



# Developing a Novel Approach to Treat Metastatic Solid Tumors

*James Nathanielsz, Chief Executive Officer*

# Forward-Looking Statement

The information in this presentation is provided to you by Propanc Biopharma, Inc. (the "Company") solely for informational purposes and is not an offer to buy or sell, or a solicitation of an offer to buy or sell, any security or instrument of the Company, or to participate in any investment activity or trading strategy, nor may it or any part of it form the basis of or be relied on in connection with any contract or commitment in the United States or anywhere else. By viewing or participating in this presentation, you acknowledge and agree (i) that the information contained in this presentation is intended for the recipient of this information only and shall not be disclosed, reproduced or distributed in any way to anyone else, (ii) that no part of this presentation or any other materials provided in connection herewith may be copied, retained, taken away, reproduced or redistributed following this presentation, (iii) that all participants must return all materials provided in connection herewith to the Company at the completion of the presentation, and (iv) to be bound by the foregoing limitations.

No representations, warranties or undertakings, express or implied, are made and no reliance should be placed on the accuracy, fairness or completeness of the information, sources or opinions presented or contained in this presentation, or in the case of projections contained herein, as to their attainability or the accuracy and completeness of the assumptions from which they are derived, and it is expected that each prospective investors will pursue his, her or its own independent investigation. The statistical and industry data included herein was obtained from various sources, including certain third parties, and has not been independently verified. By viewing or accessing the information contained in this presentation, the recipient hereby acknowledges and agrees that neither the Company nor any of its shareholders, employees, officers, directors, affiliates, advisers, agents or representatives (collectively, "Representatives") accepts any responsibility for or makes any representation or warranty, express or implied, with respect to the truth, accuracy, fairness, completeness or reasonableness of the information contained in, and omissions from, these materials, and that neither the Company nor any of its Representatives accepts any liability whatsoever for any loss howsoever arising from any information presented or contained in these materials.

This presentation contains forward-looking statements, including descriptions about the intent, belief or current expectations of the Company and its management about future performance and results. Such forward-looking statements are not guarantees of future performance and involve known and unknown risks, uncertainties and other factors which may cause actual results, performance or achievements to differ materially from those expressed or implied by such forward-looking statements. These factors include uncertainties as to the Company's ability to continue as a going concern absent new debt or equity financings; the Company's current reliance on substantial debt financing that it is unable to repay in cash; the Company's ability to successfully remediate material weaknesses in its internal controls; the Company's ability to reach research and development milestones as planned and within proposed budgets; the Company's ability to control costs; the Company's ability to obtain adequate new financing on reasonable terms; the Company's ability to successfully develop PRP, its lead product candidate; the Company's ability to obtain and maintain patent protection; the Company's ability to recruit employees and directors with accounting and finance expertise; the Company's dependence on third parties for services; the Company dependence on key executives; the impact of government regulations, including FDA regulations; the impact of any future litigation; the availability of capital; changes in economic conditions, competition; and other risks, including, but not limited to, those described in the Company's Registration Statement on Form S-1, filed with the U.S. Securities and Exchange Commission (the "SEC") on October 17, 2018, and in the Company's other filings and submissions with the SEC. These forward-looking statements speak only as of the date set forth below and the Company disclaims any obligations to update these statements except as may be required by law. Neither the Company nor any of its Representatives has any obligation to, nor do any of them undertake to, revise or update the forward-looking statements contained in this presentation to reflect future events or circumstances.

This presentation speaks as of August 27, 2020. The information presented or contained in this presentation is subject to change without notice and its accuracy is not guaranteed. Neither the delivery of this presentation nor any further discussion of the Company or any of its Representatives with any of the recipients shall, under any circumstances, create any implication that there has been no change in the affairs of the Company since that date.

# Summary

---

**1** Overview

**2** Lead Asset: PRP

**3** Rec-PRP Program

**4** Corporate Overview

# Investment Highlights



Generated compassionate use (CU) data across **46 terminal patients where 41% exceeded life expectancy** without any serious adverse events



Initially targeting Pancreatic and Ovarian cancers with **combined TAM of \$14.3B** and long-term strategy of targeting metastatic solid tumors (**~\$111B TAM**)



Ready to initiate a **Phase 1b clinical study in 30 - 40 patients** to study the safety and efficacy of PRP with expected results in 2025



**Unique ability to convert cancerous cells back into healthy cells.** Post-treatment data shows Colorectal and Pancreatic cancer cells returned to homeostasis

# Senior Leadership with Extensive Experience

## Management



**James Nathanielsz**  
Chief Executive & Chief  
Financial Officer

- Director & CEO since Oct. 2007
- 25 yrs. experience in R&D, Manufacturing & Distribution, including 15 yrs. in oncology pharmaceutical drug development.
- Bachelor of Applied Science (Biochemistry/ Applied Chemistry) & Master of Entrepreneurship & Innovation



**Dr. Julian Kenyon**  
Chief Scientific Officer

- Co-Founder & Director, Feb '08.
- Medical Director of the Dove Clinic for Integrated Medicine, UK
- Bachelor of Medicine & Surgery & Doctor of Medicine, University of Liverpool, UK
- Primary Fellow of the Royal College of Surgeons, Edinburgh for over 40 years



**Prof. Klaus Kutz**  
Chief Medical Officer

- 25 yrs. Experience in Clinical Pharmacology & Safety in oncology
- 12 yrs. experience Head of Clinical Pharmacology in 2 multinational pharma companies
- Specialist for Internal Medicine, Gastroenterology & Clinical Pharmacology
- Professor of Medicine, University of Bonn, Germany



**Mr. Josef Zelinger**  
Non-Executive Director

- 45 yrs. Experience in tax auditing, finance, investment and management consulting
- Director of several private investment companies in commercial real estate, import/export businesses and financial investments
- Bachelor of Business (Accounting), RMIT University, Fellow of RMIT University (Business)

## Scientific Advisory Board (SAB)

**Prof. Macarena Perán**  
University of Jaén

**Prof. Juan Marchal Corrales**  
University of Granada

**Dr. Maria Garcia**  
University Hospital

**Dr. Ralf Brandt**  
vivoPharm Co-Founder

# Focused Pipeline Candidates

Indications	Drug Candidate	Discovery	Preclinical	Phase 1	Phase 2	Status	
Pancreatic Cancer (ODD*) Ovarian Cancer	<b>PRP</b> (Trypsinogen + Chemotrypsinogen)						<i>Initiate Phase 1b in 2H 2024; Interim results expected in 2025</i>
	<b>POP1</b> Synthetic (Trypsinogen + Chemotrypsinogen)					<i>Entering preclinical development 2H 2024</i>	

\* = Orphan Drug Designation

Clinical Partners

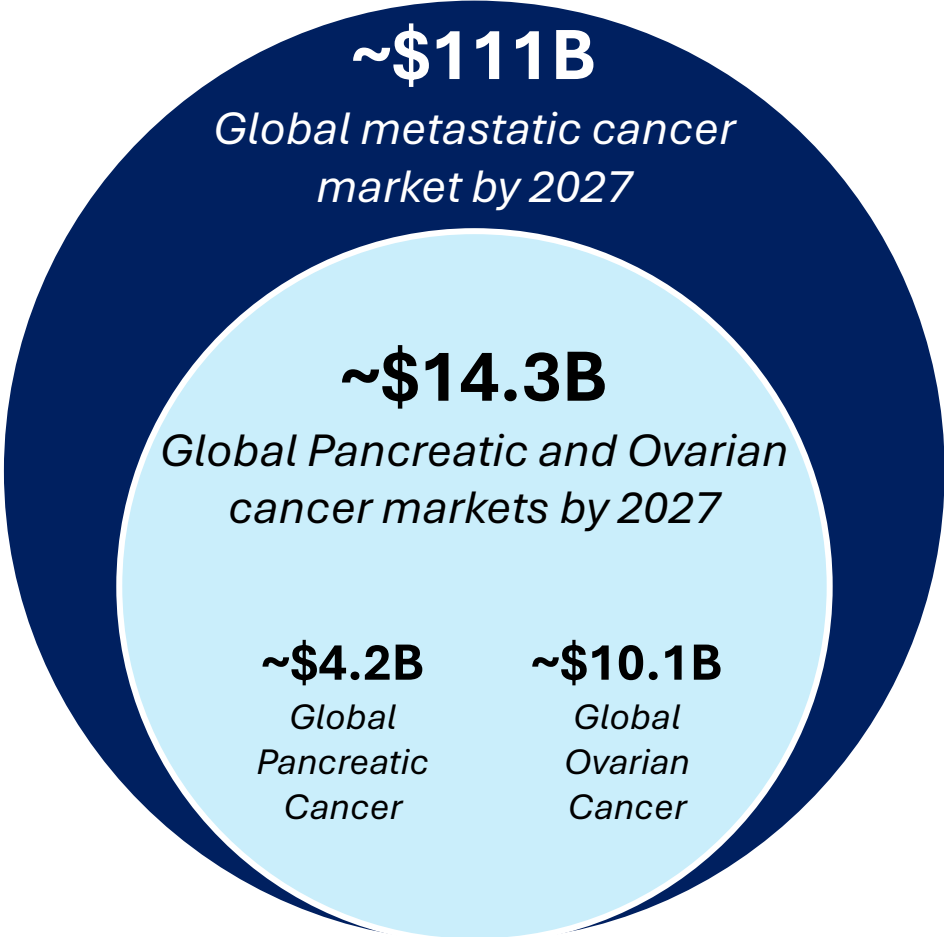
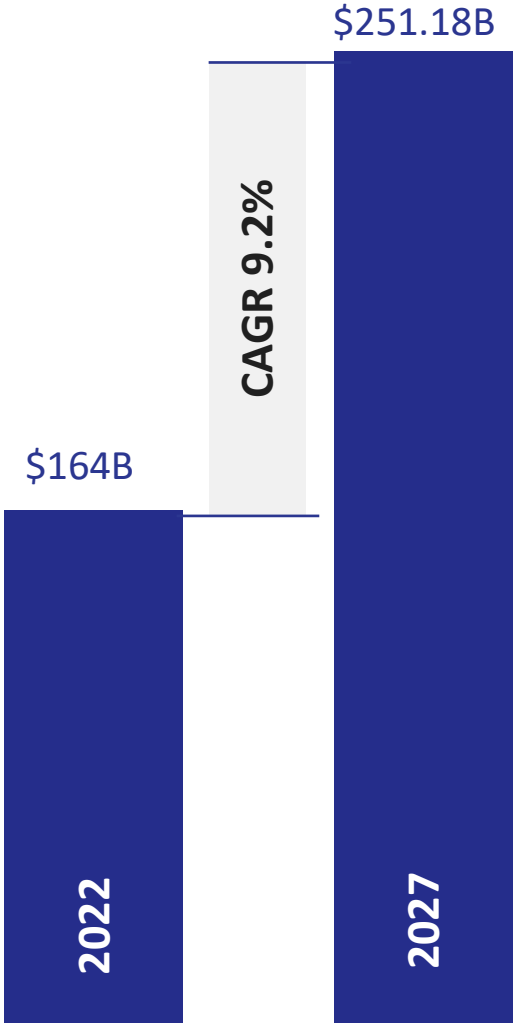


CDMO



# Large Addressable Market with Unmet Need

Global Cancer Treatment Market Size



**91%**  
*of cancer cases are solid tumors*

**1.8M**  
*New cases of solid tumors in the U.S.*

**~670k**  
*Pancreatic and ovarian cancer deaths in 2022*



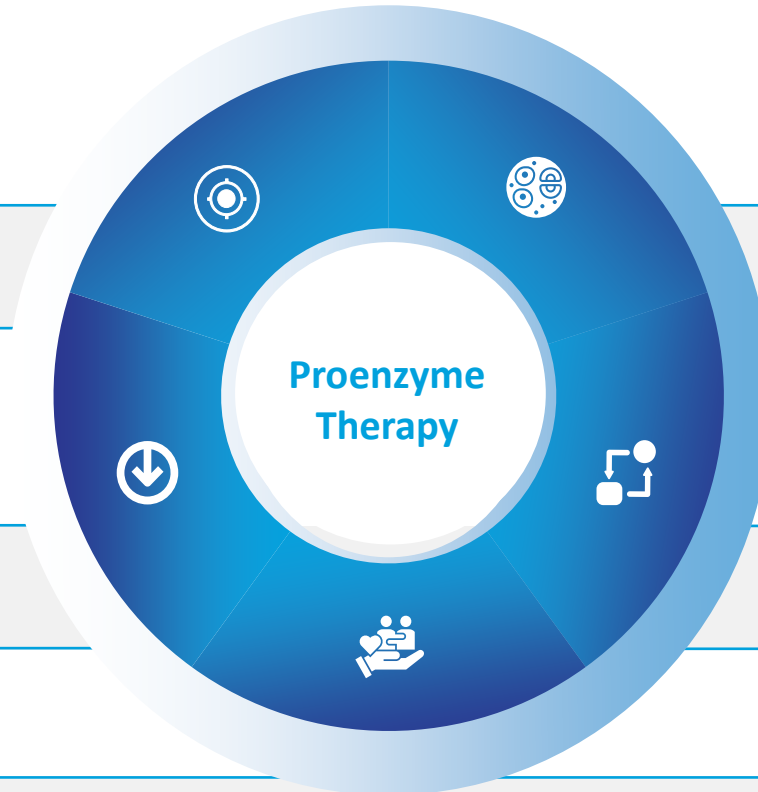
# PRP

*A synergistic combination of Trypsinogen and Chymotrypsinogen*



# Technology Based on Pancreatic Enzyme Therapy

*Propanc Biopharma's PRP (Proenzyme Therapy) offers a groundbreaking approach to treating metastatic solid tumors, addressing critical challenges in the cancer treatment market.*



✓ Selective Targeting of Tumor Cell

Targeting Cancer Stem Cells ✓

✓ Inducing Cell Differentiation

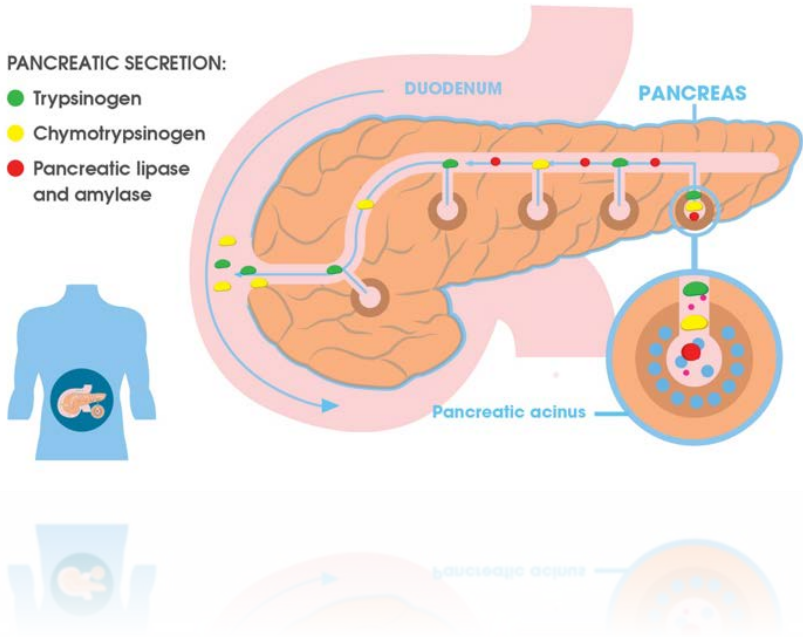
Altering EMT Signalling Pathways ✓

✓ Compassionate Patient Treatment Results

# PRP: Proenzyme Formulation Derived from Pancreas

## PANCREATIC SECRETION:

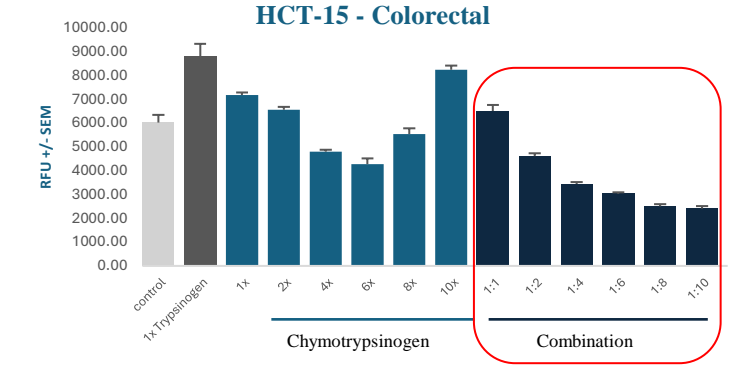
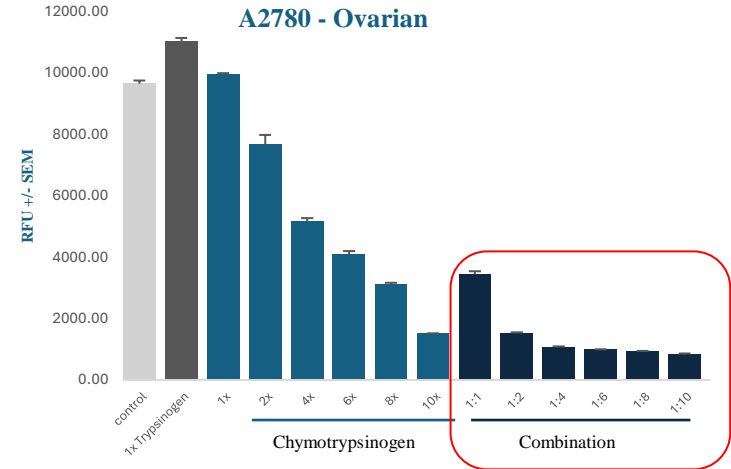
- Trypsinogen
- Chymotrypsinogen
- Pancreatic lipase and amylase



Mixture of 2 proenzymes from bovine pancreas

Synergistic ratio of 1:6 inhibits growth of most tumor cells, *in vitro*

Strong responses include ovarian and colorectal cancers



Efficacy also shown in pancreatic, kidney, breast, brain, prostate, lung, liver, uterine and skin cancers



# PRP: Suppresses EMT Process and Metastasis

## 1 Up-Regulation

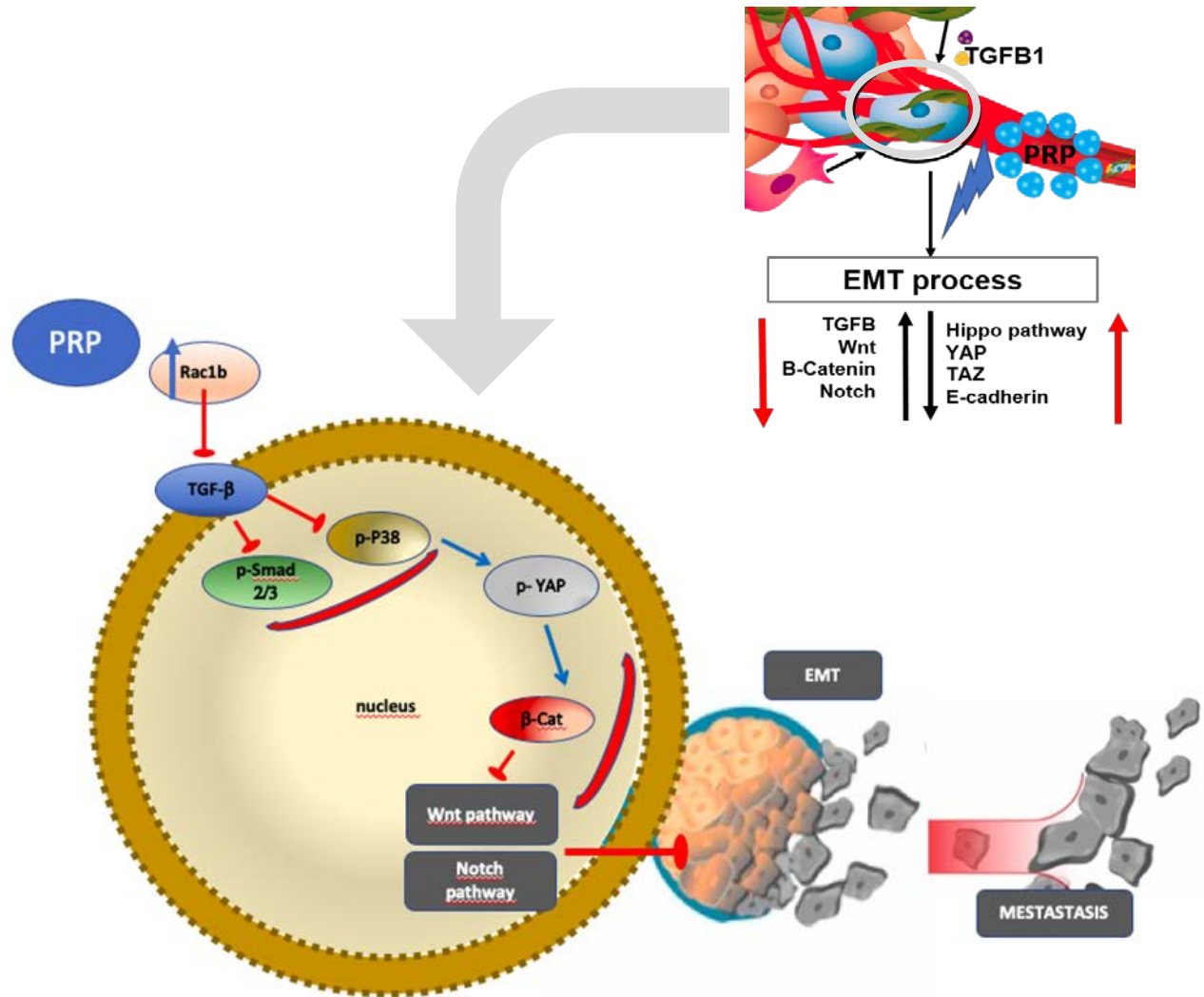
Promotes RAC1b;  
Preventing Hyper-activation  
of TGF-  $\beta$  Pathway

## 2 Multiple Pathways

Regulates Four Pathways  
Relating to Cancer Spread &  
Metastasis of CSCs

## 3 Inhibits the EMT

Inhibits the EMT  
Process That Leads to  
Metastatic Cancer



# PRP: Alters EMT Signaling Pathways

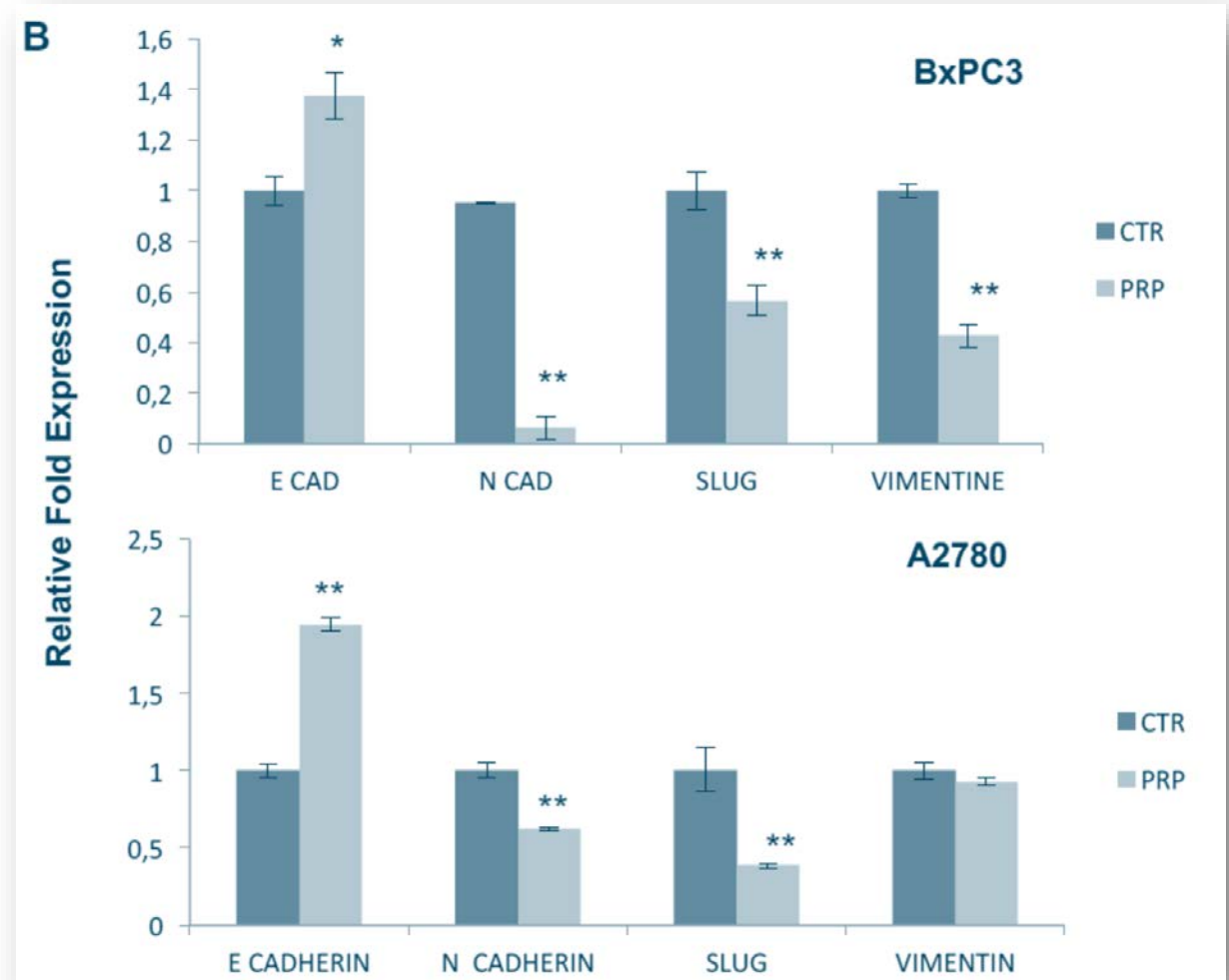
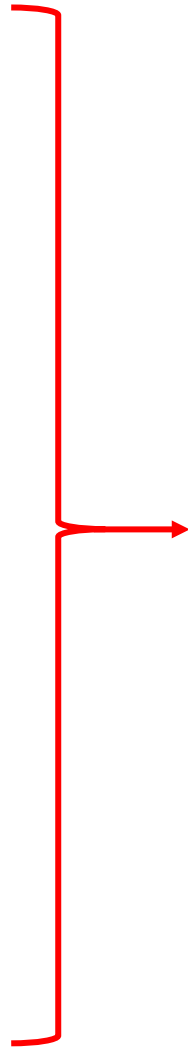
Cancer stem cells die naturally by reprogramming the cancer stem cell to reduce malignancy and invasiveness



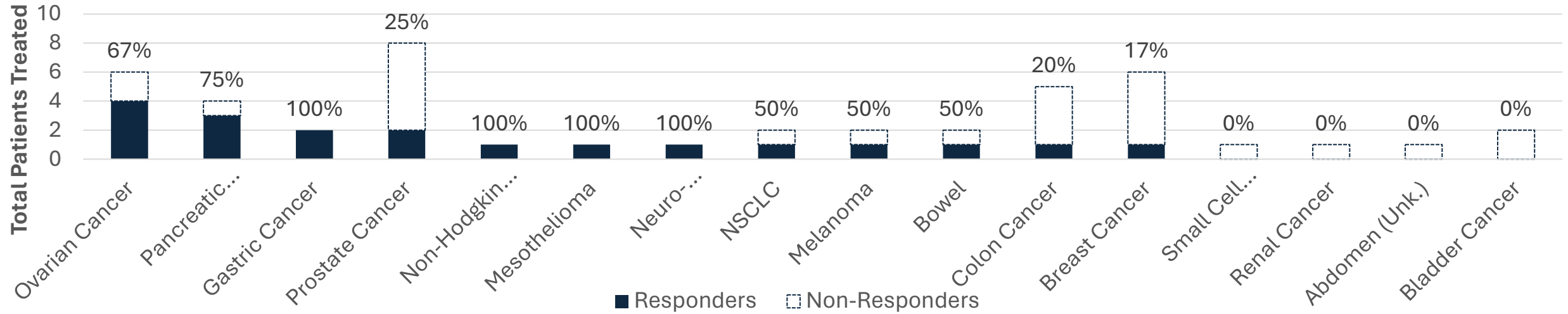
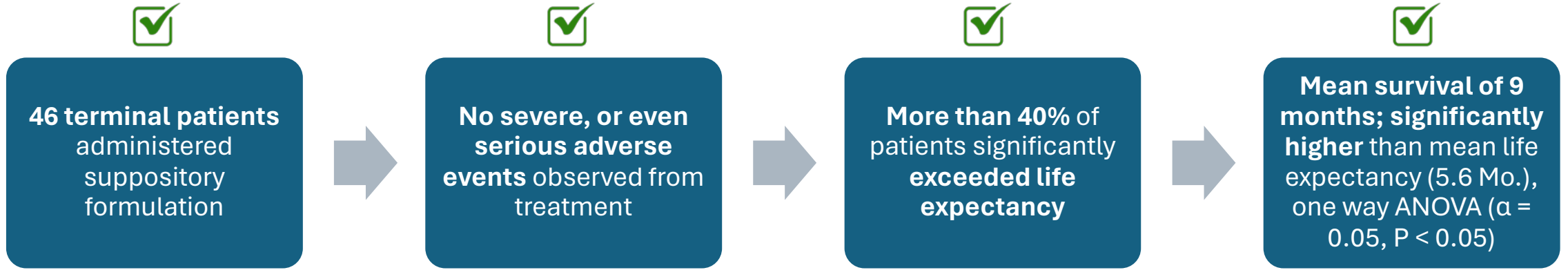
PRP promotes the expression of E-cadherin and decreases expression of N-cadherin & vimentin mesenchymal markers



Strongly inhibits Slug, a transcription factor associated with tumour metastasis and angiogenesis



# Compassionate Use (CU) Study Data



\*All patients either met or exceeded life expectancy based on initial prognosis

# Improving on CU Results

1

## Formulation Optimized

Compassionate use study was meant as a proof of concept; only tested a 1:1 ratio of proenzymes

2

## Administration Improved

PRP will be an IV administration, making it a far simpler and direct delivery of drug

3

## Systemic Exposure

Because of synergistic ratio and direct delivery, proenzymes will increase systemic exposure to 100%

4

## Dosing Regime

Dosing will be weekly vs daily allowing for a more flexible and less intensive schedule for patients



# CU Data Highlights Market Value

Compassionate use study highlighted **41% of patients exceeded life expectancy** with the average survival of patients almost doubling from 5.6 months at original prognosis to 9 months. Additionally, there was a superior safety profile with no serious adverse events observed from treatment. Propanc has since developed an optimized formulation of this proenzyme combination which we will be used in our Phase 1b trial.

Company	Mkt Cap. <sup>1</sup>	Ph. of Lead Asset <sup>1</sup>	Context of Data from Lead Asset <sup>1</sup>
Revolution Medicine	\$4.8B	Ph. 1	RMC-6236, showed an ORR of 38% in NSCLC and 20% in PDAC in their Ph.1 studies. This was compared to a SOC benchmark of 13% and 11% respectively
Merus	\$2.8B	Ph. 1/2	Reported an ORR of 37% in HNSCC Ph. 1/2 trial and PFS of 5.3 months with median OS being 11.5 months
ALX Oncology	\$730M	Ph. 2	(Combo Treatment) 52% ORR but the other combo drugs showed 22% ORR without Evo (net +30% ORR due to Evo)
Maia Biotechnology	\$24M	Ph. 2	Currently enrolling Ph.2 ... Combo with Libtayo ... “estimated” ORR between 35-40%
Compass Therapeutics	\$250M	Ph. 3	In Ph. 1 study across multiple indications, monotherapy ORR of 19% and combo ORR of 24%. ORR in Ph. 2 study in solely BTC of 37.5% (increase to 64% ORR in patients in 2 <sup>nd</sup> line setting)
Hookipa Pharma	\$80M	Ph. 2	Ph. 2 ORR of 42% for Head / Neck Cancer vs historical 19% ORR for pembro alone
Cardiff Oncology	\$160M	Ph. 2	29% ORR in Ph.1b/2 trial in all patients with median DOR of 12 months
C4 Therapeutics	\$730M	Ph. 1	15% ORR in Ph.1 Monotherapy study and 33% ORR in combo study with Dex (to date; still enrolling) ... and 33% is 3/9 patients (small sample)
Elevation Oncology *	\$230M	Ph. 1	Ph. 1 data demonstrated 47.1% ORR in gastric cancer and 38.1% ORR across all evaluable patients
Tango Therapeutics *	\$1.2B	Ph. 1/2	TNG908 proof-of-mechanism demonstrated in phase 1 update. Exposure not yet within the efficacious range. Ph. 1/2 study ongoing testing solid tumors
Nucana	\$17M	Ph. 2	Ph.1 study highlighted encouraging disease control & PFS in various metastatic cancers between 9 to 11 months, but no ORR reported

<sup>1</sup> As of March 5<sup>th</sup>, 2024

# PRP Phase 1b Study Design



## Design

- Open-label, multicenter, non-comparative, safety and pharmacokinetic study of PRP administered at increasing dose levels, once weekly as intravenous injection of a 28-day (4-week) cycle
- The study consists of an accelerated escalation phase and a subsequent standard phase
- Target patient population will be 30-40 patients



## Objectives

- **Primary:** Determine maximum tolerated dose (MTD) of PRP in patients with advanced solid tumors
- **Secondary:** Determine dose for Phase II, evaluate toxicity profile and time for recovery, evaluate dose-limiting toxicity, evaluate pharmacokinetics, describe relationship between toxicity and systemic exposure, describe any evidence for antitumor activity of PRP, and describe possible immune response against study medication



## Timing

- From first dose to trial completion, the study will be a 6-month review period and after the study, patients will have the option to enroll in an open label extension
- Assuming positive results, we will look towards the initiation of two simultaneous Ph.2 studies in advanced pancreatic and ovarian cancers

## Additional Variables

**Primary:** Drug related toxicities, based on clinical and laboratory assessments

**Secondary:** ORR, PFS, Safety Criteria, Pharmacokinetics, Antibodies against both chymotrypsinogen and trypsinogen

# POP1 / Rec-PRP

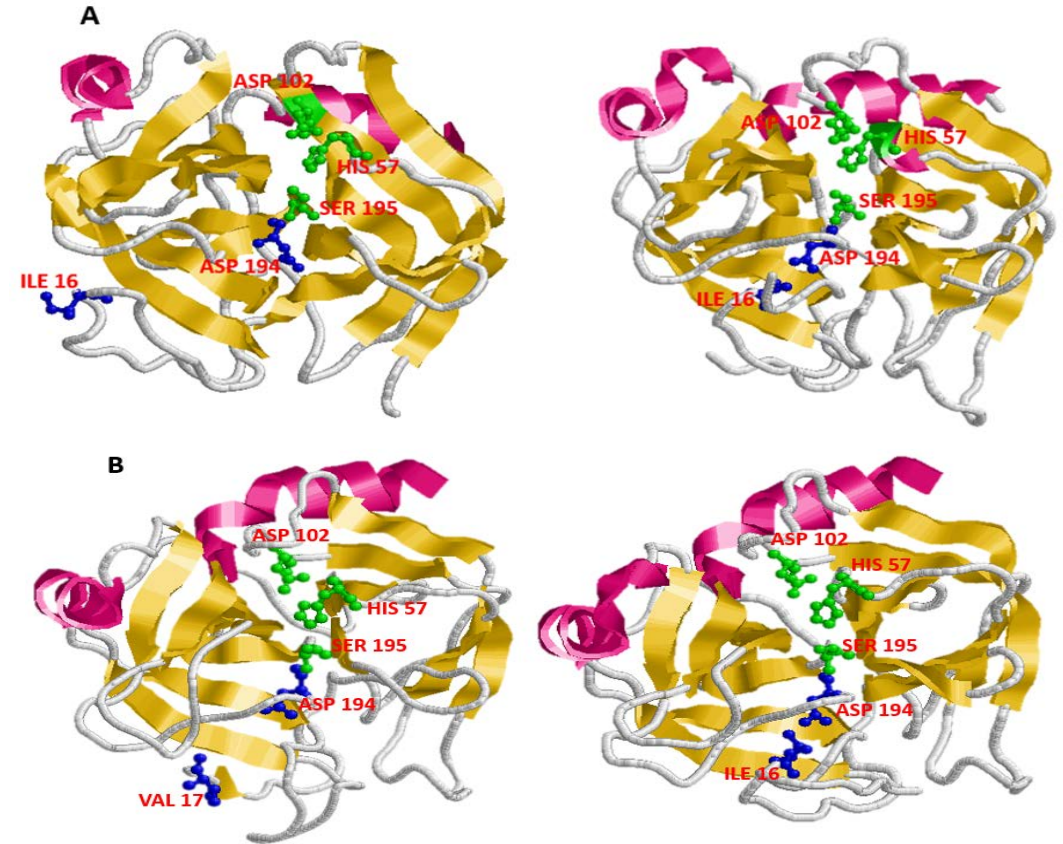
*Human Recombinant Version of PRP*

# Rec-PRP Program: Synthetic Enzymes

Our research has produced synthetic versions of the two proenzymes using a novel expression system to achieve high titers of recombinant trypsinogen and chymotrypsinogen

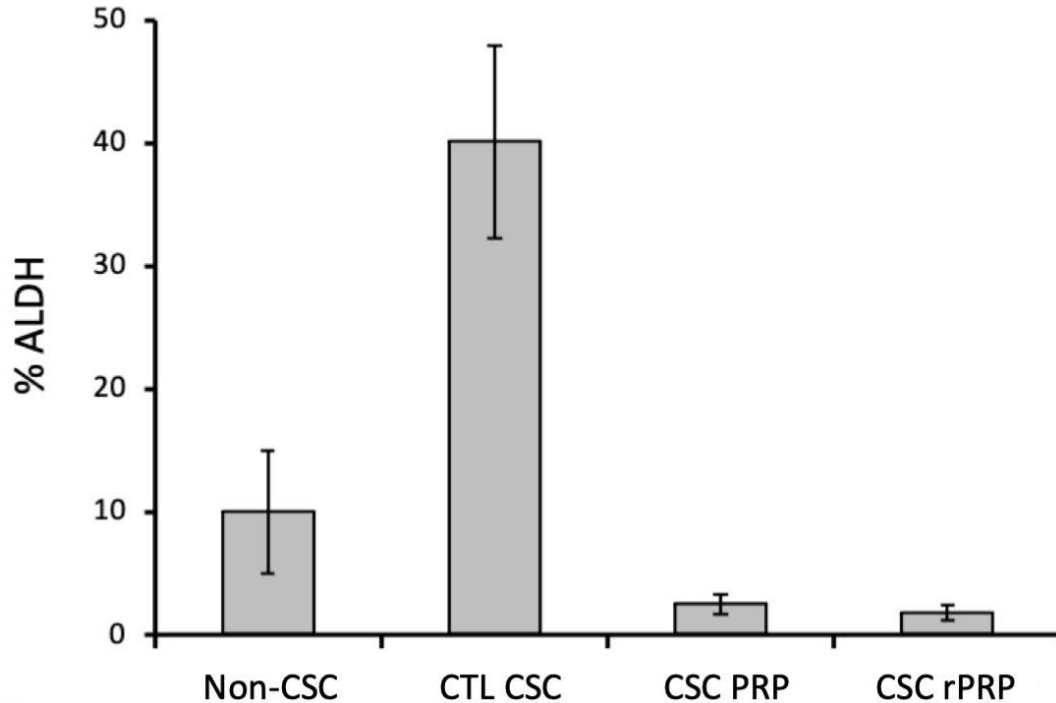
Anti-cancer effects to be tested against naturally derived proenzymes of bovine origin

Goal to produce crystallized proteins with better stability and a longer shelf life for global distribution

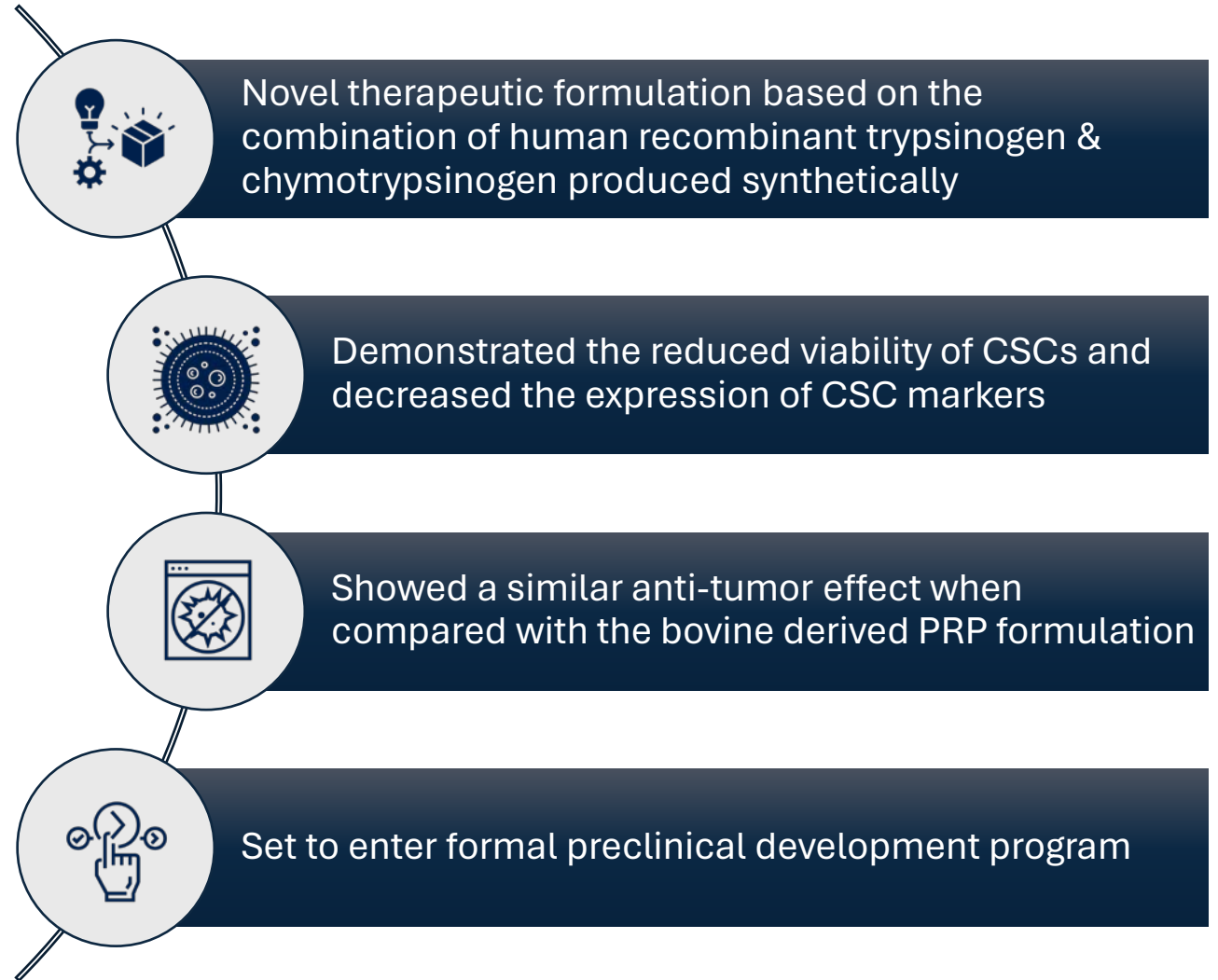


General structure of Chymotrypsinogen / Chymotrypsin and Trypsinogen / Trypsin represented in ribbon and in color. **A** The structure of Chymotrypsinogen (zymogen) is shown on the left and the structure of Chymotrypsin (active form) on the right. **B** The structure of Trypsinogen (zymogen) is shown on the left and the structure of Trypsin (active form) on the right. The amino acids that make up the active site are shown in green. In the case of the active structures in blue, the interaction between the amino acids Ile-16 and Asp-194 is shown, which are involved in the formation of a salt bridge necessary for the activation of proteins.

# Rec-PRP Demonstrated Preclinical Results



*Graph represents the %ALDH of BxPC3 CSCs and Non-CSC control and treated with PRP and Rec-PRP*





# Corporate Overview



# Therapeutic Landscape

	PRP Therapy	Chemotherapeutics	Targeted Therapies (e.g., Multi-targeted kinase inhibitors)	Monoclonal Antibodies	Immunotherapy
<b>Severe, or Serious Side Effects</b>	<b>No severe or serious side effects observed from treatment to date</b>	Pain, diarrhoea, constipation, mouth sores, hair loss, nausea, vomiting, blood-related side effects (neutropenia, anaemia, thrombocytopenia)	Fatigue, rash, hand-foot reaction, diarrhoea, hypertension, dyspnoea	Skin and gastrointestinal toxicities, serious side effects from certain drugs (e.g., Avastin)	Skin and gastrointestinal toxicities, limited patient eligibility, limited clinical advancements
<b>Resistance Development</b>	<b>Not observed in clinical trials</b>	Limited	Limited	Limited	Not applicable
<b>Cancer Types</b>	<b>Various, including breast, ovarian, colorectal, lung, and pancreatic cancer</b>	Various	Various	Various	Various
<b>Clinical Advancements</b>	<b>Significant clinical advancements, fewer side effects, potential for preventing recurrence and metastasis, potential for inducing cell differentiation, potential for targeting and eradicating cancer stem cells</b>	Limited	Limited	Limited	Limited



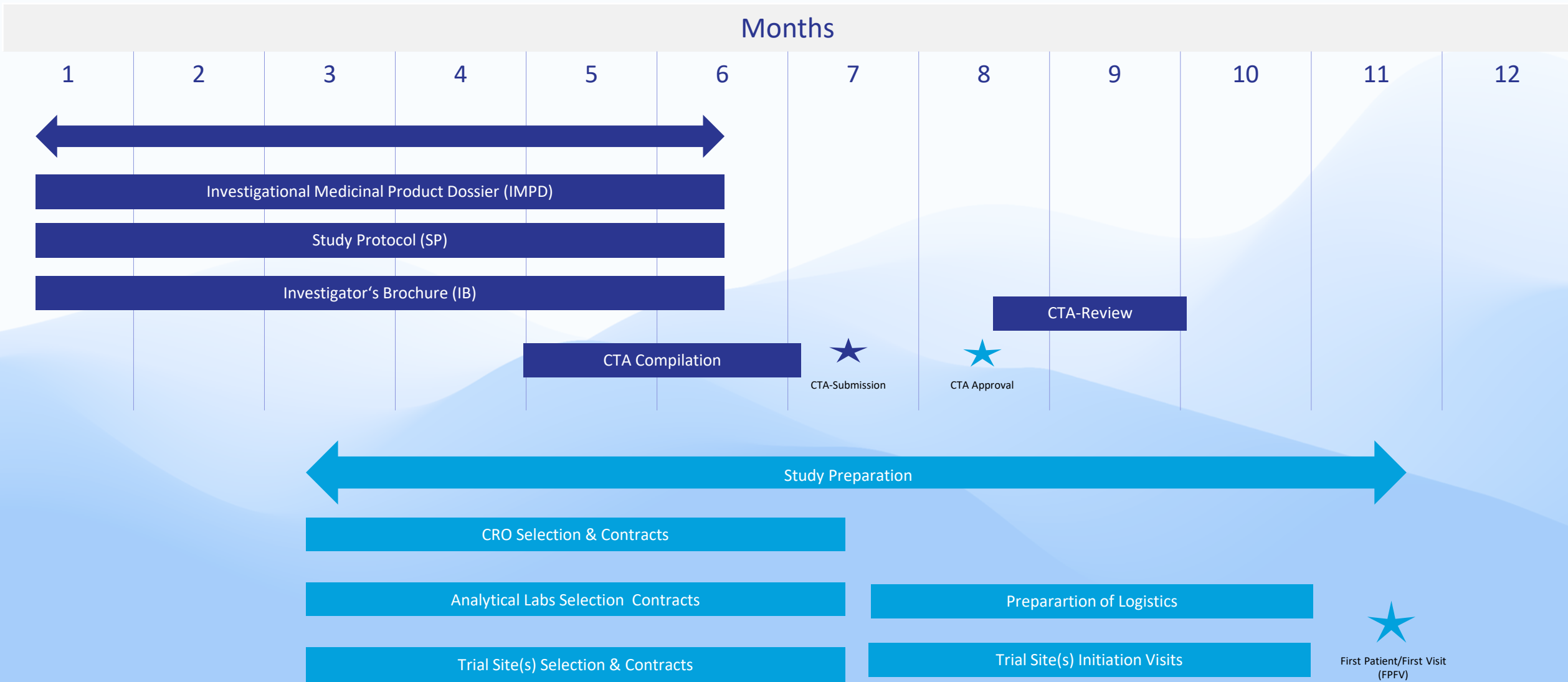
# Early Data Shows Promise Among Alternatives



Ticker	ELEV	FGEN	TNGX
Share Price	\$4.41	\$1.71	\$11.13
Market Cap.	\$187M	\$169M	\$1.1B
Phase of Dev.	Ph.1 Study Ongoing	Ph.3 Ongoing	Ph. 1/2 Ongoing
Overview	Claudin 18.2 targeting ADC; comes with typical safety concerns of toxic payloads of ADCs and potential off target effects	MOA is fully human antibody against connective tissue growth factor used in combination; previous trial showed no clear survival benefit	Uncertainty around PRMT5 class / less robust efficacy as previously believed; early data; other challenges faced with synthetic lethality

***Propanc expects to see an increased survival benefit when compared across all three of these pipeline candidates without nearly the same amount of safety risks associated***

# Clinical Development Timelines



# What's Next?



Significant Value Already  
Unlocked

## Completed Tasks

- Scientific advice meetings with MHRA (UK)
- Preclinical pharmacology and safety toxicology studies
- Orphan Drug Designation Status received from FDA for treatment of pancreatic cancer



Short Timelines and Limited Capital  
Required for Next Milestones

## Planned Activities

- Preparation for Ph.1B, FIH Study in advanced cancer patients
- Investigational Medicinal Product (IMP) Manufacture
- Development of bio-analytical assays to quantify PRP in human serum
- Follow on discussion with study investigator at Australia's biggest cancer hospital, Peter Mac Cancer Center

# Investment Highlights



Generated compassionate use (CU) data across **46 terminal patients where 41% exceeded life expectancy** without any serious adverse events



Initially targeting Pancreatic and Ovarian cancers with **combined TAM of \$14.3B** and long-term strategy of targeting metastatic solid tumors (**~\$111B TAM**)



Ready to initiate a **Phase 1b clinical study in 30 – 40 patients** to study the safety and efficacy of PRP with expected results in 2025



**Unique ability to convert cancerous cells back into healthy cells.** Post-treatment data shows Colorectal and Pancreatic cancer cells returned to homeostasis