ABN 16 165 160 841

ASX RELEASE **2nd June 2020**

Amplia Provides Updated Investor Presentation

Amplia Therapeutics Limited (ASX: ATX) ("Amplia" or the "Company") today released a new investor slide deck which provides an update on the Company's technology and its near-term and mid-term plans as it moves towards initiating its first clinical trial later this year.

In the last two months, Amplia has been awarded two Orphan Drug Designations from the US FDA, one for the use of AMP945 in the treatment of pancreatic cancer and one for idiopathic pulmonary fibrosis (IPF). These designations provide the company with waived FDA fees, clinical trial protocol assistance, and seven years' market exclusivity in FDA-administered markets if AMP945 secures regulatory clearance for these indications.

Amplia remains on track to initiate a Phase 1 clinical trial in healthy volunteers later this year. Data from this trial will be used to advance AMP945 into Phase 2 testing for multiple indications. In parallel, Amplia intends to conduct an extensive preclinical program that will provide data to refine the Company's internal development program as well as support partnering discussions for other applications for AMP945.

"The company has made extraordinary progress over the last 12 months and it is very exciting to be on the cusp of commencing the clinical development of AMP945" said John Lambert, CEO of Amplia. "The Phase 1 trial we plan to conduct has been designed to unlock the commercial opportunites provided by AMP945 and we expect to hit several key development milestones over the next 12-18 months".

The attached presentation provides updates on the following:

- details of how Amplia's FAK inhibitors may be used in the treatment of cancer and fibrosis
- the design and expected outcomes from the planned Phase 1 clinical trial
- information on Phase 2-enabling preclinical studies planned to run in parallel with the Phase 1 trial
- upcoming milestones

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

- End -

For Further Information

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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).

Investor Presentation

June 2020

Amplia Therapeutics Limited

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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.

Company Highlights

Developing small molecule drugs against Focal Adhesion Kinase (FAK) for two, significant disease areas:

- **cancer** – combo therapy in hard-to-treat solid tumours
- **fibrosis** – prevention and treatment

Orphan Drug Designations for both pancreatic cancer and idiopathic pulmonary fibrosis

Range of commercial opportunities for partnering, licensing and co-development

First Phase 1 clinical trial scheduled to start in 2H 2020

Data from Phase 1 will be relevant for multiple cancer and fibrotic disease indications

Investigational New Drug (IND) designation and Phase 2 clinical trial program targeted in 2021

Company snapshot[1]

Shares	66.5M
Market cap	$9.3M
Options	9.3M
Cash [2]	$1.1M
Last qtr burn [2]	($0.6M)
Listed	May 2018 (RTO)
Headquarters	Melbourne
Board	Warwick Tong (Chair) John Lambert (MD) Robert Peach (NED) Chris Burns (NED)
Substantial institutional holders	Platinum - 8.6%

ATX Price and Volume – 6 months

price	$0.14
12mth high - low	$0.25 - $0.05
av. daily volume	210,000

[1] as at 27 May 2020

[2] quarter ending 31 Mar 2020

Board of Directors

Warwick Tong
MB, ChB, MPP, GAICD
Non-Executive Chairman

- GSK (NZ, London, Singapore)
- ex-CEO & Director of Cancer Therapeutics CRC (Melbourne)
- SurfaceLogix, BioMedVic (Chair), Cortex Health, CSIRO

John Lambert
PhD, GAICD
MD & CEO

- Biota (Drug Discovery, Drug Development, Operations)
- Medicines Development for Global Health (Senior Director)
- University Melbourne, ANU, Harvard University

Robert Peach
PhD
Non-Executive
Independent Director

- co-founder Receptos (acquired by Celgene for $7.8B in 2015)
- Apoptos, Biogen Idec, IDEC, Bristol Myers Squibb
- Director
  - Avalia Immunotherapies
  - AdAlta
  - Rekover

Chris Burns
PhD, FRSC, GAICD
Non-Executive Director

- Pfizer (UK), Ambri (Head of Chemistry), University of Sydney
- Cytopia (Head Medicinal Chemistry, Research Director)
- Currently holds exec roles with privately held biotechs MecRx, Certa Therapeutics and OccuRx

Amplia's Scientific Advisors

Prof. Margaret Frame
OBE, PhD

Science Director and Chair of Cancer Biology, University of Edinburgh

Global thought leader in FAK

Prof. Paul Timpson
PhD

Laboratory Head - Invasion and Metastasis Lab, Garvan Institute

World leader in FAK biology

Assoc Prof. Lara Lipton
MBBS, PhD, FRACP

Medical oncologist and clinical researcher with extensive experience in pancreatic cancer

Prof. Phil Hansbro
PhD

Director, Centenary UTS Centre for Inflammation at Sydney

Internationally recognized researcher in the role fibrosis plays in diseases such as COPD, asthma and idiopathic pulmonary fibrosis

Technology overview

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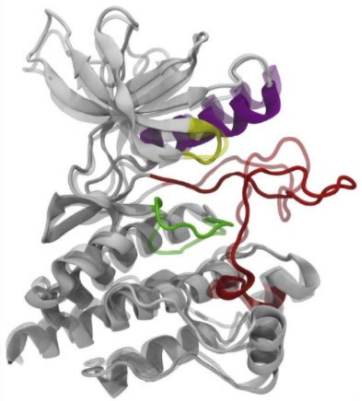
Focal Adhesion Kinase – dual purpose drug target



Focal Adhesion Kinase (FAK)

Cancer defence mechanisms

- cell migration and metastasis
- tumour microenvironment (TME)
- local regulation of immune response
- angiogenesis

Fibrotic disease treatments

- central role in fibrosis
- collagen accumulation
- fibronectin production
- myofibroblast differentiation

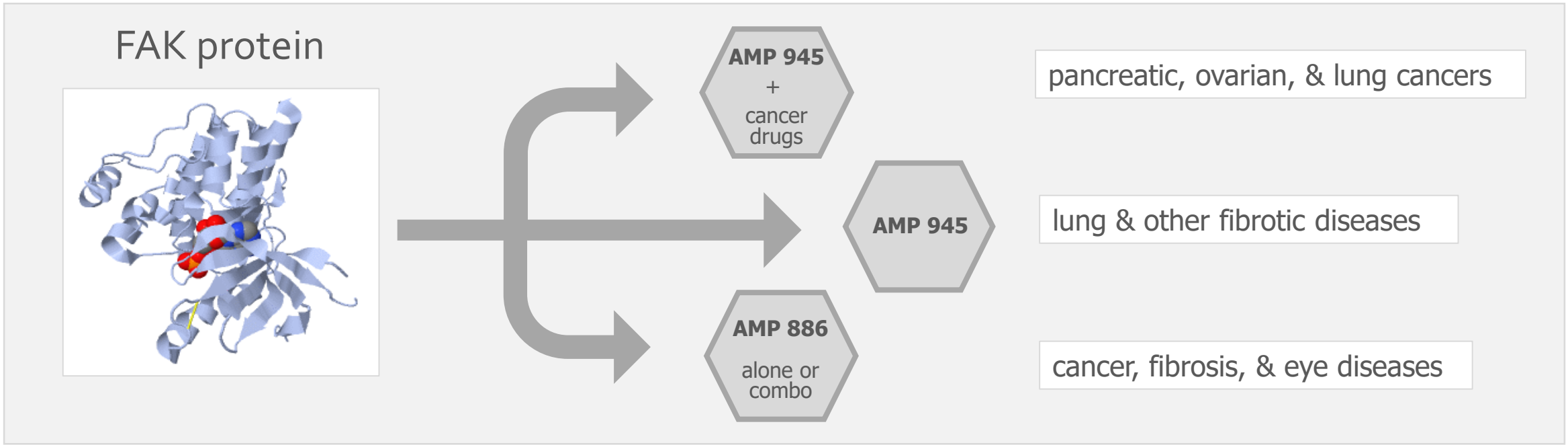
Amplia is developing two FAK inhibitors

Amplia has exclusive, worldwide licenses to two proprietary, FAK inhibitors:

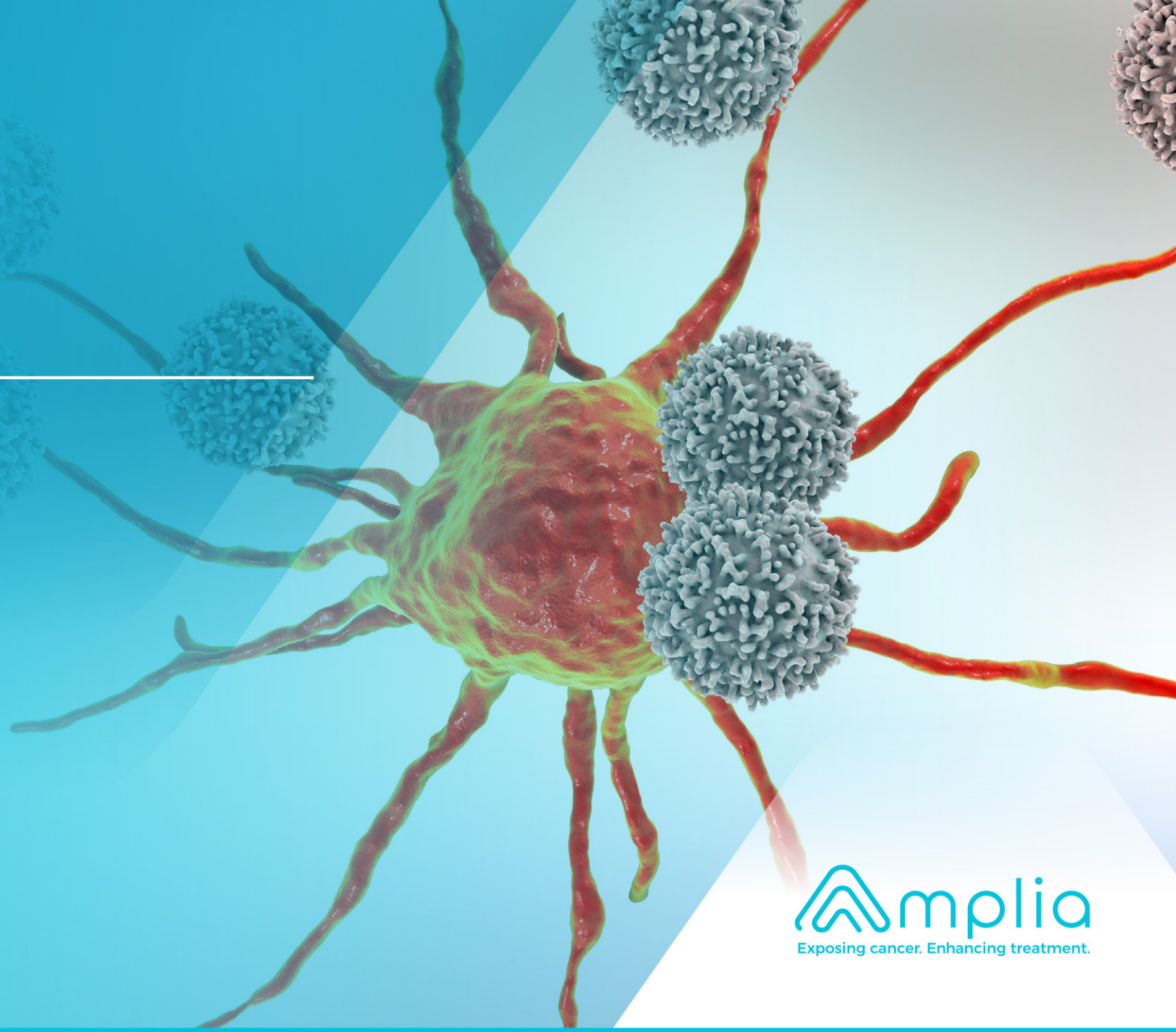
- **AMP945** – highly potent, highly selective, orally bioavailable – only blocks the FAK protein
- **AMP886** – orally bioavailable, potent blocker of the FAK protein and other cancer drug targets

Both were developed by the Cancer Therapeutics CRC (CTx) – a collaboration of Australia's leading cancer researchers whose past commercial successes include:

- licensing a drug to Merck in 2016 (US$15M upfront, up to US$500M milestones + royalties)
- establishing a collaboration and license agreement with Pfizer in 2018 (US$14M upfront, up to $US460M milestones + royalties)



Cancer treatments



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Why cancer drugs often do not work

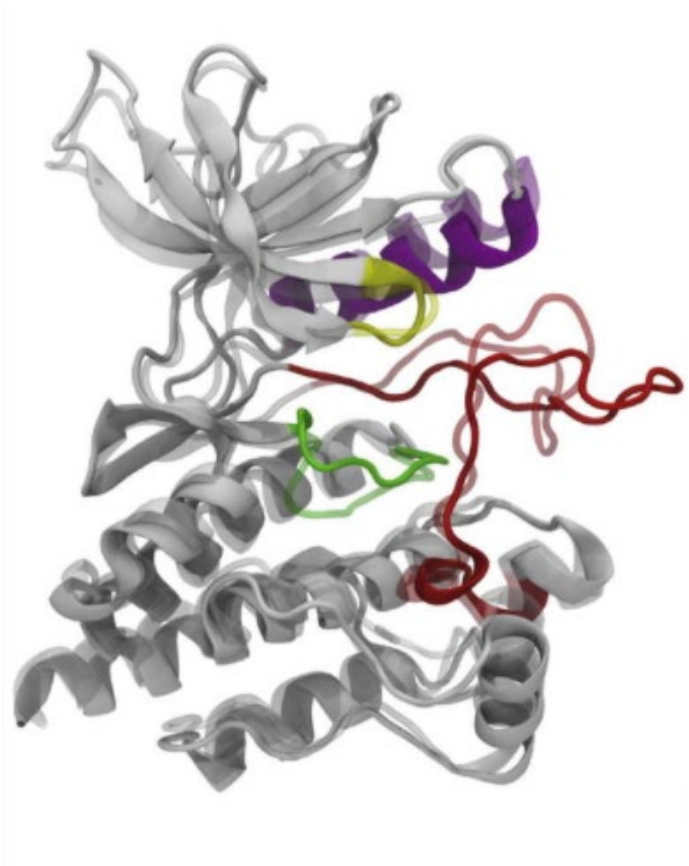
Pharmaceutical strategies to treat cancer:

1. **cytotoxic drugs**: target rapidly dividing cancer cells
2. **targeted drugs**: block specific proteins elevated in cancer cells
3. **anti-angiogenic drugs**: block new blood vessels which feed the cancer
4. **immuno-oncology (I-O) drugs**: activate the immune system to attack the cancer

The effectiveness of these drugs limited by tumour 'defence' mechanisms which:

- allow cancers to migrate spread to other sites in the body
- generate resistant cancer cells
- physically shield the cancer from the immune system
- dampen the immune system's response against the 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)

- elevated levels of FAK in cancers are associated with poor outcomes
- increased FAK activity is found in many, difficult-to-treat, solid cancers
- FAK is involved in many cancer defence mechanisms that reduce the effectiveness of cancer drugs
- 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.

FAK inhibition – pancreatic cancer

Pancreatic cancer is a deadly and difficult to treat disease with most patients dying within 6-12 months

Pancreatic cancer is unresponsive to cancer drugs:

- surrounded by a dense, fibrotic, protective stroma
- the tumour microenvironment (TME) contains cells that suppress the immune system

In animal studies using human pancreatic tumour tissue, FAK inhibitors:

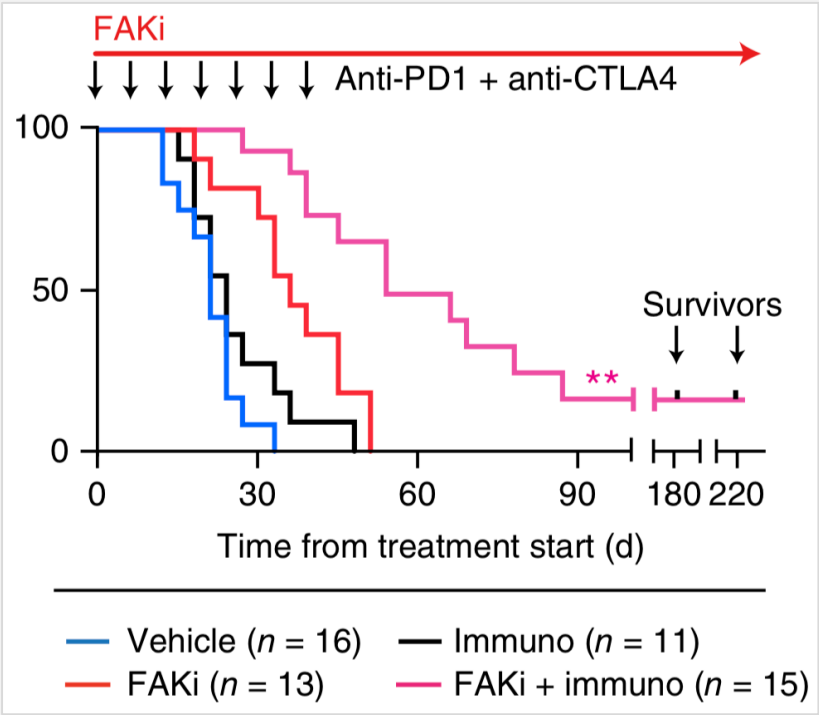
- slowed tumour progression
- doubled survival times
- reduced tumour fibrosis
- reduced the number of immunosuppressive cells

In preclinical studies, a FAK inhibitor made human pancreatic cancer respond to:

- T-cell immunotherapy (cell-based treatments)
- PD-1 antagonists (I-O drugs)

Amplia recently appointed leading world expert in FAK biology Prof. Paul Timpson from the Garvan Institute of Medical Research to its Scientific Advisory Board

FAKi allows pancreatic cancer to respond to I-O drugs



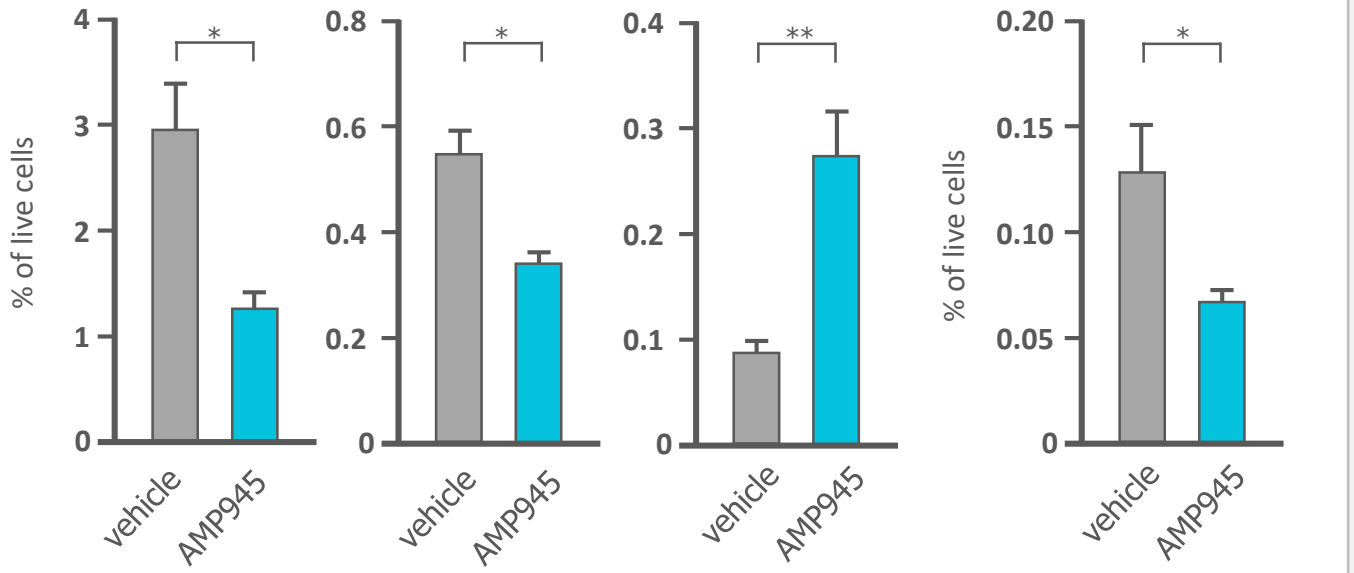
SOURCE: Targeting focal adhesion kinase renders pancreatic cancers responsive to checkpoint immunotherapy (Nature Medicine, 2016) DOI: https://doi:10.1038/nm.4123

AMP945 – potential to enhance cancer treatments

Reduced immunosuppression

Reduced angiogenesis

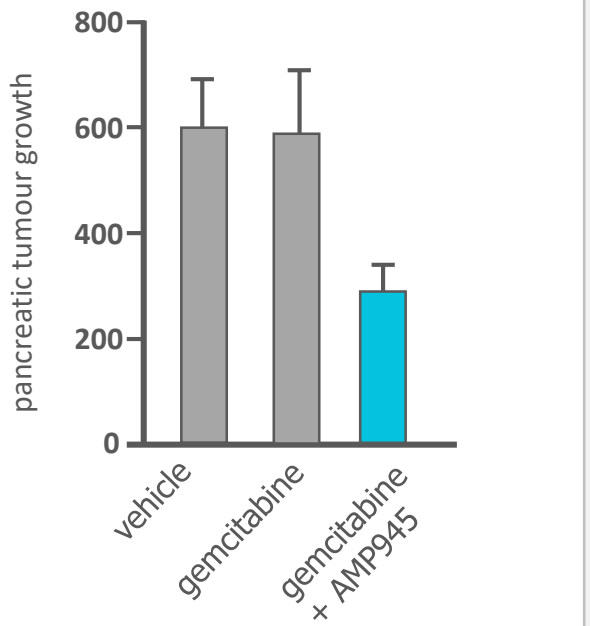
tumour macrophages | tumour suppressor cells | CD8 eff T-cells | tumour endothelial cells



AMP945 in a skin cancer model

Improved efficacy

response to chemotherapy drugs



AMP945 in a pancreatic tumour model

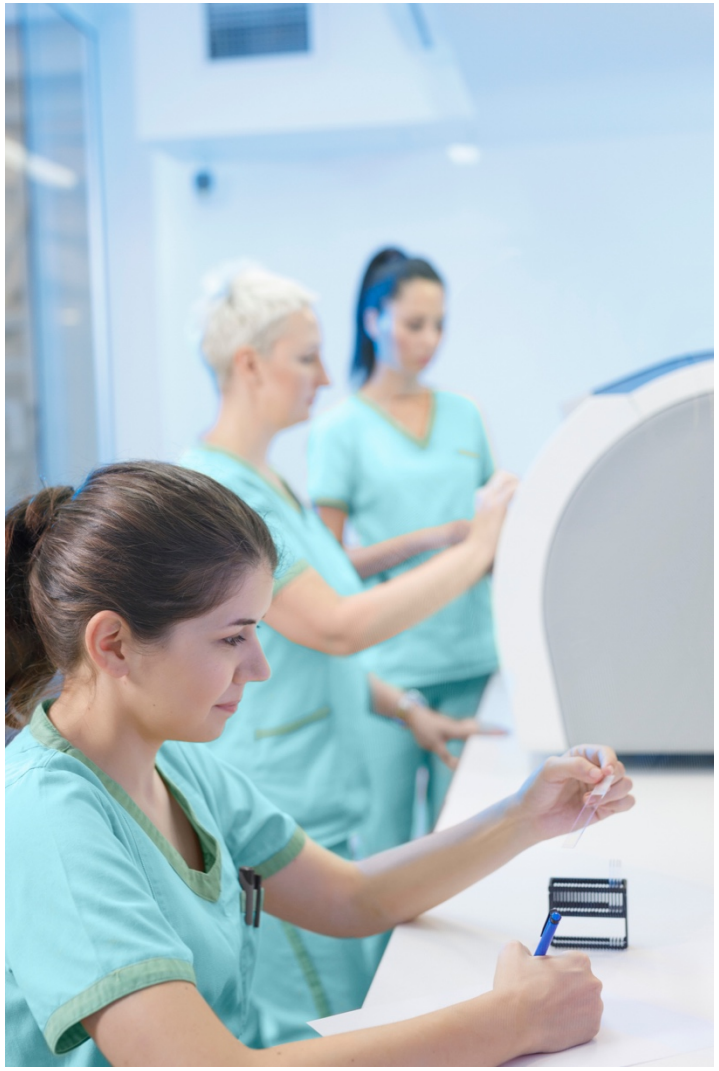
AMP945 – treatment of solid tumours

Pancreatic cancer

- FDA Orphan Drug Designation for AMP945 in the treatment of pancreatic cancer received in March 2020
- Collaboration with Prof. Paul Timpson at the Garvan Institute to assess novel dosing regimes and combination therapies for pancreatic cancer
- These studies will help guide future clinical trials in patients with pancreatic cancer

Other cancers

- Amplia plans to perform preclinical studies to evaluate combining AMP945 with other cancer drugs including MEK inhibitors
- These studies will inform the structure and design on Amplia's Phase 2 clinical program



Fibrosis treatments

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FAK in Idiopathic Pulmonary Fibrosis

Idiopathic Pulmonary Fibrosis (IPF) is a devastating, progressive disease caused by the build-up of fibrotic tissue in the lung which affects 3M people worldwide, including 130,000 in the US

Left untreated, the median survival time is 2-3 years, with lung transplantation the only treatment option currently available that improves outcomes

Approved antifibrotic drugs (pirfenidone and nintedanib) slow the progression of the disease by ~50%, but are unable to prevent the eventual loss of lung function:

- increase median life expectancy by 2½ years
- quality of life for end-stage disease remains very poor

FAK has a pivotal role in the biochemical pathways regulating the development and progression of fibrosis in the lungs

AMP945 – prevention and treatment of fibrosis

Lung Fibrosis

- FDA Orphan Drug Designation for AMP945 in the treatment of idiopathic pulmonary fibrosis received in May 2020

Preclinical study of AMP945 using the industry-standard bleomycin model of lung fibrosis indicates:

- AMP945 can prevent lung fibrosis from becoming established
- AMP945 can reduce lung fibrosis once it has become established

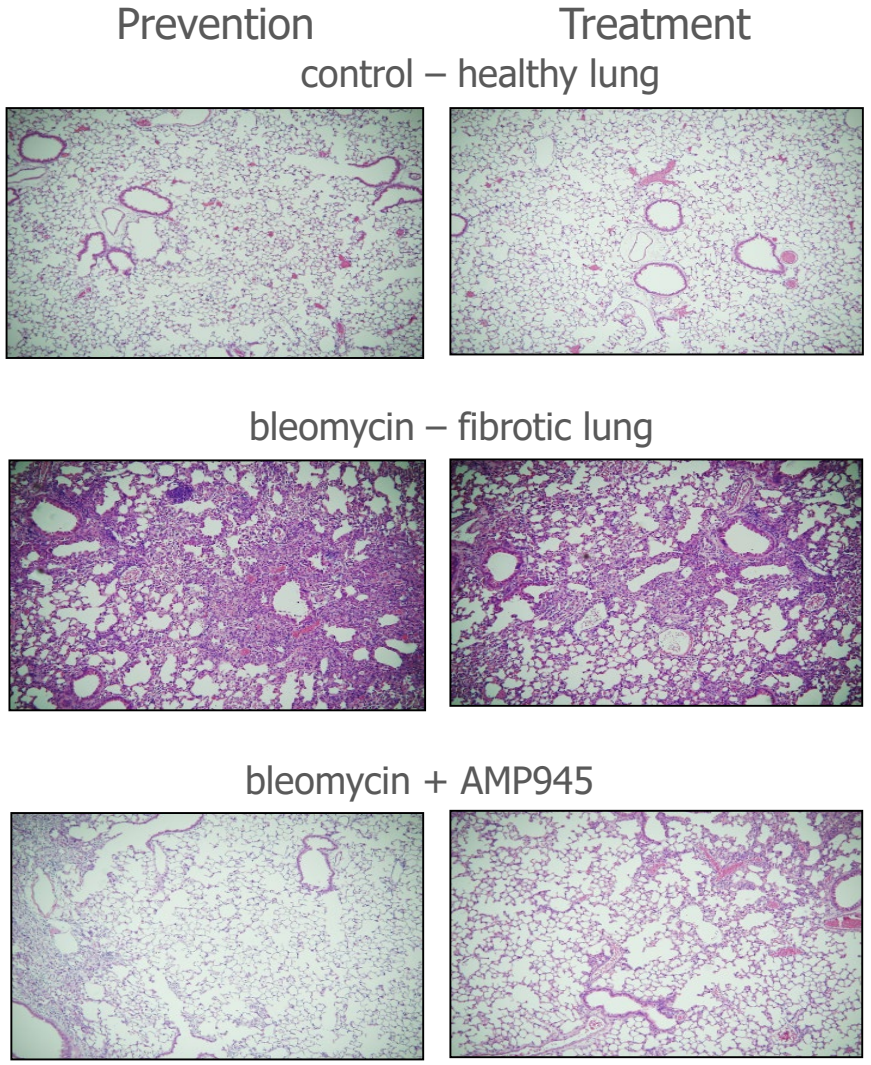
Causes of lung fibrosis

Many diseases are caused or exacerbated by formation of fibrotic tissue

- Idiopathic – unknown causes triggering pulmonary fibrosis (IPF)
- Acute lung tissue injury – arising from viral or bacterial infections

Treatment options are few and have limited effectiveness:

- IPF – nintedanib & pirfenidone – slow, but do not reverse, progression



Business Plan

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Amplia's FAKi's provide a promising opportunity set

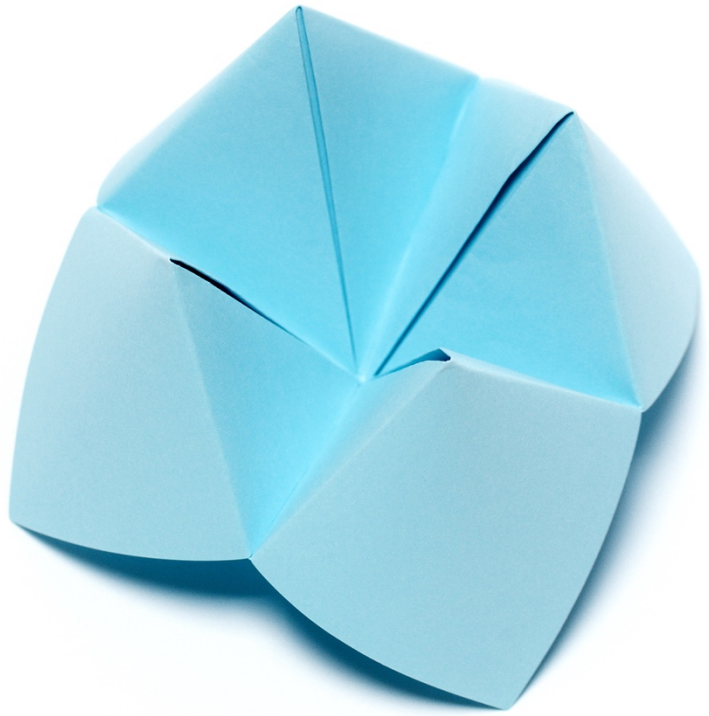
AMP945 and **AMP886** provide Amplia with several commercial opportunities

Amplia is taking three approaches realize these opportunities:

1. **take AMP945 into clinical development** for pancreatic cancer and idiopathic lung fibrosis (both granted Orphan Drug Designations by the FDA)

2. **license, partner or co-develop** other applications for AMP945 including other cancer combination therapies, fibrotic diseases, uveal melanoma

3. **seek partners** for co-development or licensing of AMP886 to treat wet AMD, cancer or fibrotic diseases



Initially, a Phase 1 clinical trial and parallel preclinical studies are planned

Readiness for Phase 1 Trial of AMP945

First clinical trial of AMP945 planned to commence in 2H 2020:

- GMP clinical manufacture complete (kg scale)
- Dosing in preclinical toxicology studies complete
- CRO selected

Phase 1 safety trial of orally administered AMP945 in healthy volunteers:

- Single Australian site
- 64 volunteers, cost of ~$2M
- Single and multiple ascending doses, forecast 6-9 months to complete

Low risk trial:

- FAKi drugs have good safety profile – no known class effects
- AMP945 is highly specific – minimal "off target" activity detected
- healthy volunteers – no delays anticipated for recruiting subjects

Design of Planned Phase 1 Trial of AMP945

Part A: Single Ascending Dose (SAD)

- 5 cohorts of 8 volunteers
- Single doses
- Safety and pharmacokinetics following a single dose of AMP945

Part B: Food Effects (Single dose)

- 1 cohort of 8 volunteers
- Single dose
- Safety and pharmacokinetics when dosed after food

Part C: Multiple Ascending Dose (MAD)

- 3 cohorts of 8 volunteers
- Multiple doses
- Safety and pharmacokinetics after repeated dosing with AMP945

Targeted Outcomes from Phase 1 Trial of AMP945

Safety

- Establish tolerable doses in healthy volunteers
- Identify safety signals for monitoring in expected later clinical trials

Pharmacokinetics (PK)

- Identify rate of drug clearance and informs optimal dosing frequency
- Establish relationship between dose and systemic exposure
- Inform combination approaches for later trials

Pharmacodynamics (PD)

- Confirm whether AMP945 inhibits FAK in healthy volunteers
- Taken with safety and PK data, informs optimal dose selection for inhibition in FAK

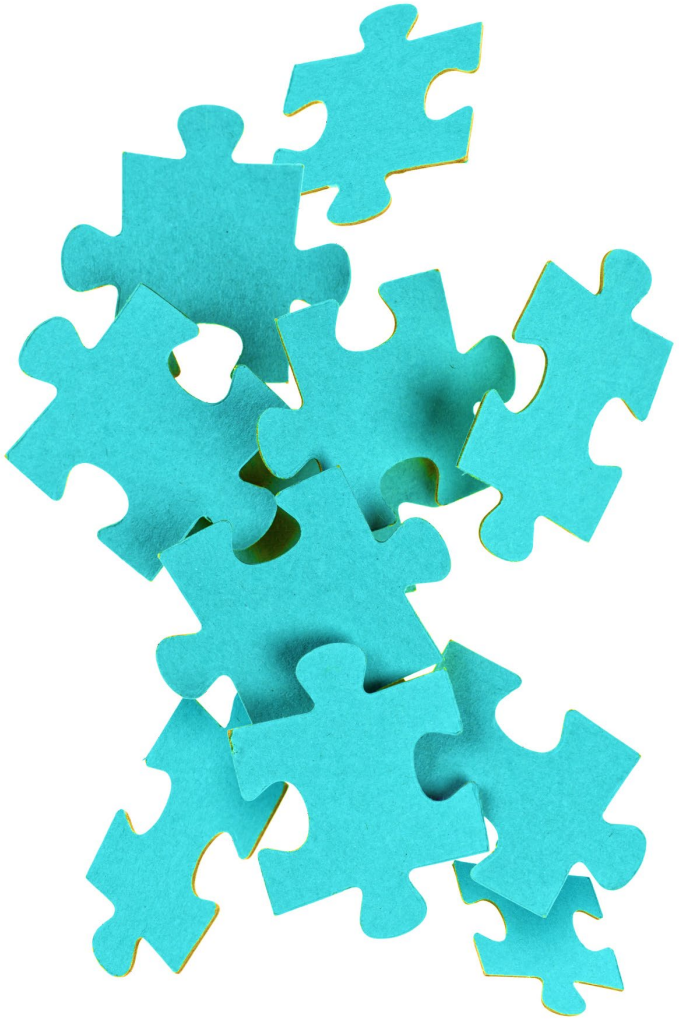
Parallel Preclinical Studies

- In parallel with conducting the Phase 1 clinical trial of AMP945 in healthy volunteers, Amplia plans to evaluate AMP945 in multiple preclinical models

- Drug combinations in animal models of human cancers:
  - each combination/tumour model relatively inexpensive to evaluate
  - can establish effects of combined agents in model systems relatively quickly

- Combination drug partners for AMP945 to treat cancer that will be evaluated include:
  - RAF / MEK inhibitors
  - chemotherapy drugs
  - immuno-oncology drugs

- Monotherapies in fibrosis disease models:
  - lung fibrosis
  - wet age-related macular degeneration (wet AMD – eye disease)



AMP886 – age-related macular degeneration

Age-related macular degeneration (AMD) affects 1 in 7 Australians >50yrs[1]:

- 17% experience vision impairment
- 15% people >80yrs have vision loss or blindness due to AMD

Antibody drugs that target vascular endothelial growth factor (VEGF) have improved the prognosis for AMD patients, however:

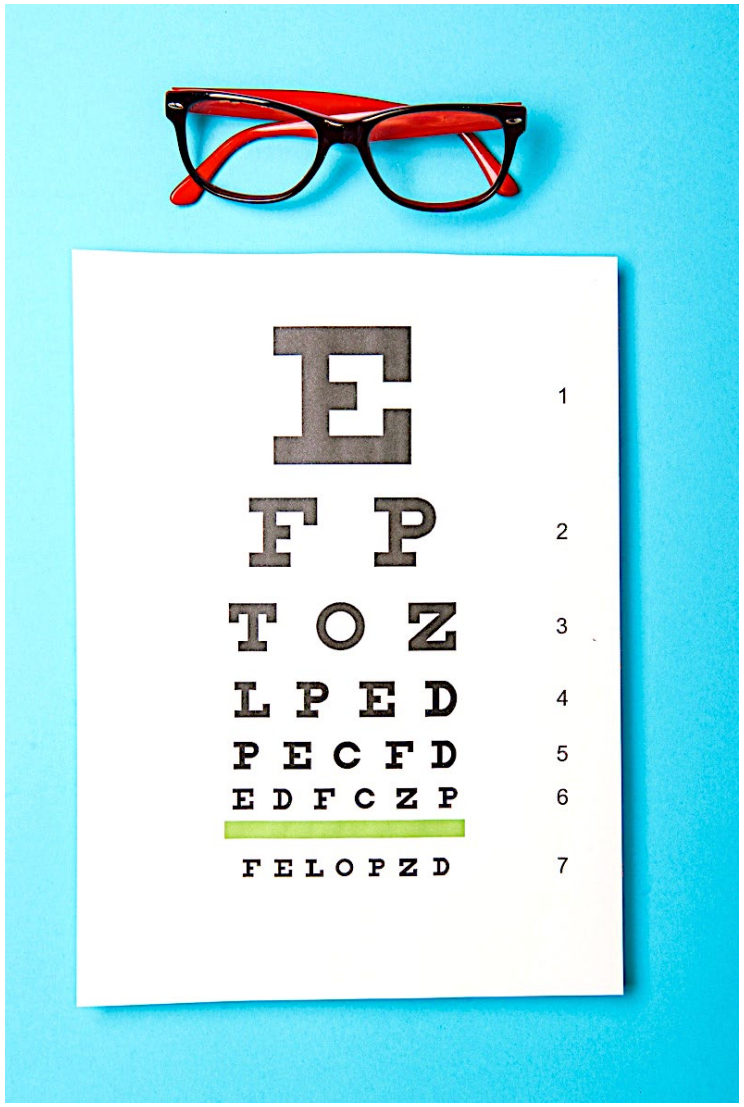
- 10% patients do not respond
- 50% suffer from ongoing vision loss
- does not treat the fibrosis that occurs

AMP886 may provide a unique and attractive treatment option – dual therapy:

- FAK inhibition has the potential to reduce fibrosis
- also acts on pathway related to that of approved antibody AMD drugs

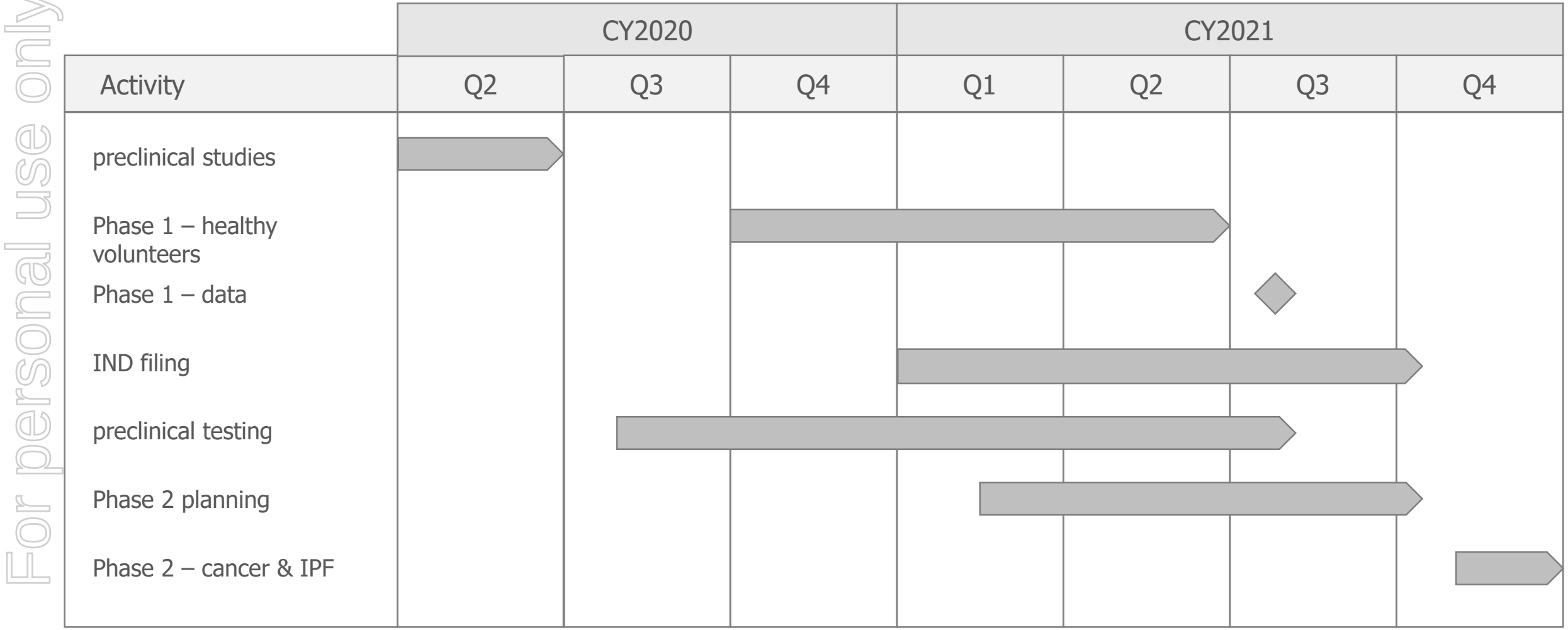
Preclinical studies to examine this opportunity:

- well established animal model
- world-leading research group – Prof Erica Fletcher – University of Melbourne
- quick – go/no-go within 6 months



1. https://www.mdfoundation.com.au/content/what-is-macular-degeneration

AMP945 – 18-month development plan



Upcoming targeted milestones

- **June 2020 -** final report of preclinical toxicology studies
- **July 2020 -** ethics clearance to commence Phase 1 trial in healthy volunteers
- **Q3 2020 -** initiate Phase 1 clinical trial
- **Q2 2021 -** selection of first indication for Phase 2 based on preclinical combo studies
- **Q2 2021 -** headline data from Phase 1 clinical study
- **Q3 2021 -** file Investigational New Drug (IND) Application for AMP945 with FDA
- **Q4 2021 -** receive IND designation for AMP945
- **H2 2021 -** initiate Phase 2 program for AMP945 in cancer and IPF

Appendix

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Competitive landscape

Competitor	FAKi	status & comments
Verastem	defactinib	• in Phase 2 clinical trials for pancreatic cancer in combination with Keytruda • initiating Phase 1 clinical trials in combination with in-licensed Mek/Raf inhibitor
InxMed	IN10018	• Shanghai-based company acquired IN10018 from Boehringer Ingelheim • in Phase 1b with Mek inhibitor for uveal and metastatic melanoma

In February 2020, Verastem secured $100M investment in a private placement to leading US life science investors to focus on the clinical development of its FAK inhibitor

- Verastem's clinical data shows promising efficacy of a FAK/MEK combination therapy in patients with KRAS mutant cancers
  - Expansion cohorts ongoing in low-grade serous ovarian cancer (LGSOC), KRAS mutant non-small cell lung cancer (NSCLC) and KRAS mutant colorectal cancer (CRC)

Amplia's data indicates that AMP945 has greater specificity than defactinib - lower potential for side-effects from off-target activity

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