ABN 16 165 160 841

ASX RELEASE **19th October 2021**

Amplia Provides Updated Investor Presentation

Amplia Therapeutics Limited (ASX: ATX) ("Amplia" or the "Company") today released a new investor slide deck which provides further information on the Company's technology and its plans to initiate Phase 2 clinical studies of AMP945 in pancreatic cancer and pulmonary fibrosis.

The attached presentation provides the following:

- An update on the details of the Company's planned Phase 2 clinical trial in pancreatic cancer
- A summary of Amplia's technology, targeted therapeutic indications and competitive landscape
- Preclinical data underpinning the Company's planned Phase 2 clinical studies in pancreatic cancer and pulmonary fibrosis

This ASX announcement was approved and authorised for release by the CEO of Amplia Therapeutics.

- End -

For Further Information
Dr. John Lambert
CEO and Managing Director
john@ampliatx.com
www.ampliatx.com

About Amplia Therapeutics Limited
Amplia Therapeutics Limited is an Australian pharmaceutical company advancing a pipeline of Focal Adhesion Kinase (FAK) inhibitors for cancer and fibrosis. FAK is an increasingly important target in the field of cancer immunology and Amplia has a particular development focus in pancreatic and ovarian cancer. FAK also plays a significant role in a number of chronic diseases, such as idiopathic pulmonary fibrosis (IPF).

Amplia Therapeutics

October 2021

Amplia Therapeutics Limited

Amplia
Exposing cancer. Enhancing treatment.

Disclaimer

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This presentation contains forward-looking statements which can be identified by the use of words such as "may", "should", "will", "expect", "anticipate", "believe", "estimate", "intend", "scheduled" or "continue" or similar expressions. Any forward-looking statements contained in this presentation are subject to significant risks, uncertainties, assumptions, contingencies and other factors (many of which are outside the control of, and unknown to Amplia, and its officers, employees, agents or associates), which may cause the actual results or performance to be materially different from any future result so performed, expressed or implied by such forward-looking statements.

There can be no assurance or guarantee that actual outcomes will not differ materially from these statements. The data and results pertaining to clinical subjects used in this presentation are illustrative of medical conditions and outcomes associated with potential applications of Amplia's acquired product pipeline. Actual results from clinical trials may vary from those shown.

Amplia Therapeutics is developing new treatments for cancer and fibrosis

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Investment highlights

- Two Focal Adhesion Kinase (FAK) inhibitors with activity profiles supporting multiple therapeutic opportunities
    - Clear differentiation from other FAK inhibitors in development
- AMP945 has completed a Phase 1 trial in 56 volunteers and was shown to have an excellent safety and tolerability profile
- Phase 2 clinical trials planned in cancer and fibrosis
- Highly experienced management team, Board and advisor network
- Solid track record in delivery against timelines and budgets
- Collaboration in place with world leading FAK-biology group at the Garvan Institute

Company snapshot[1]

Shares on issue	124.8M
Market capitalization	$24.3M
Options on issue	13.9M
Cash [2]	$4.1M
Headquarters	Melbourne
Board	Warwick Tong (Chair) Jane Bell (NED) Chris Burns (NED) John Lambert (MD) Robert Peach (NED)
Institutional holders	Platinum – 16.2% Blueflag Holdings – 7.0% Acorn Capital

ATX Price and Volume – 12 months

Price [1]	$0.195
12mth high - low	$0.37 - $0.18
Av. daily volume	195,000

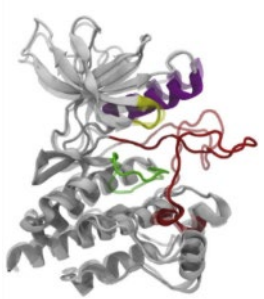
[1] as at close of trade, 15 Oct 2021

[2] As at 30 June 2021. The Company received a $1.1M R&D Tax rebate in October 2021

Amplia's pipeline

DRUG	INDICATION	THERAPY	PRECLINICAL	PHASE 1	PHASE 2	PHASE 3 & APPROVAL
AMP945	*Pancreatic cancer*	Combination therapy				
AMP945	*Idiopathic pulmonary fibrosis (IPF)*	Monotherapy				
AMP945	*Other cancers & fibrotic diseases*	Combo/Mono therapies				
AMP886	*Cancers & fibrotic disease*	Monotherapy				

Why is FAK a good target for drug development?



Focal Adhesion Kinase (FAK)

Indication

FIBROTIC DISEASES

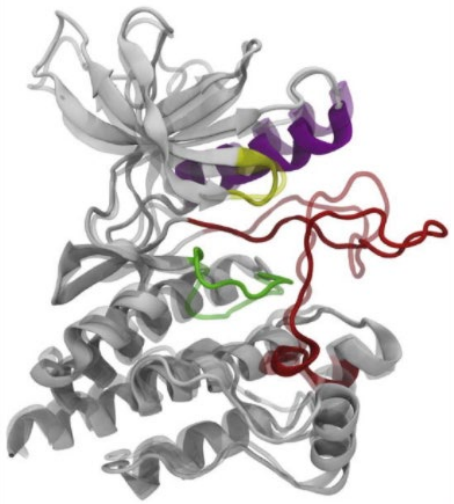
SOLID CANCERS

Opportunities

Monotherapy
- Lung fibrosis
- Liver fibrosis (NASH)
- Renal fibrosis
- Wound healing

Combination Therapy
- Pancreatic cancer
- Ovarian cancer
- Breast cancer
- Hepatocellular carcinoma
- Melanoma
- Gastric cancer
- Lung cancer

Targeting cancer's defence mechanisms



Focal Adhesion Kinase (FAK)

Fibrosis

FAK helps establish and maintain the dense, fibrotic tissue around cancers

Immune activity

FAK triggers the release of signaling molecules (cytokines) which suppress the immune system

Cell migration

FAK regulates cell migration that is involved in the formation of secondary cancers (metastases)

FAK is involved in many cancer defence mechanisms that reduce the effectiveness of cancer drugs

Increased FAK activity is found in many, difficult-to-treat, solid cancers

Elevated levels of FAK in cancers are associated with poor outcomes

Amplia is investigating the use of FAK inhibitors (FAKi's) to disrupt cancer defence mechanisms, making them more responsive to cancer drugs

Remove the shield.
Deliver the blow.

Amplia's target indications

Pancreatic Cancer

- 60,000 new diagnoses and 48,000 deaths from pancreatic cancer in the US each year
- Difficult-to-treat cancer that is often surrounded by a protective, fibrotic stromal layer
- Less than 20% patients eligible for surgery – chemo main treatment
- Few new therapies approved and most patients treated with cytotoxic chemotherapy drugs

AMP945 was awarded Orphan Drug Designation by the US FDA for use in treating Pancreatic Cancer in March 2020

Idiopathic Pulmonary Fibrosis (IPF)

- Affects 130,000 in the US and ~3M people worldwide
- Devastating, progressive disease caused by the build up of fibrotic tissue in the lungs
- Only two drugs approved which slow progression but are unable to stop the disease
- With treatment, median survival time is 3-5 years

AMP945 was awarded Orphan Drug Designation by the US FDA for use in treating Idiopathic Lung Fibrosis in May 2020

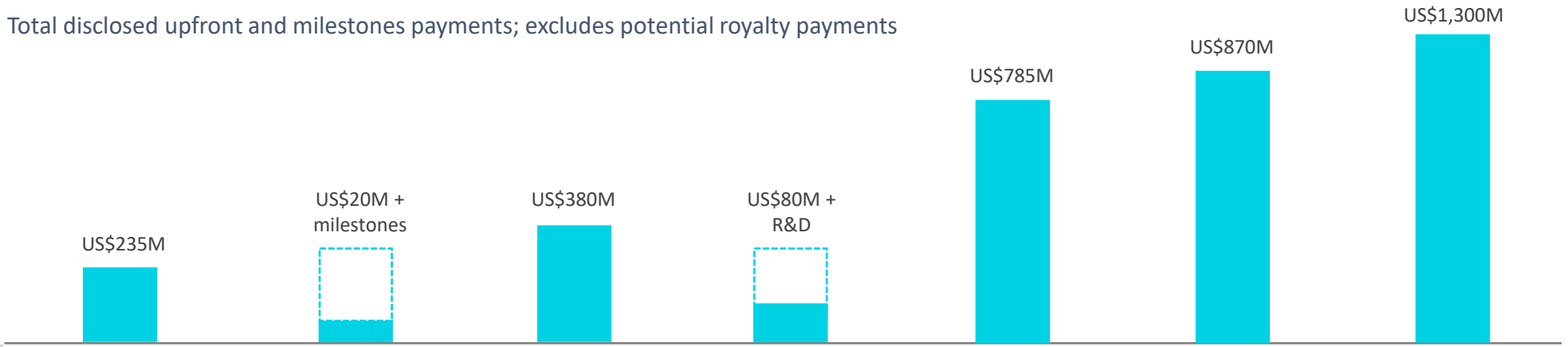
Why target pancreatic cancer and pulmonary fibrosis?

Pancreatic Cancer	Pulmonary Fibrosis
Preclinical data provides rationale for clinical study in this disease	
AMP945 enhances the efficacy of standard of care in pancreatic cancer models	AMP945 reduces fibrosis in the bleomycin model of lung fibrosis
Gateway indication to other fibrotic cancers/fibrotic diseases	
Ovarian cancer; Breast cancer; Hepatocellular carcinoma; Melanoma; Gastric cancer; Lung cancer	Liver fibrosis (NASH); Renal fibrosis; Wound healing
Unmet need, market size and partnering landscape	
Unmet need where incremental improvements to standard of care will be widely accepted	Unmet need with limited treatment options available
2021 Total Addressable Market (TAM) $2B, forecast to grow to $5.4B by 2029*	2021 TAM $2.2B, forecast to grow to $4.6B by 2027**
Treatments are expected to evolve with kinase inhibitors becoming a more significant drug class in this indication	Vibrant partnering landscape for fibrosis drugs

* GlobalData, *Pancreatic Cancer –Opportunity Analysis and Forecasts to 2029* (2020)
** ResearchAndMarkets, *Idiopathic Pulmonary Fibrosis - Global Market Trajectory & Analytics*, 2021

Recent deals for anti-fibrotic and pancreatic cancer drugs

Total disclosed upfront and milestones payments; excludes potential royalty payments



Year	2021	2020	2020	2019	2019	2019	2019
Deal	Licensing/R&D	License	License	Licensing/R&D	Licensing/R&D	License	License
Up front	US$10M	US$20M	US$17M	US$80M	US$15M	US$40M	US$40
Acquirer	QILU PHARMACEUTICAL	abbvie	AstraZeneca	NOVARTIS	GILEAD	Boehringer Ingelheim	Boehringer Ingelheim
Vendor	Cend Therapeutics	MORPHIC THERAPEUTIC	Redx Discovering Targeted Medicines	PLIANT	YUHAN	YUHAN	bridgebio therapeutics
Asset	Pancreatic cancer entering Phase 2 as combo with Gem/nab-paclitaxel – Asia rights only	Preclinical integrin inhibitors for the treatment of fibrotic disease	Small molecule drug in preclinical development for IPF/fibrotic disease	Small molecule integrin inhibitor in preclinical development for NASH	Small molecule drugs for fibrotic diseases in preclinical for NASH	Dual agonist fusion protein in development for 2 fibrotic diseases	Small molecule drug in development for fibrotic diseases in Phase 1

Product differentiation

			Pancreatic Cancer		Fibrosis
Company	FAKi	FAK Selectivity	First Line	Combo with	
Amplia	AMP945	✓✓✓	✓	Gem/nab-paclitaxel	✓
Verastem	defactinib	✓	×	Pembrolizumab	×
InxMed	IN10018	✓✓	×	Pembrolizumab KN046	×

Amplia's AMP945 is differentiated from its competitors by

1. Exquisite FAK selectivity
2. Pairing with first-line therapy
3. Combination with gemcitabine/nab-paclitaxel, an approved pancreatic cancer therapy
4. AMP945's clinical safety profile is consistent with development in fibrosis indications

AMP945 is primed for Phase 2 clinical trials

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AMP945 is the most selective FAK inhibitor currently in clinical development

Non-specific kinase inhibition often leads to clinical side effects

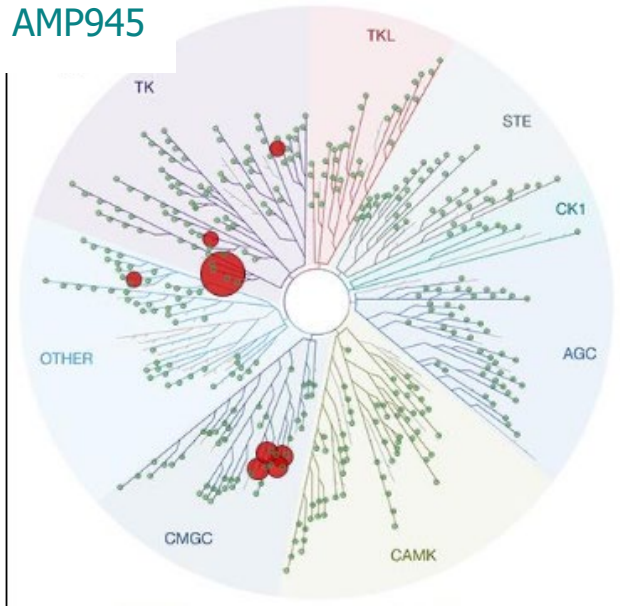
AMP945 is currently the most selective FAK inhibitor in clinical development

Number of kinases targeted in addition to FAK with *in vitro* IC50 < 1µM:

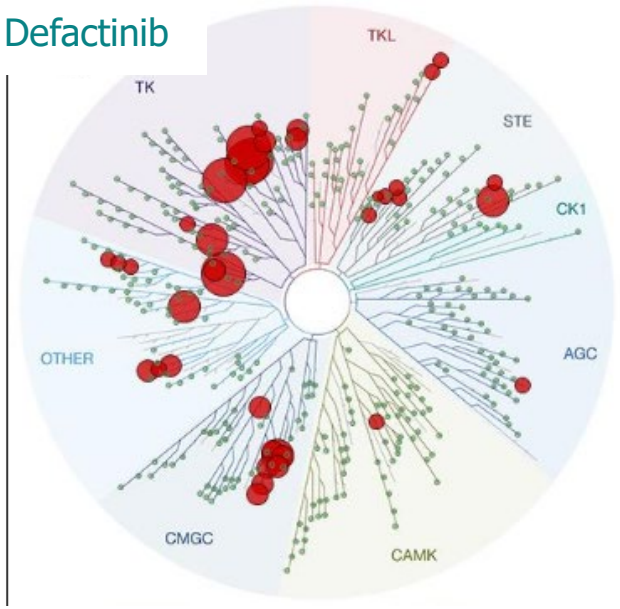
- **AMP945**: 3 (468 kinase tested)
- IN10018: 4 (262 kinase tested)
- Defactinib: 9 (468 kinase tested)

Attributes	AMP945
Kinases inhibited (IC_{50} nM)	FAK (0.9)
CYP inhibition	> 20 µM all isoforms
Glutathione trapping	negative
Comments	Highly selective for FAK across 468 kinase screen

AMP945

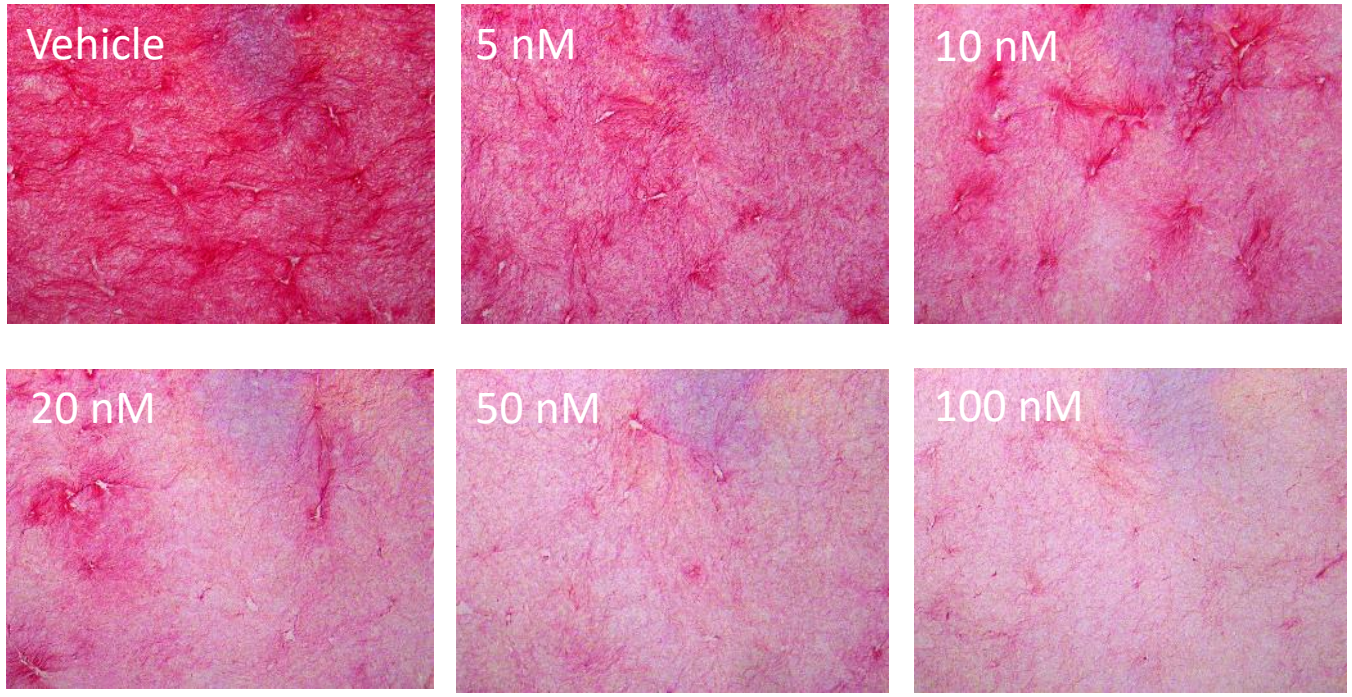


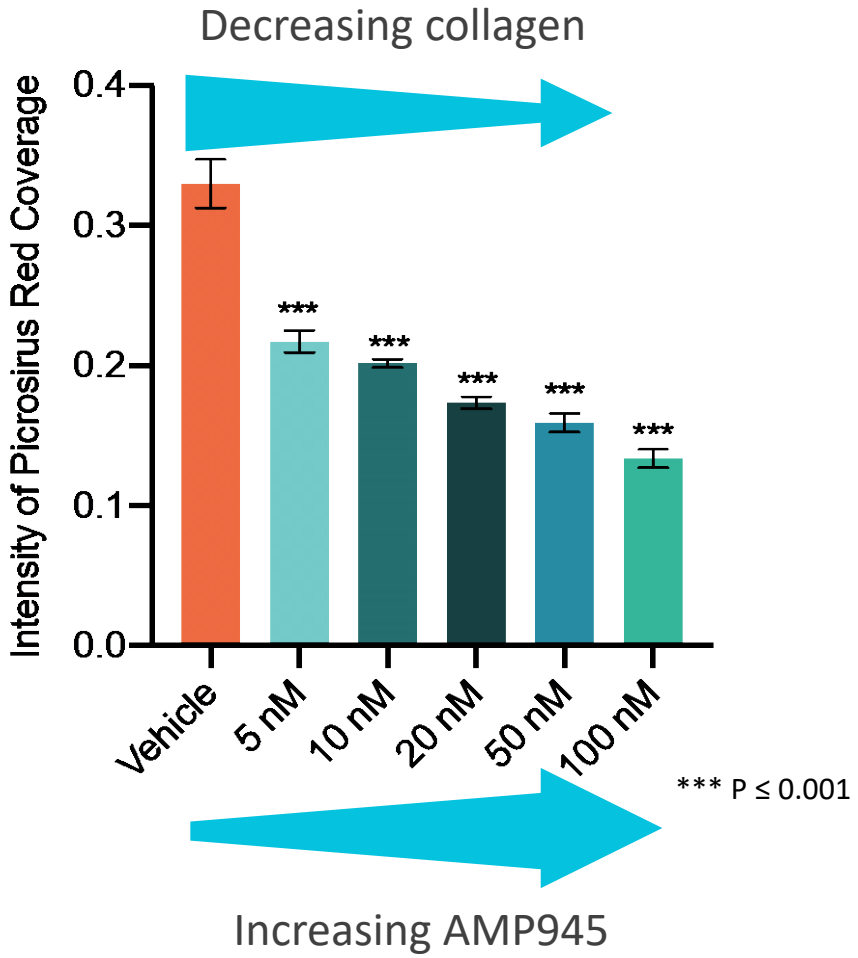
Defactinib



AMP945 inhibits deposition of collagen

Picosirius red staining for total collagen

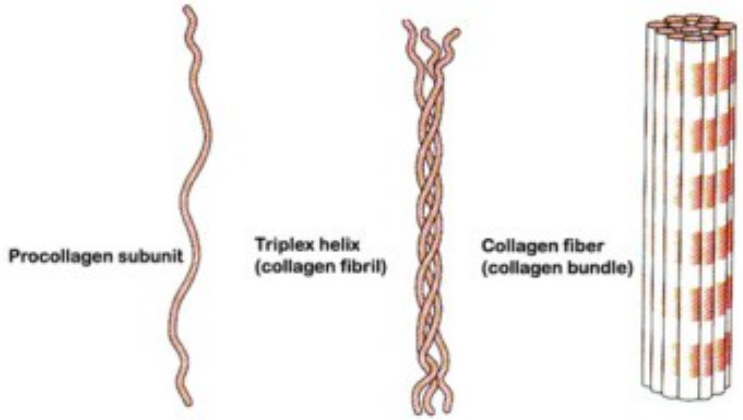


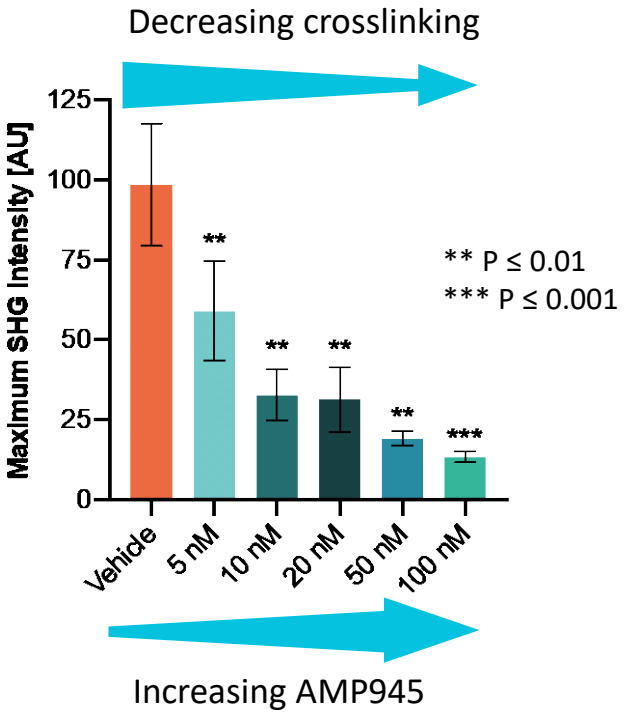


- Fibroblasts lay down new collagen
- Collagen is a key component of fibrotic tissue
- AMP945 inhibits fibroblasts, causing less new collagen to be deposited

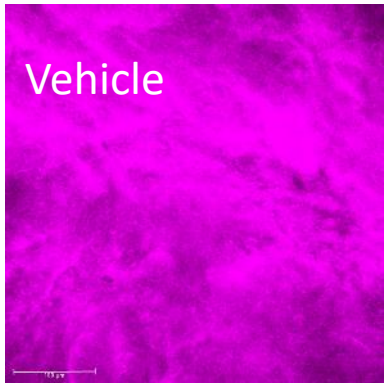
Studies conducted in the laboratory of Professor Paul Timpson (Garvan)

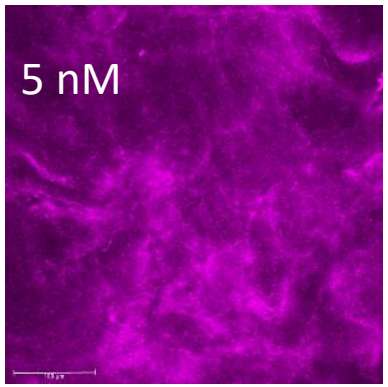
AMP945 blocks collagen cross-linking

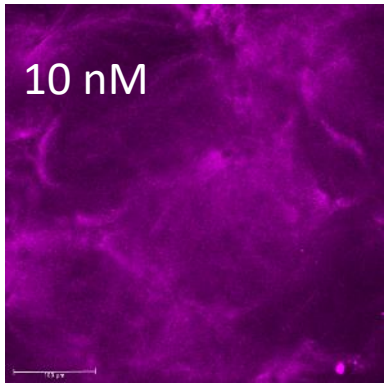


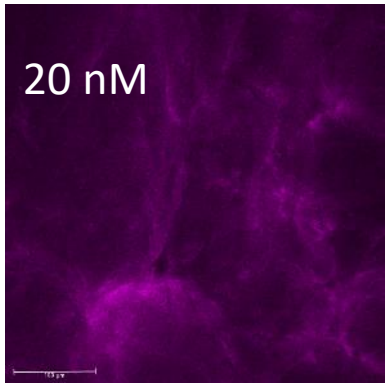


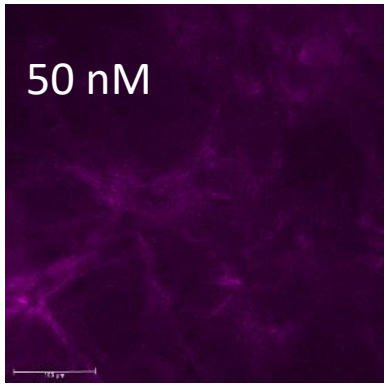
- Crosslinking of collagen is required for the formation fibrotic tissues
- AMP945 inhibits collagen cross-linking in a dose-dependent manner

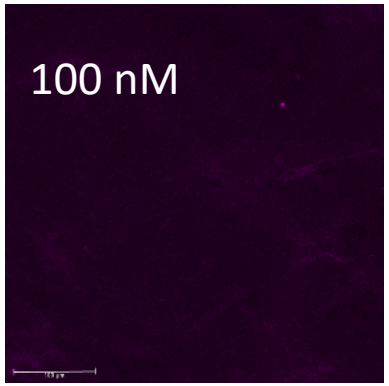












Studies conducted in the laboratory of Professor Paul Timpson (Garvan)

AMP945 treats and prevents lung fibrosis

Bleomycin animal model of lung fibrosis

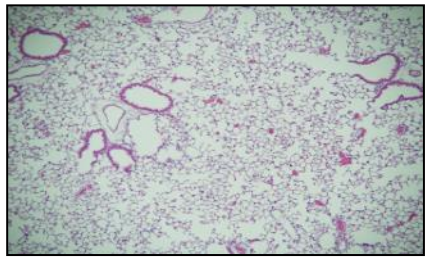
PREVENTION

- AMP945 administered before onset of fibrosis
- Evaluating ability of AMP945 to prevent fibrosis from becoming established

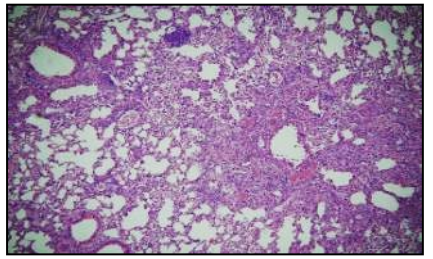
TREATMENT

- AMP945 administered after onset of fibrosis
- Evaluating ability of AMP945 to treat established fibrosis

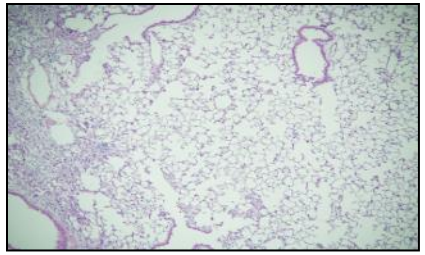
control – healthy lung



bleomycin – fibrotic lung



bleomycin + AMP945



- FAK has a pivotal role in the biochemical pathways regulating both the development and progression of fibrosis in the lungs
- AMP945 both prevents and reverses the fibrosis in the industry-standard disease model for lung fibrosis

Peer-reviewed preclinical rationale for Phase 2 trial

- Recent publication by Amplia's Garvan collaborators highlights potential of FAK inhibition in pancreatic cancer

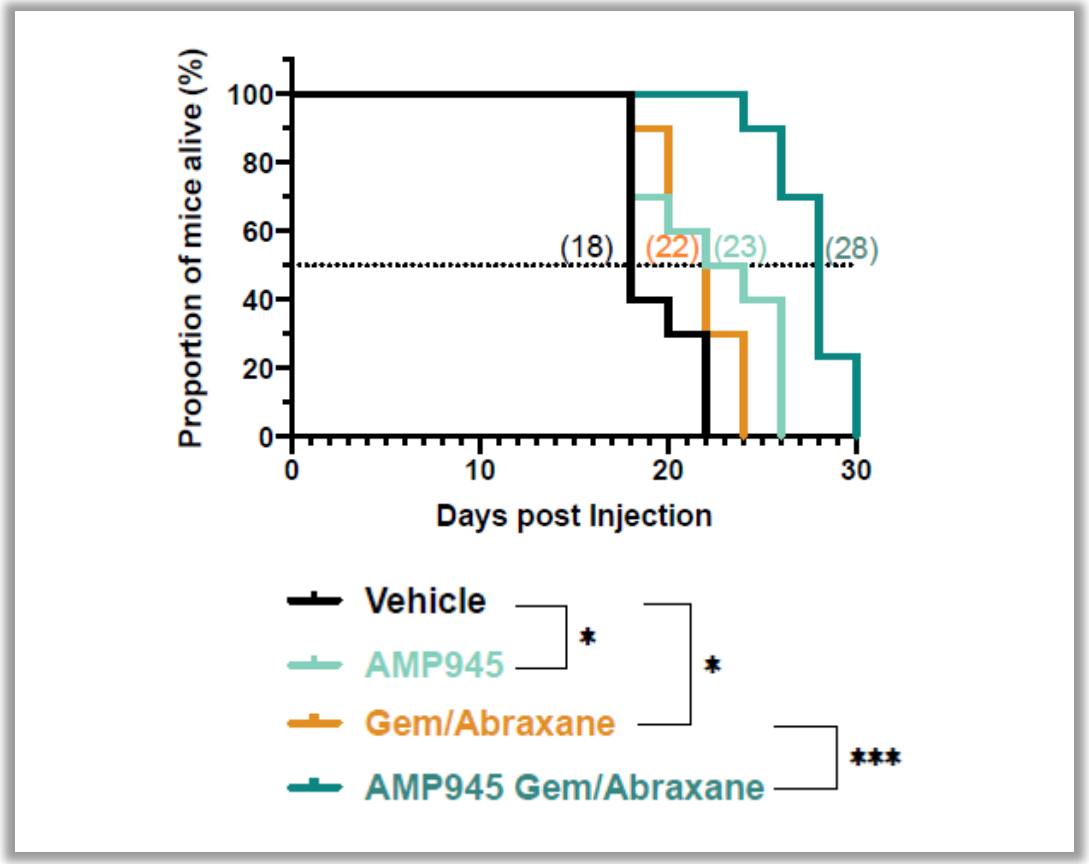
Key findings

- Priming with FAK inhibitor before treatment with gemcitabine/Abraxane®
  - Increases survival in KPC pancreatic cancer model
  - Reduces metastasis

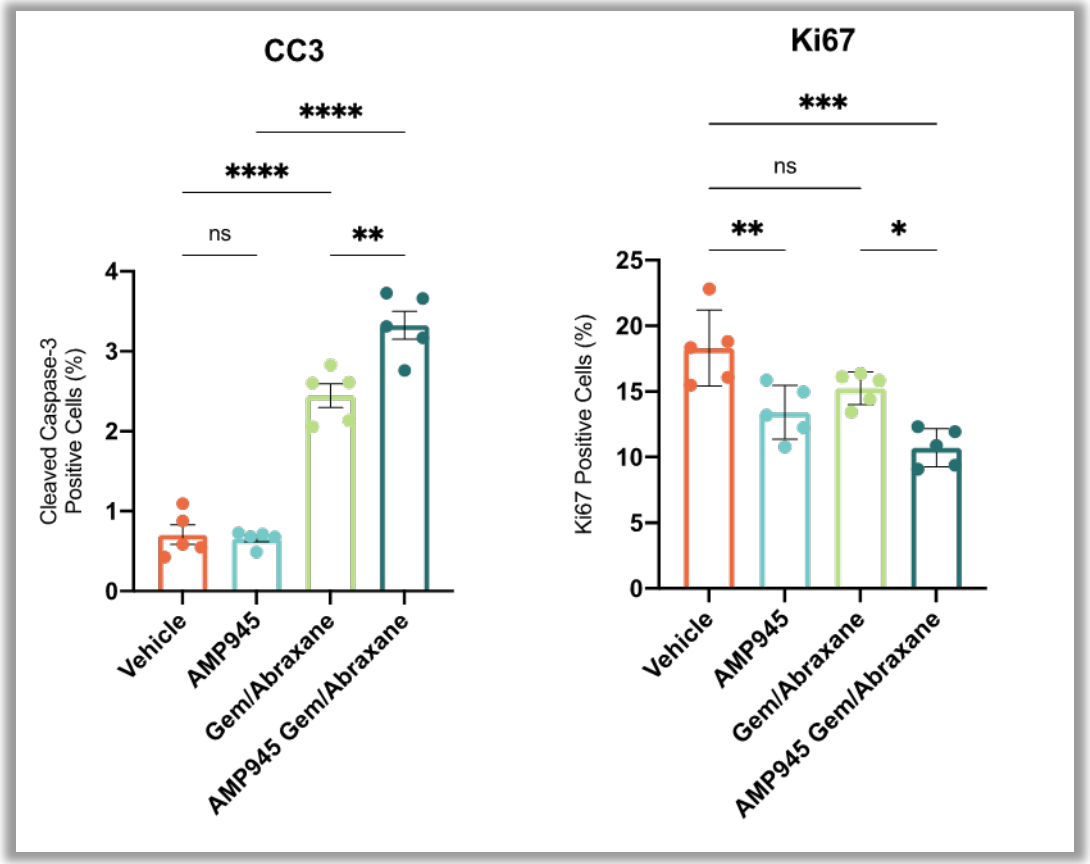
Murphy, Kendelle J., Reed, Daniel A., et al., *Science Advances, 7 (2021), eabh0363.*

AMP945 drives same effects in Garvan models

AMP945 increases survival in aggressive KPC model of pancreatic cancer



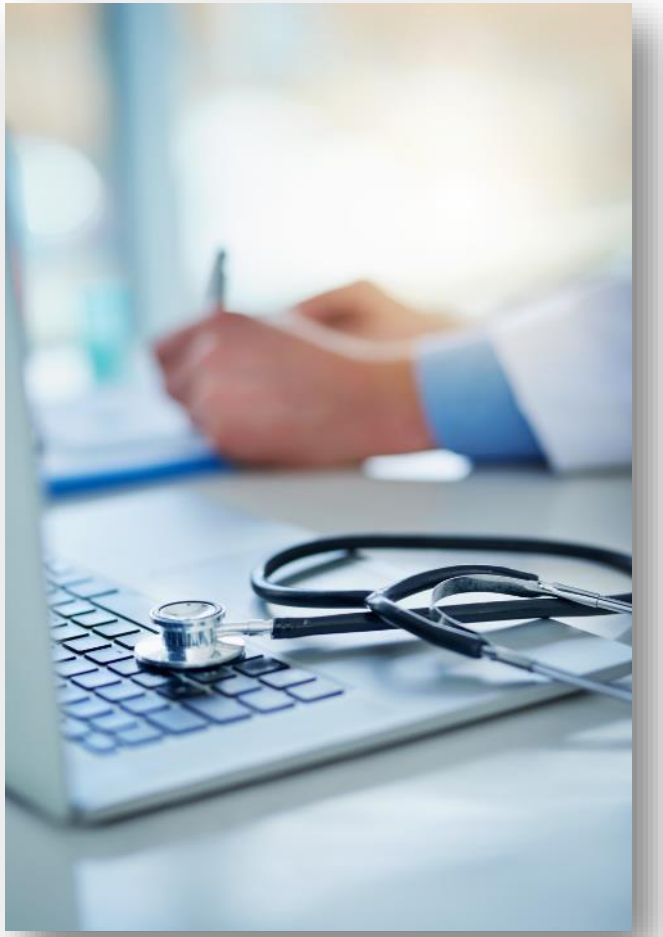
AMP945 impacts key markers of tumour growth



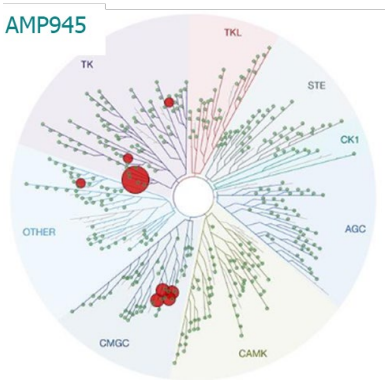
Phase 1 trial of AMP945 completed in May 2021

- Trial execution:
  - Commenced in October 2020 - completed May 2021
  - Recruited in 56 healthy volunteers aged 18 - 65
  - Single site in Melbourne Australia, Nucleus Network

- Phase 1 trial components:
  - Single Ascending Doses
  - Multiple Ascending Doses
  - Food Effect
  - Pharmacokinetics
  - Pharmacodynamics



AMP945's excellent clinical safety profile



Summary of Treatment Emergent Adverse Events from Amplia's Phase 1 trial of AMP945

	Single Dose					Multiple Dose			
	Cohort 1 AMP945 X mg (N=6)	**Cohort 2 AMP945 2X mg (N=6)**	**Cohort 3 AMP945 4X mg (N=6)**	**Cohort 4 AMP945 8.3X mg (N=6)**	**Pooled Placebo (N = 8)**	**Cohort 1 AMP945 Y mg (N = 6)**	**Cohort 2 AMP945 2Y mg (N=6)**	**Cohort 3 AMP945 4Y mg (N = 6)**	**Pooled Placebo (N = 6)**
Severity Rating	**Number of Events**					**Number of Events**			
Mild	1	1	5	1	3	7	6	4	5
Moderate	0	2	1	0	0	2	0	0	0
Severe	0	0	0	0	0	0	0	0	0

N = Number of volunteers per Cohort

AMP945 phase 1 data supports further development

- Summary of Outcomes
  - Safe and well-tolerated at all doses tested
  - No serious adverse events (SAEs) or withdrawals and no identified safety trends
    - Single ascending doses up to 125mg
    - Multiple ascending dose (100mg QD for 7 days)
  - No food effect
  - Once-a-day oral dose supported by pharmacokinetics
    - Predictable dose/exposure relationship
  - Achieved blood levels of AMP945 expected to inhibit FAK
  - Low risk of interaction with other drugs in combination therapy

- Amplia is now progressing AMP945 into Phase 2 clinical trials
  - Pancreatic cancer – Q1 2022
  - Pulmonary fibrosis – Q3 2023

Phase 2 Clinical Trial in Pancreatic Cancer Patients

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Questions Amplia's Phase 2 study aims to answer

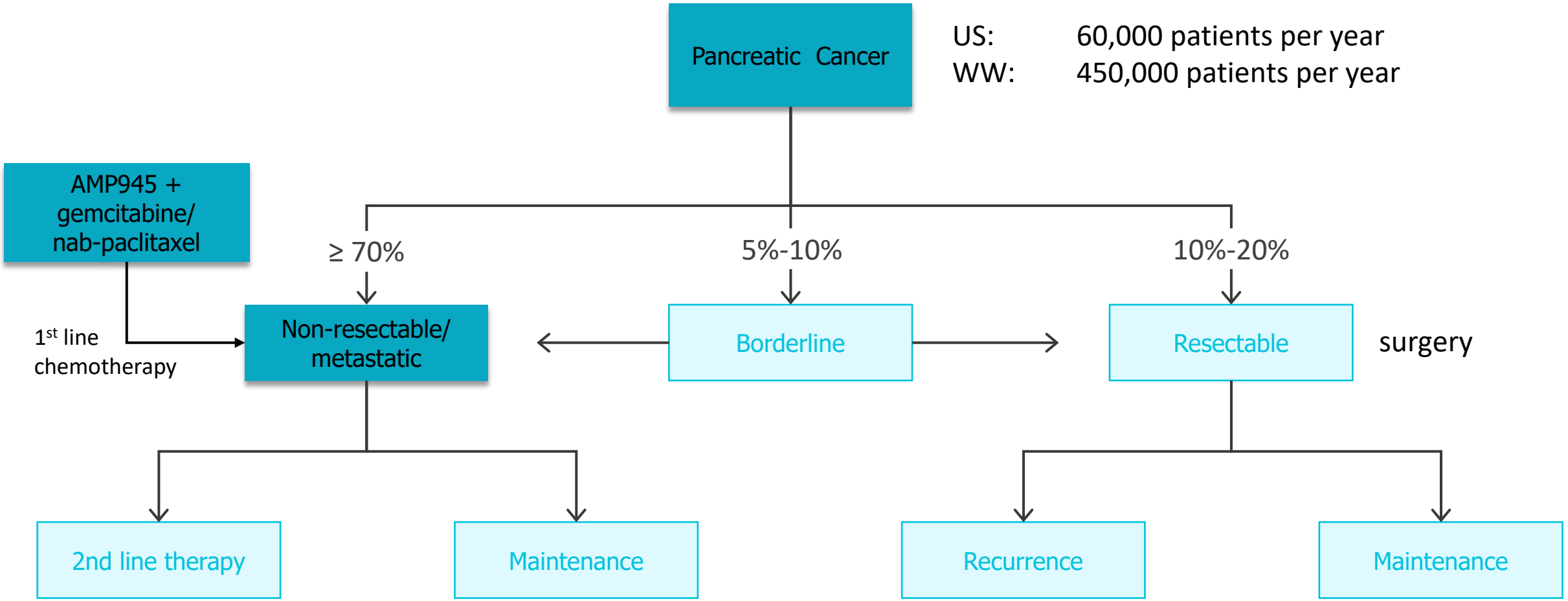
- Does AMP945 enhance the efficacy of gemcitabine and Abraxane® in patients with advanced pancreatic cancer?
- If AMP945 does enhance the efficacy of gemcitabine and Abraxane®, how does this manifest clinically?
- What is the optimal dose of AMP945 to maximise its effect on FAK?
- Which patients respond best to AMP945 combined with gemcitabine and Abraxane®?

Phase 2 study of AMP945 in pancreatic cancer

Key Trial Elements

- Patients with non-resectable or metastatic pancreatic cancer
- First-line therapy
  - Largest patient cohort
  - Healthier patients
  - Positions AMP945 as a first-line treatment option
- Intermittent dosing of AMP945 between doses of gemcitabine/Abraxane®
  - Designed to enhance standard of care
  - Mirrors design of preclinical efficacy studies

AMP945 will be integrated into first-line therapy



Gilbert, J. W., Wolpin, B., et al., 'Borderline Resectable Pancreatic Cancer: Conceptual Evolution and Current Approach to Image-Based Classification', *Ann Oncol, 28 (2017), 2067-76.*

Benefits of developing AMP945 as 1st line therapy

Largest patient population: >70% newly diagnosed patients

- Largest addressable market opportunity
- Large patient pool to recruit from for clinical trial

Patients better able to respond

- treatment naïve
- less likely to have developed resistance
- better overall health

Minimal impact on current clinical practice

- integrates with established experience
- opportunity to enhance available treatment
- will help acceptance and adoption

"With the exception of two targeted agents, which exhibited minimal or no overall survival benefit (erlotinib and olaparib), standard treatments are limited to conventional chemotherapies."

"There have been no paradigm-shifting advances beyond combination chemotherapy in the pancreatic cancer field over the past two decades. This contrasts with many other common cancers, which have benefited from impactful targeted therapies."

A comprehensive analysis of clinical trials in pancreatic cancer; what is coming down the pike? Oncotarget 2020, 11:3489-3501

Efficacy endpoints

- Primary Endpoint – Objective Response Rate (ORR)
  - Widely used in single-arm trials
  - Able to support Accelerated Approvals
  - Sensitive endpoint
- Secondary Endpoints – Safety, DoR, PFS, OS, CR, Symptoms, Pharmacokinetics
  - Alternate measures of efficacy
  - Initial assessment of effect sizes
- Exploratory Endpoints – pFAK, CA19-9, fibrosis markers
  - Signals of response
  - Predictive biomarkers (e.g. MERLIN)

Endpoints are described in detail in FDA Guidance for Industry

ORR: Objective response rate; DoR: Duration of Response; PFS: Progression free survival; OS: Overall survival; CR: Complete response; CA19-9: Carbohydrate antigen 19-9; MERLIN: Moesin-Ezrin-Radixin-Like Protein.

Phase 2 trial design

Stage 1

- Select the optimal dose of AMP945
  - Minimal dose giving maximum effect on pFAK
  - Tissue sampling to guide dose selection
- Test efficacy of optimal dose
  - Assess efficacy across multiple endpoints
  - Check for predictive markers of response

Stage 2

- Adapt trial based on Stage 1 results
- Recruit additional patients
- Increase confidence in efficacy results to support randomised trial

AMP945-202 trial summary

Population

Patients with Stage III or IV pancreatic cancer

First line therapy

ECOG status ≤ 1

Life expectancy of >3 months

Design

Phase 1b/2a open label, single arm study to evaluate safety, PK, PD and efficacy of AMP945 in combination with gemcitabine/Abraxane®

Treatment

Dose escalation

- Fixed doses of G/A, escalating doses of AMP945
- 4 cohorts of 3-6 pts. 1 month cycle

Expansion

- Part 1: 26 pts, 5 months
  Interim Analysis

Expansion

- Part 2: 24 pts, 9 months

Endpoints

Dose Escalation
Safety, PK, RP2D

Expansion
-Primary: Objective response, duration of response
-Secondary: Overall survival, progression free survival
-Exploratory: Impact on/of biomarkers

Stage IV only in expansion phase

AMP945 + G/A safety run-in

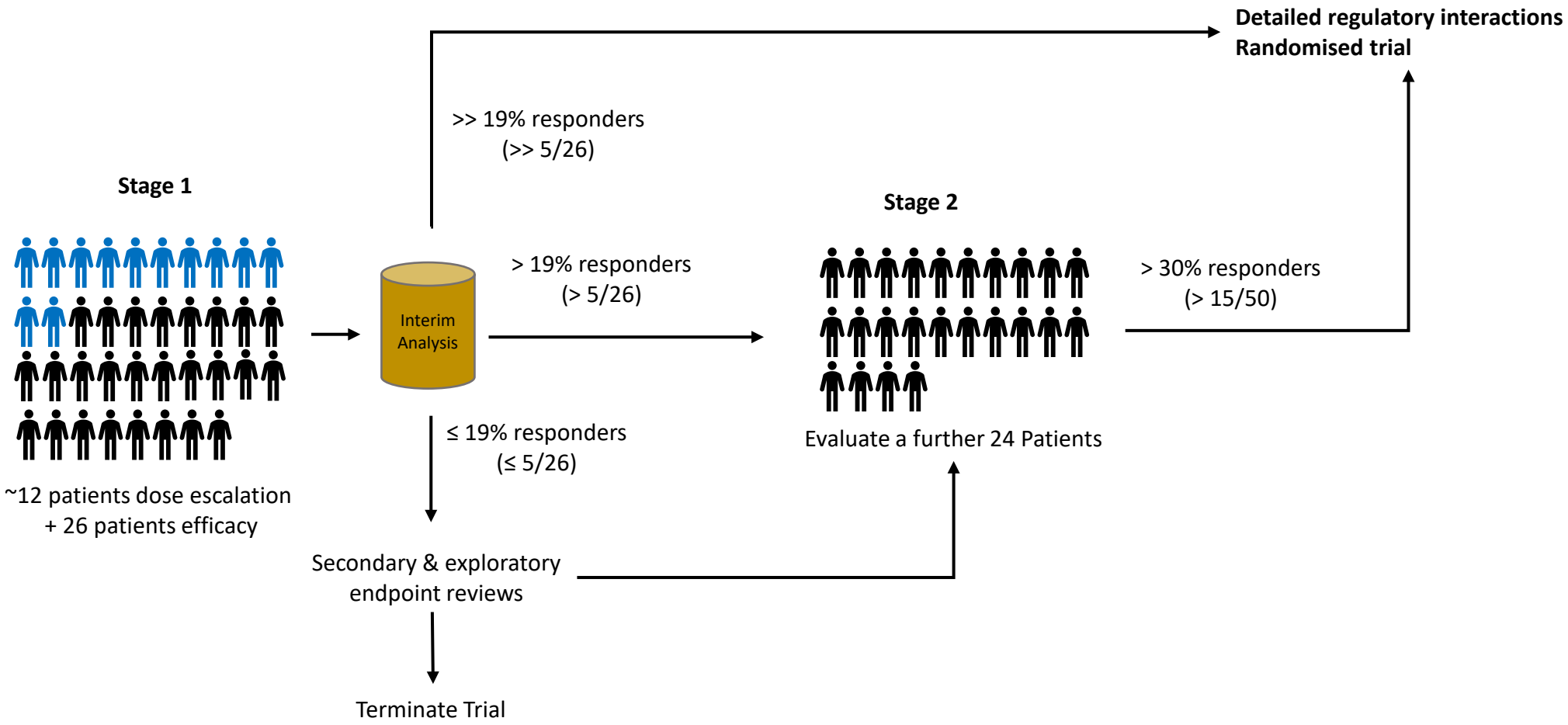
Tissue sampling guides dose selection

Selected dose used in expansion phase

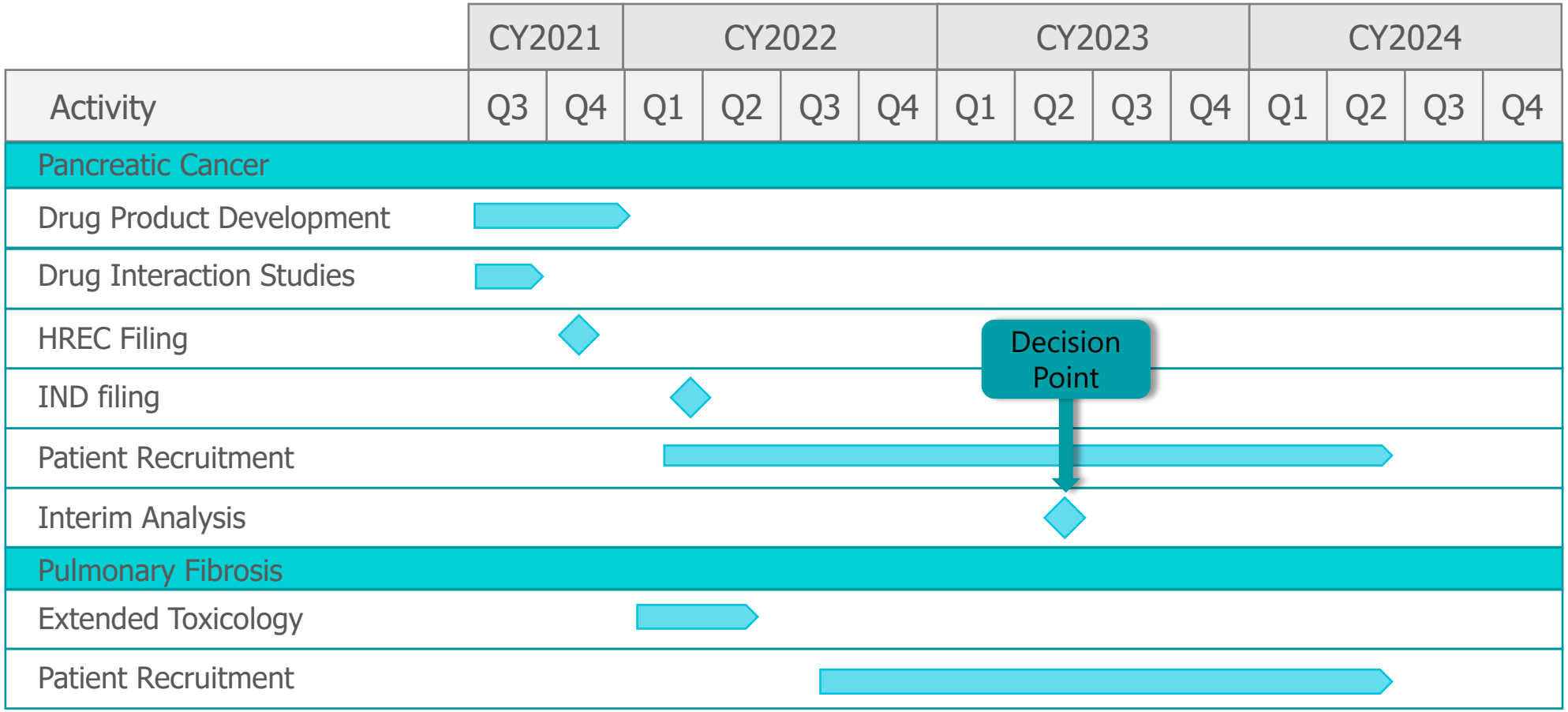
Recruitment due to commence Q1 2022

ECOG: Eastern Cooperative Oncology Group; PK: pharmacokinetics; PD: pharmacodynamics; G/A: Gemcitabine/Abraxane®; RP2D: Recommended Phase 2 Dose

Trial overview and decision tree

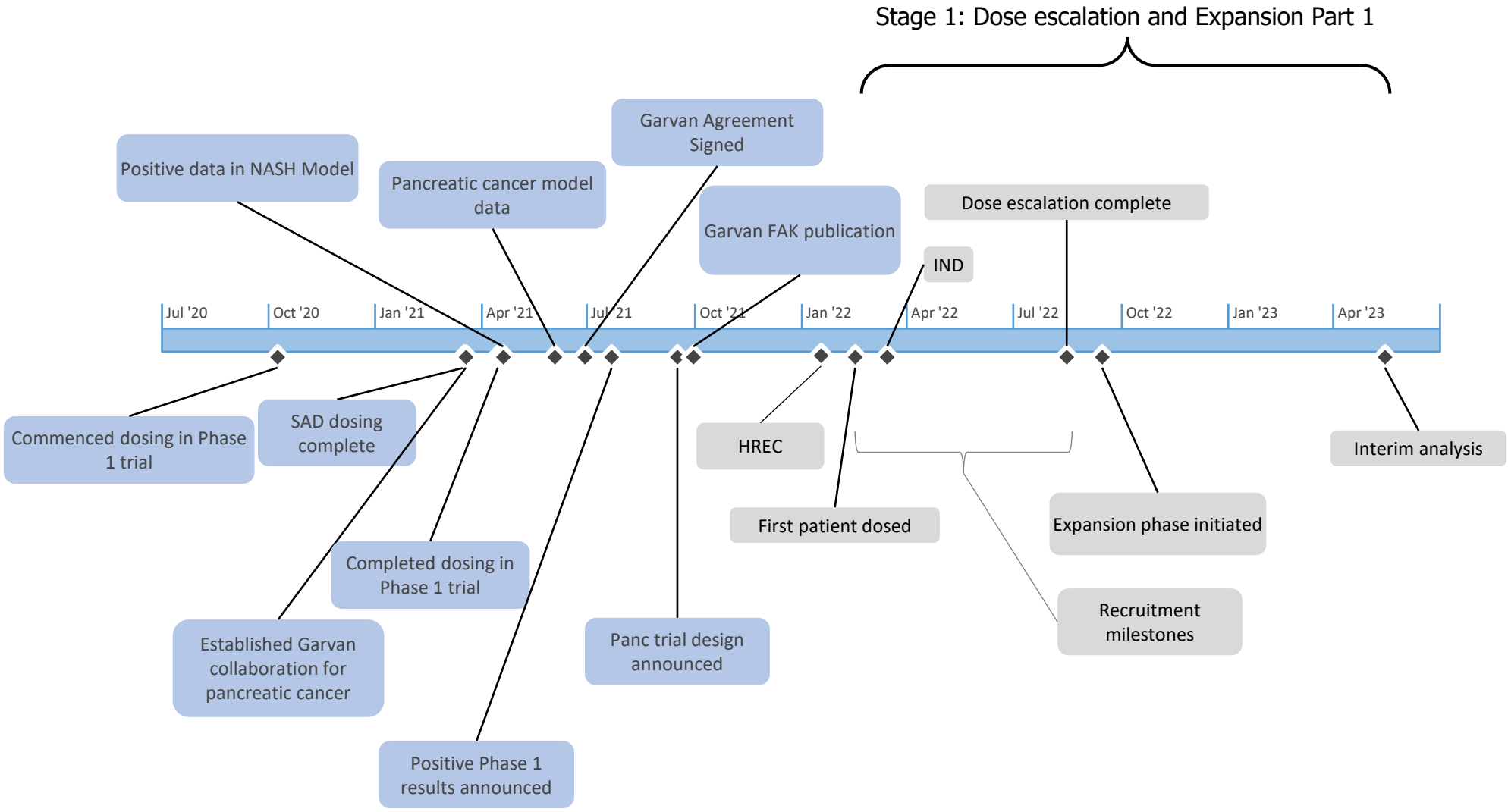


Schedule



HREC: Human Research Ethics Committee
IND: Investigational New Drug

Expected newsflow



Exposing cancer. Enhancing treatment.

Amplia Therapeutics Limited
ABN 16 165160 841
ASX: ATX
info@ampliatx.com
www.ampliatx.com

Contact:
John Lambert
Chief Executive Officer
john@ampliatx.com