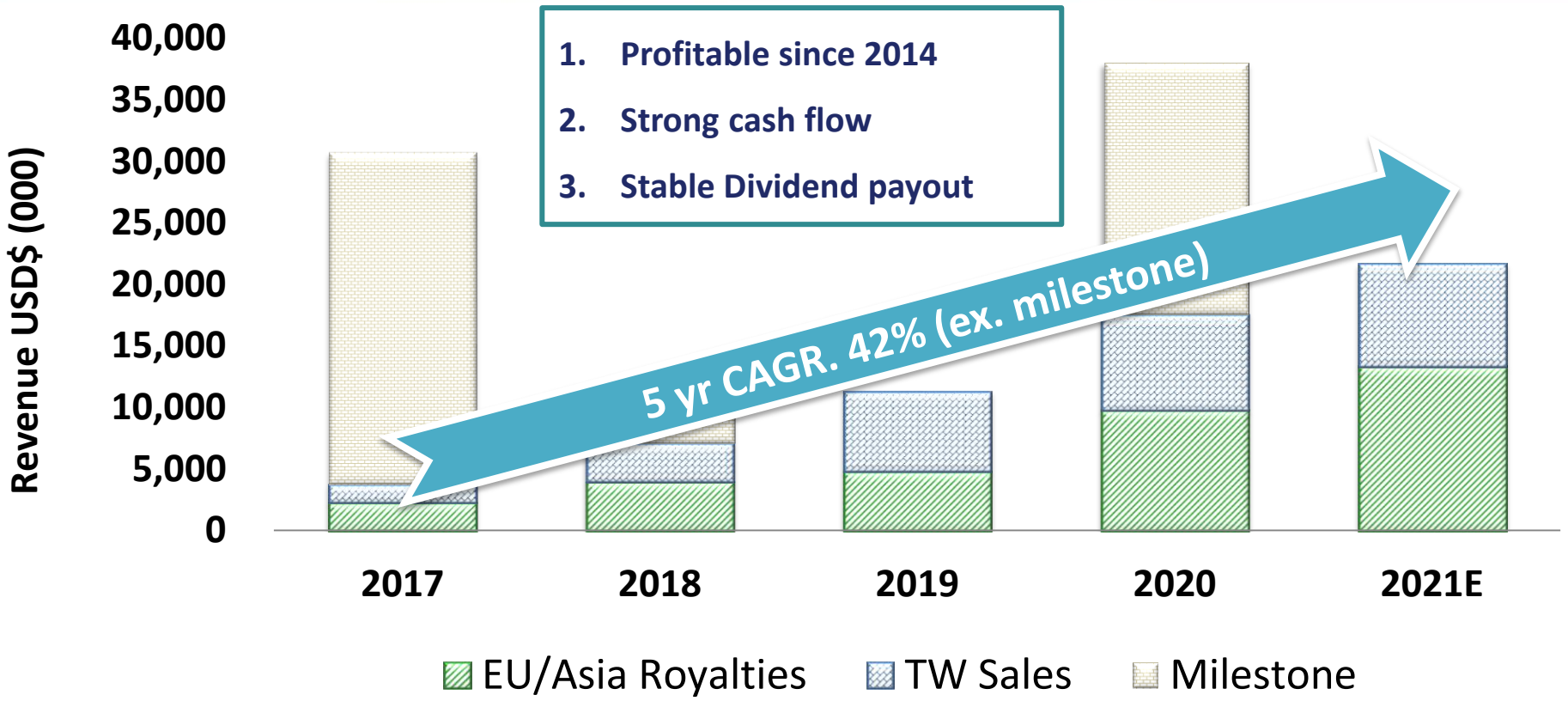
Cynthia Gao, MBA
Associate Director, US Commercial Distribution Quality, Biogen and Founder of Pharma Quality 360

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

Virtual Pharmaceutical Company Business Model



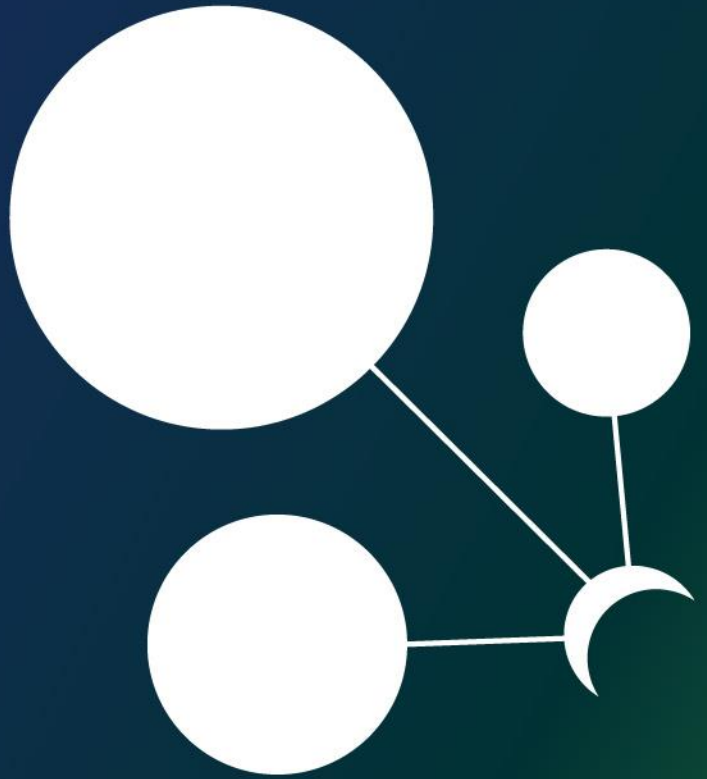
Profitable R&D Biotech



Taiwan Sales belongs to PharmaEngine, Inc.

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

Vision 2025



Vision 2025 to Deliver Sustainable Growth and Enhanced Value

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Commercial

ONIVYDE® life cycle management (LCM) through new indications and market expansion with our partners

Pipeline

Pipeline delivering

1 Mid stage projects for out-license

2 Early stage projects at Phase I/II

3 Lead optimization/preclinical projects

Operation

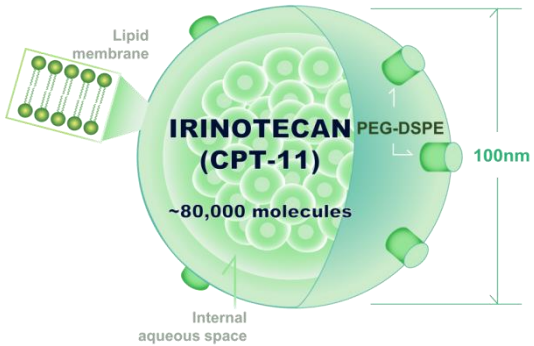
- +20% non-GAAP revenue as RD expenses
- Long-lasting dividend payout
- In/Out-license or M&A

Commercial

ONIVYDE® Life Cycle Management

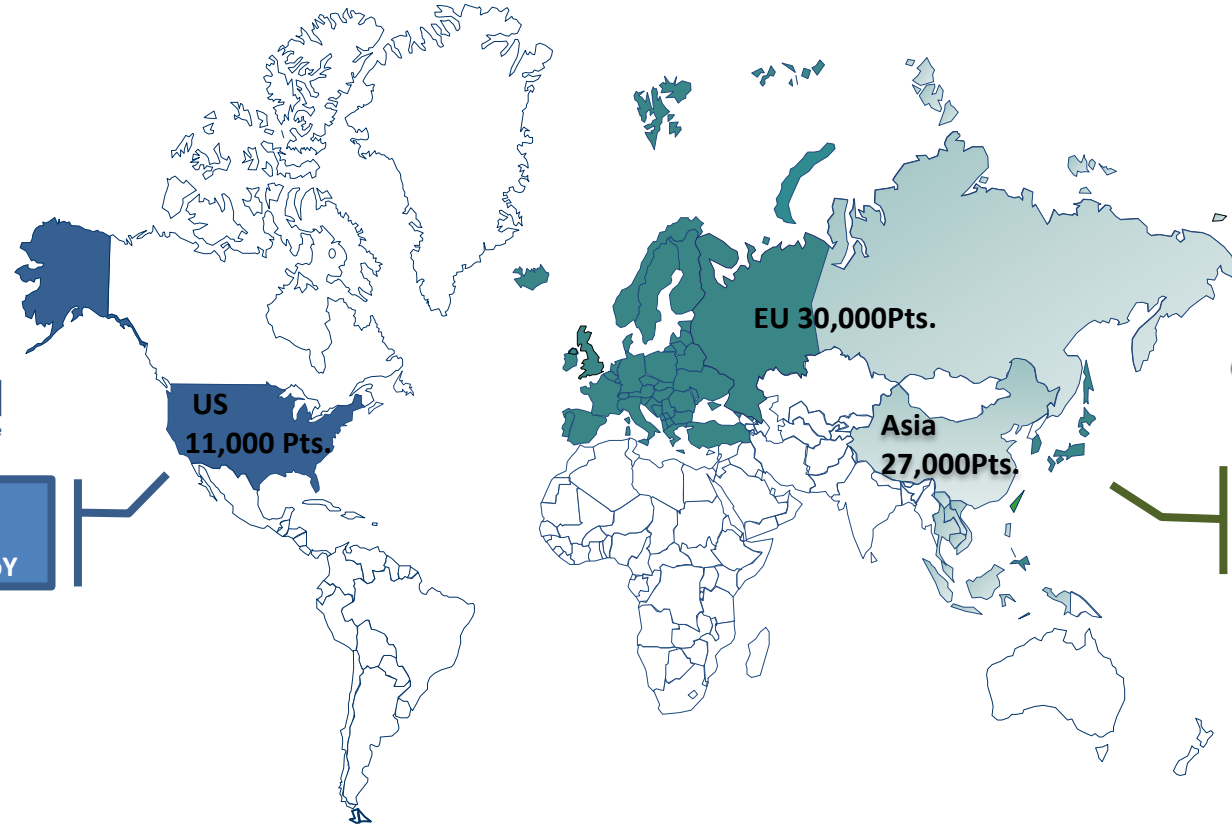
ONIVYDE® as Global 2L PDAC (post-Gemcitabine) Standard of Care

- First FDA-approved drug in post-gemcitabine pancreatic cancer
- Category 1 evidence in NCCN and ESMO clinical practice guideline



- ONIVYDE® is a liposome formulation of irinotecan
- Sustained release profile
- Preferential tumor accumulation
- Site-specific activation

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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3Q21 Sales & Royalties

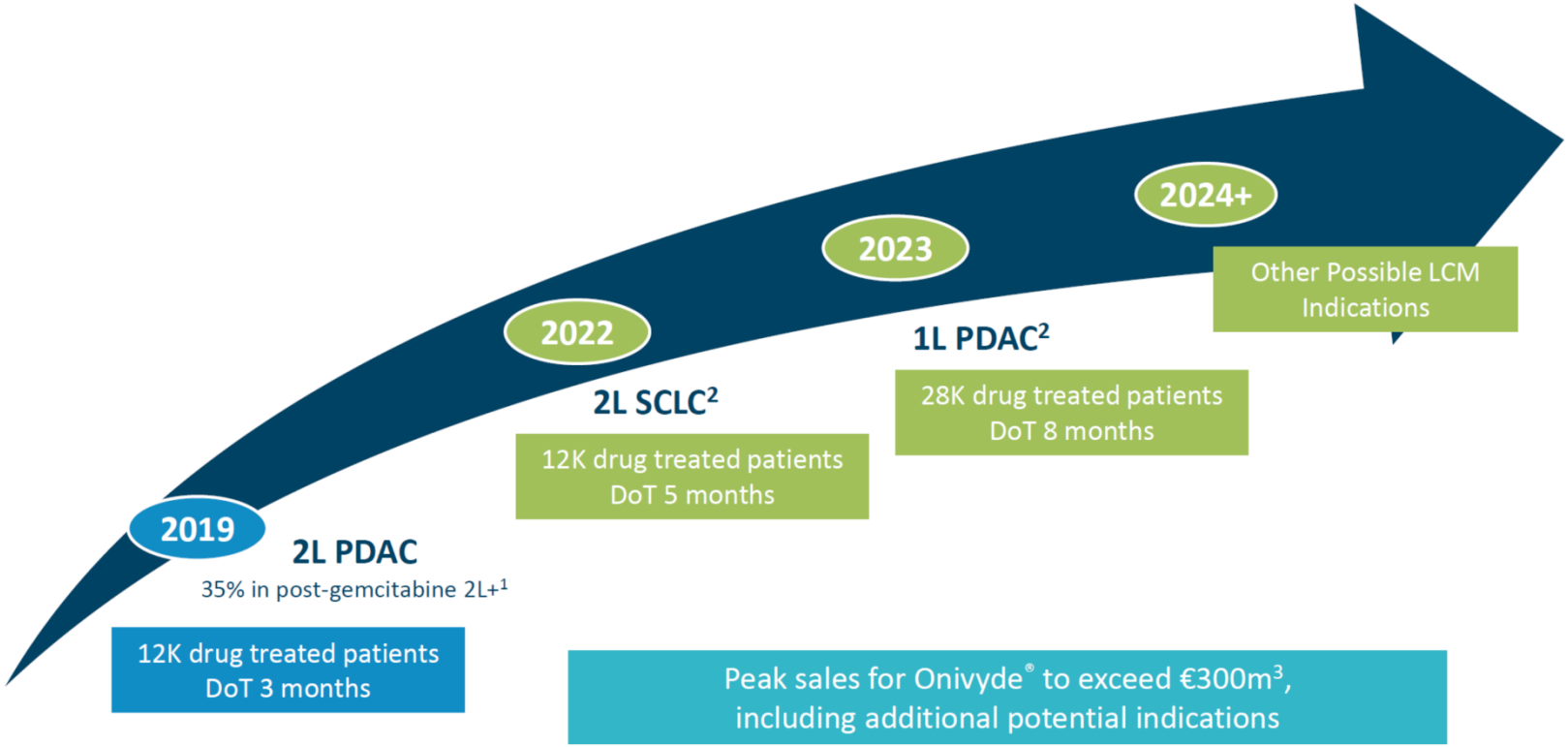
US$ 16.2M, +67% YoY

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



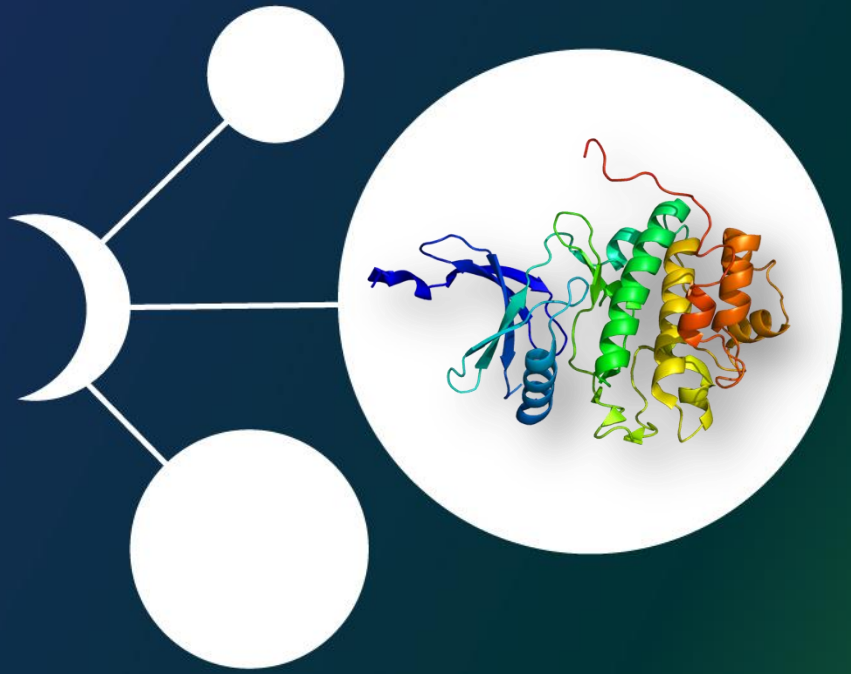
LCM: Life cycle management; PDAC: Pancreatic ductal adenocarcinoma; SCLC: Small cell lung cancer; DoT: Duration of treatment; 1L: First line; 2L: Second line; 1. IQVIA APLD claims, September 2020 ; 2. Expected submission dates ; 3. Risk adjusted; IPSEN Capital Market Day 2020

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

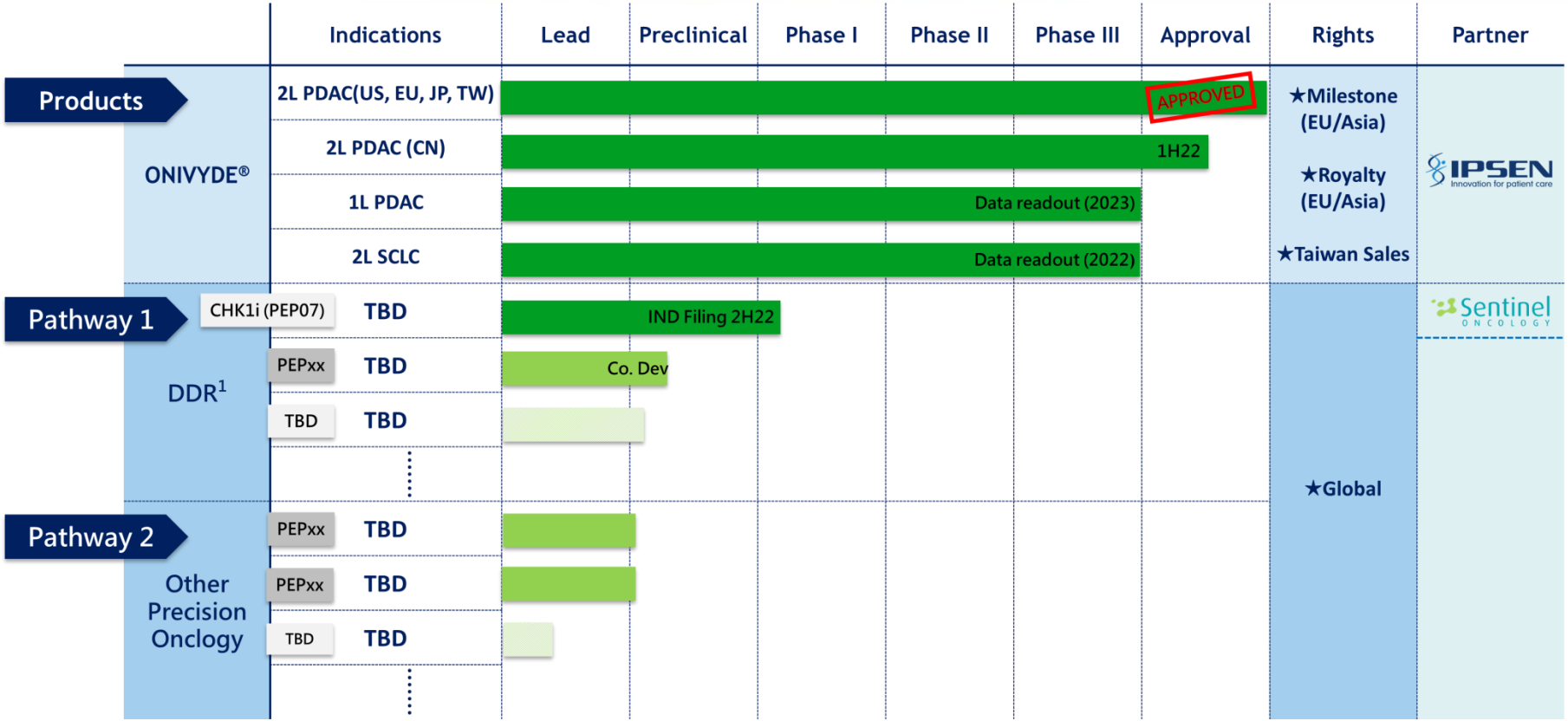
1L PDAC	2L SCLC
5Y survival rate only 7%	5Y survival rate only 6%
Significant need for more effective therapies with reduced toxicity	Very few FDA approved therapies, highlighting need for new options
Ability to build on successful approvals for 2L PDAC & leverage our global partners to establish new 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

R&D Portfolio



Pipeline Portfolio



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

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

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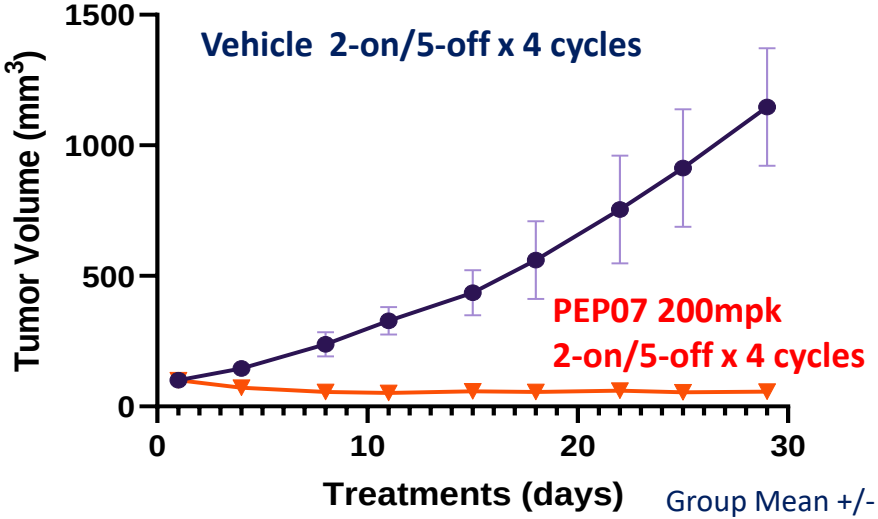
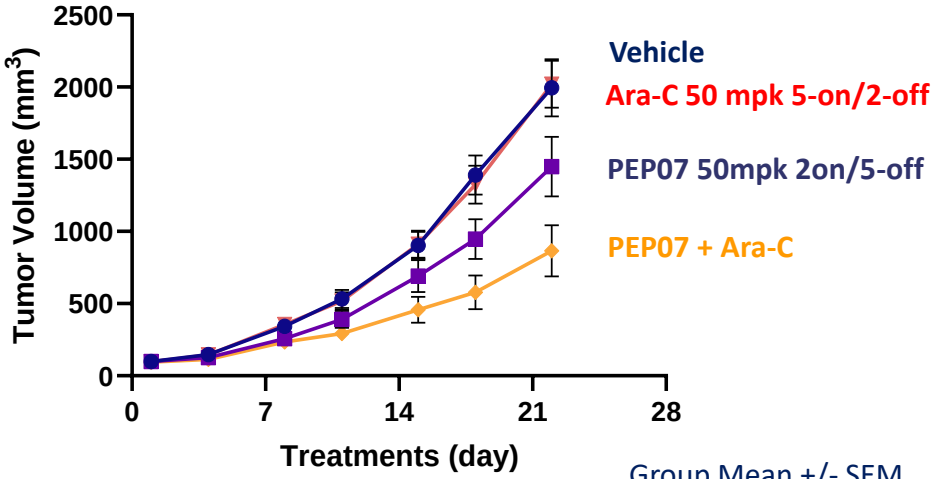
Acute Myeloid Leukemic (AML)

Ara-C Sensitive



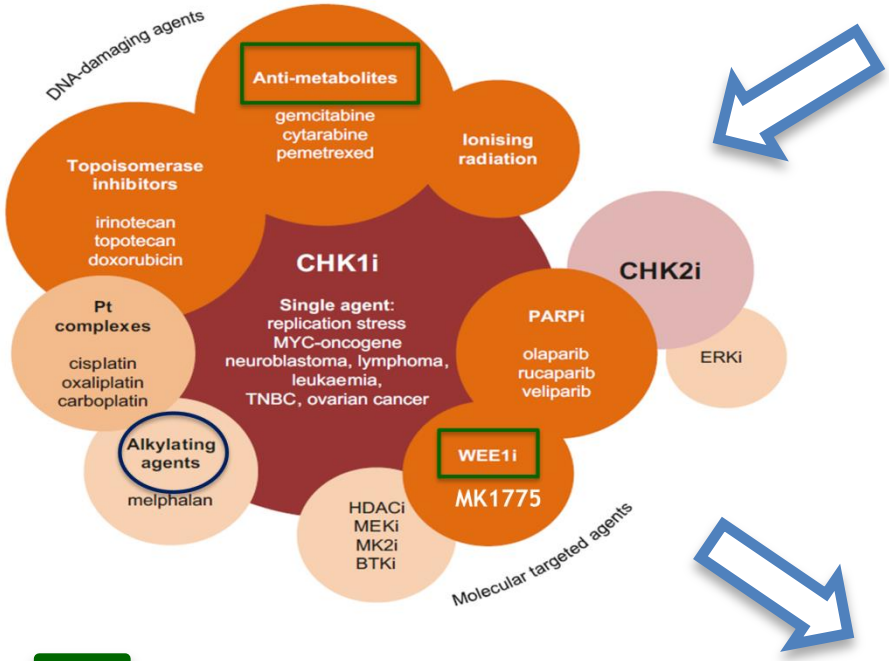
Group Mean +/- SEM
n=8/group

Ara-C Resistant



Group Mean +/- SEM
n=8/group

PEP07 (SOL-578) for Potential Combination Therapies



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

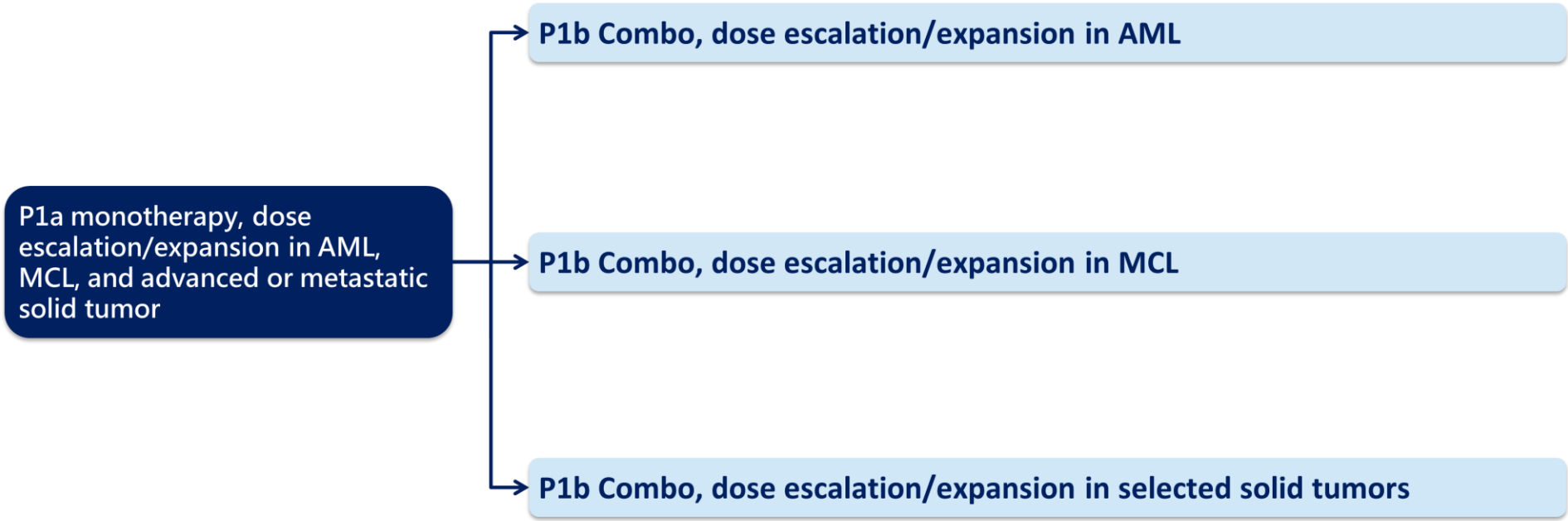
Green: Synergism ; Blue: Additivity

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

Clinical Trial Designs and Indications Guidance

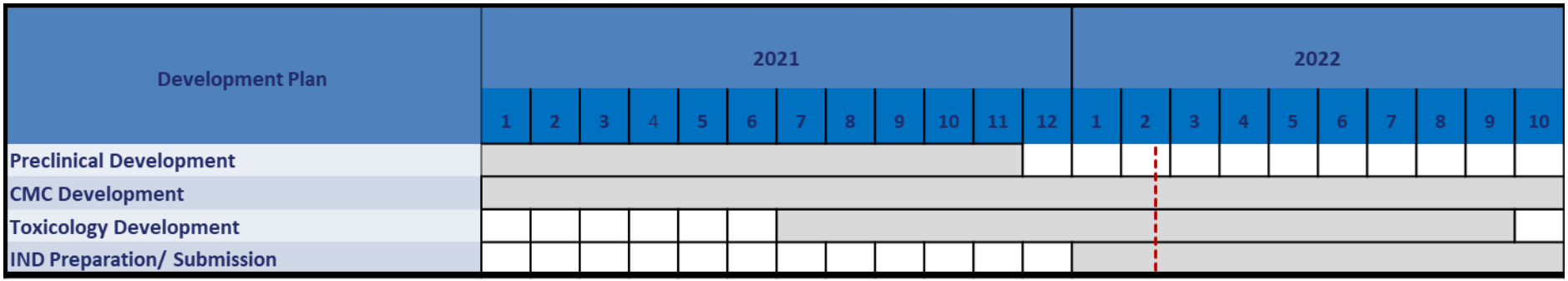
Targeting the DNA Damage Response for Anti-Cancer Therapy 241-276, 2018

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

2022: Year of Revitalization and Marching Forward

Growth through ONIVYDE® life cycle management

1. 2L PDAC get China (NMPA) approval
2. Reimbursement in additional EU countries for 2L PDAC indication
3. 2L SCLC Phase III data readout
4. 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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