A microscopic view of several cells with a complex, textured surface and numerous thin, hair-like projections extending from them. The entire image is overlaid with a semi-transparent teal color.

# Investor Introduction

**Presented 05 September 2018**

# Notice

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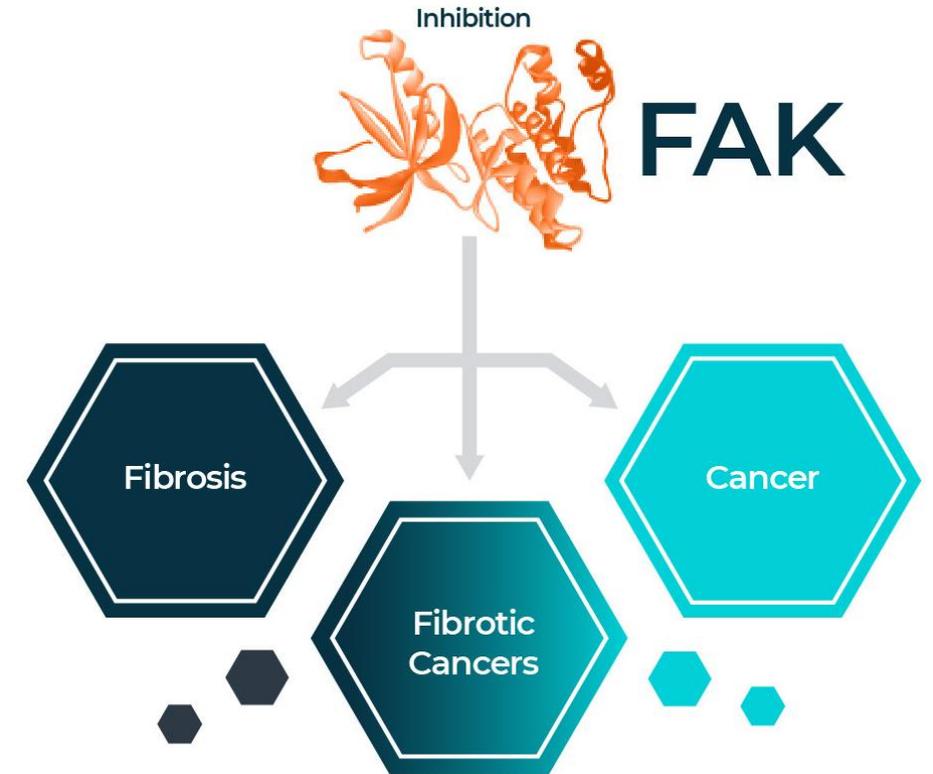
This presentation contains forward-looking statements which can be identified by the use of words such as “may”, “should”, “will”, “expect”, “anticipate”, “believe”, “estimate”, “intend”, “scheduled” or “continue” or similar expressions. Any forward-looking statements contained in this presentation are 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.

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**05 September 2018**

# Focal Adhesion Kinase - 101

- Fibrosis is the formation of excess fibrous connective tissue which can adversely affect normal organ or tissue architecture and function
- In cancer, fibrosis triggered by tumours can interfere with existing chemotherapies or rendered them completely ineffective
- Fibrosis can hide certain tumours from the immune system rendering breakthrough immuno-oncology (I-O) treatments ineffective
- Cell adhesion molecules regulate fibrotic processes
- Focal adhesion kinase (FAK) is an important protein involved in cell adhesion, migration and invasion as well as immune responses to tumours and is thus a significant target in both cancer and fibrotic diseases
- Blocking / inhibiting FAK safely could make difficult to treat tumours responsive to existing chemotherapeutics or provide a much needed breakthrough in the treatment of tumours that are resistant to I-O therapies



# Value Proposition

- Amplia has an exclusive worldwide licence to develop and commercialise two best-in-class FAK inhibitors (FAKi) developed by the Cancer CRC : AMP945 and AMP886
- AMP945 is a “pure play” FAKi with superior specificity. AMP886 is a multi-action molecule that hits two other important cancer pathways – VEGFR3 and FLT3
- Two molecules, multiple indications = multiple “shots on goal”
- The immediate objective is to have AMP945 (US) ‘IND Phase II ready’ in the second half of 2019 = significant value inflection point
- The clinical pathway to achieve this should be low risk given that two 3rd party FAKi drug candidates have successfully completed Phase I safety trials
- Experienced drug development team and strong academic partners, backed by the Cancer CRC (Australia) and Cancer Research UK

# Exclusive Worldwide Licence

- Amplia has in-licensed AMP945 and AMP886 from Cancer Research Technology (CRT), the development and commercialisation arm of Cancer Research UK – the world’s leading cancer research charity
- AMP945 and AMP886 were originally developed by Melbourne based Cancer Therapeutics CRC (CTx), a collaborative partnership of leading Research Institutes, Universities, and Biotechs, supported by the Australian Cooperative Research Centre (CRC) Program
- CTx “is in the business of finding cures for cancer” and until mid 2014 promising candidates were licensed to CRT for further development and commercial licensing
- In 2016 CRT licensed a CTx developed protein inhibitor (PRMT5) to MSD (Merck) with an upfront of US\$15 million, plus potential milestones of US\$500 million, plus royalties on sales
- Dr Warwick Tong (then CTx CEO) said of the PRMT5-MSD transaction, “This is a great result for Australian science ... and further demonstrates what can be achieved when science and commercialisation capabilities unite”

# Experienced Team



**Warwick Tong**  
MB ChB MPP GAICD  
Chairman

Ex-GSK, experienced drug developer. Former CEO and Director, Cancer CRC.



**Simon Wilkinson**  
Managing Director  
& CEO

20 yrs biotech executive management & capital markets experience.



**Robert Peach**  
PhD  
Independent Director

25+ yrs experience including senior executive and scientific positions at Apoptos, Biogen Idec, IDEC and Bristol-Myers Squibb.

Co-founder and CSO of Receptos (2009) which was acquired by Celegen for US\$7.8B in 2015.



**Christian Behrenbruch**  
D.Phil (Oxon) MBA JD  
Director

Seasoned biotech entrepreneur.

Director, Factor Therapeutics (ASX: FTT)

CEO of Telix Pharmaceuticals (ASX: TLX)

# Experienced Team



## Chris Burns

**PhD, FRSC FRACI Director**

Over 20yrs experience in Pharma, biotech and academia.

Discovered clinically trialed drugs momelotinib and lexibulin. 50+ scientific publications, 30+ patents.



## Mark Delvin

**PhD, Chief Scientific Advisor**

Experienced drug discovery biologist.

COO for Cancer Research CRC.

Previously Director of Translational Cancer Biology for the CTx where he has worked extensively on FAK inhibitors.



## Mark Sullivan

**Regulatory Affairs Adviser**

Experienced drug development professional (ex GSK, Gilead).

Founder and Managing Director, Medicines Development for Global Health.



## Damian Slizys

**BSc(Hons), LLB(Hons), PhD  
Intellectual Property Adviser**

Principal Falkenheim Advisory.  
Previously FPA Patent Attorneys.

# Scientific Advisors



**Prof. Margaret Frame**  
OBE, PhD

Science Director and Chair of Cancer Biology, University of Edinburgh.  
Global thought leader in FAK.



**Neil Carragher**  
PhD

Professor of Drug Discovery and Director of Edinburgh Cancer Discovery Unit.  
Experienced FAK researcher.



**Alan Serrels**  
PhD

Research Fellow, MRC Centre for Inflammation Research.  
Identifying FAK's role in suppressing ant-tumour responses and strategies for combination treatment strategies to overcome this cancer defense mechanism.

# What does FAK do?

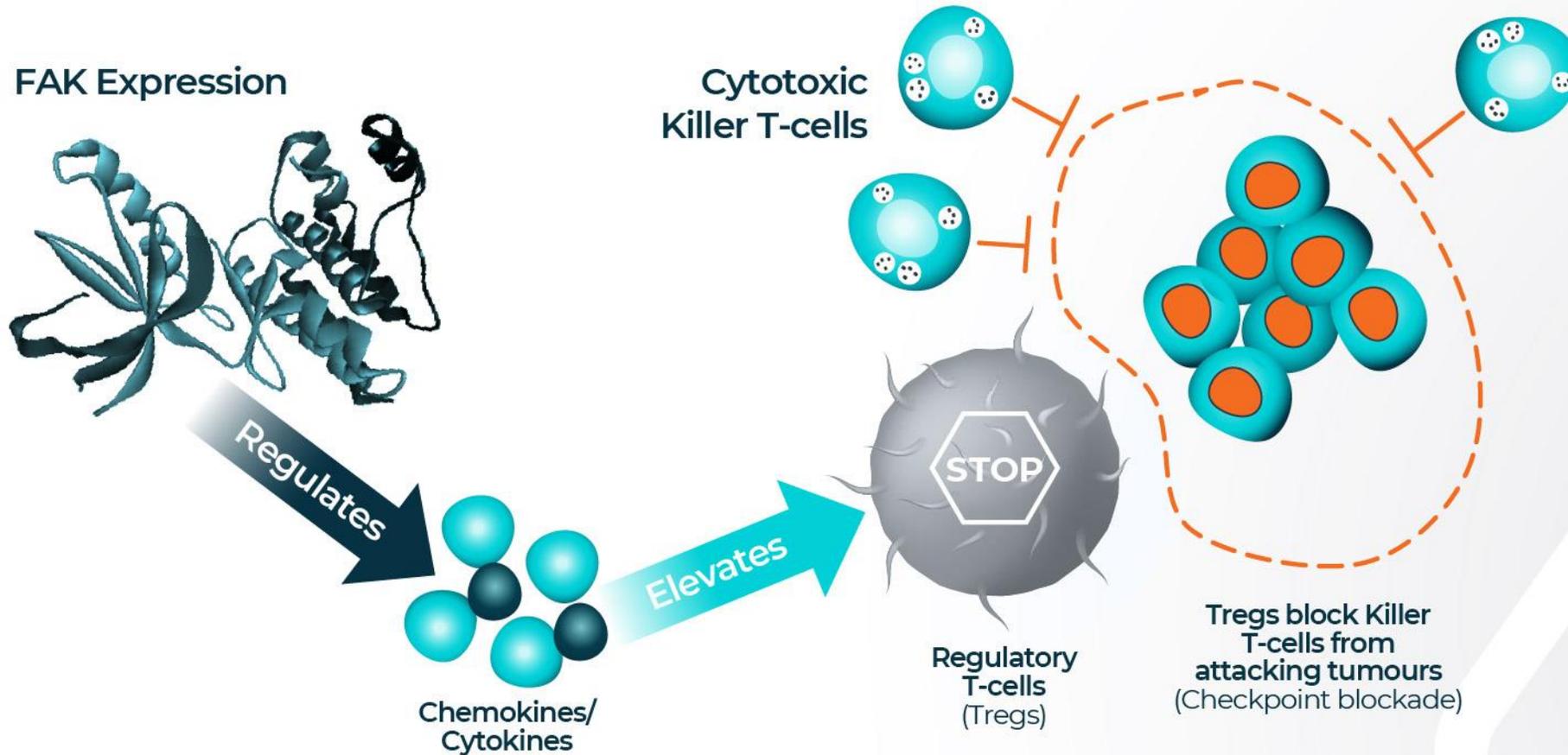
- Focal Adhesion Kinase is frequently up-regulated in many cancer types
- Signals functions that are important for cancer development and metastatic disease
- Co-opted by cancer to assist spread and to develop resistance to therapy
- FAK-dependent signaling drives elevated levels of regulatory T-Cells which in turn suppress the all important anti-tumour T-cell response
- Role in fibrosis has impact in both “fibrotic cancers” (e.g. pancreatic/ovarian), as well as non-cancer fibrotic diseases (e.g. lung/liver fibrosis)



## Key Messages

1. FAK has a fundamental role in cancer. Blocking FAK opens the door for new combination therapies with approved drugs.
2. FAK plays a major role suppressing the immune attack on tumours. Blocking FAK allows immuno-oncology drugs (e.g. checkpoint inhibitors) to work in tough cancers like pancreatic cancer.
3. The planned clinical development pathway creates the opportunity for multiple indications in both cancer and non-cancer applications.

# FAK expression contributes to tumour immunity in fibrotic cancers



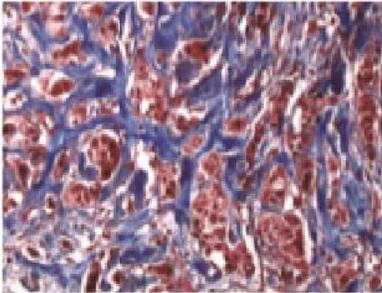
Drugs that target FAK are novel because they target the tumour micro-environment, the supportive infrastructure that enables cancer cells to “hide” from the immune system

Inhibiting FAK appears to unlock the potency of checkpoint inhibitor drugs (i.e. PD-1/PD-L1, CTLA-4), particularly in fibrotic cancers like pancreatic cancer.

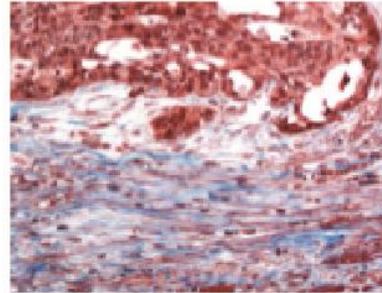
(Diagram adapted from Symeonides et. al. J Immunotherapy Cancer. 2017; 5: 17.)

# Fibrotic Cancers

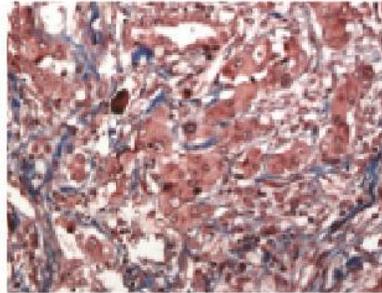
**Breast Cancer**



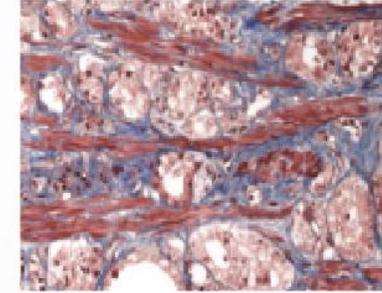
**Esophageal Cancer**



**Lung Cancer**

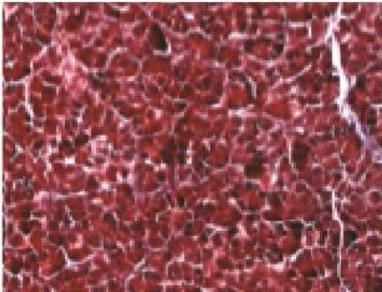


**Prostate Cancer**



Fibrotic cancers have a very different immunologic profile. Fibrotic cancers use the tumour micro-environment as part of their defence against the immune system

**Normal (Pancreas)**



**Pancreatic Cancer**



The biggest unmet need in cancer therapy is pancreatic cancer. Pancreatic cancer is the epitome of a fibrotic tumour that can potentially be attacked with a FAK inhibitor in combination with other immuno-oncology therapies

**Pancreatic Cancer:**

- worst survival outcome of the 21 most common cancers
- death rates are increasing while most other cancers declining
- predicted to overtake breast cancer as the 4<sup>th</sup> most common cancer killer by 2030

# FAK promotes tumour evasion by inducing an immunosuppressive microenvironment

Cell

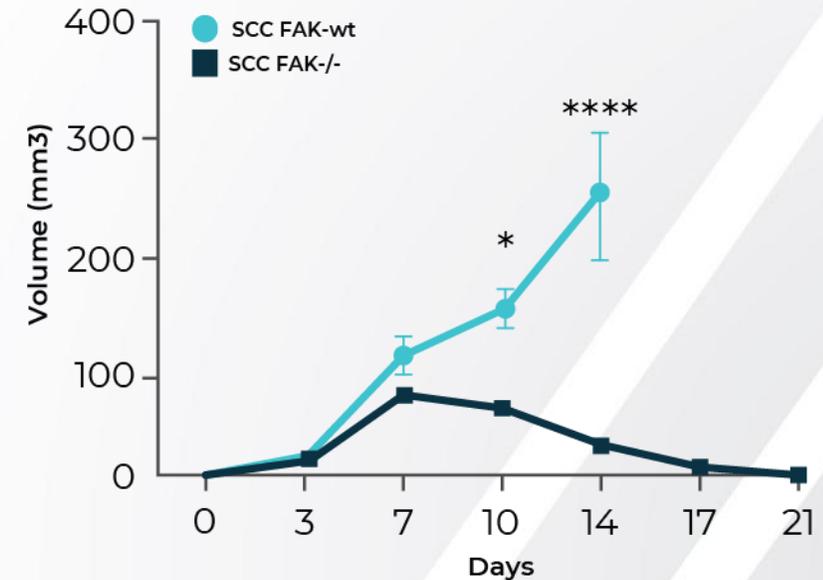
## Nuclear FAK Controls Chemokine Transcription, Tregs, and Evasion of Anti-tumor Immunity

Alan Serrels,<sup>1,7,\*</sup> Tom Lund,<sup>1,7</sup> Bryan Serrels,<sup>1</sup> Adam Byron,<sup>1</sup> Rhoanne C. McPherson,<sup>2</sup> Alexander von Kriegsheim,<sup>1</sup> Laura Gómez-Cuadrado,<sup>1</sup> Marta Canel,<sup>1</sup> Morwenna Muir,<sup>1</sup> Jennifer E. Ring,<sup>3</sup> Eleni Maniati,<sup>4</sup> Andrew H. Sims,<sup>1</sup> Jonathan A. Pachter,<sup>3</sup> Valerie G. Brunton,<sup>1</sup> Nick Gilbert,<sup>5</sup> Stephen M. Anderton,<sup>2</sup> Robert J.B. Nibbs,<sup>6</sup> and Margaret C. Frame<sup>1,\*</sup>

Inhibiting FAK decreases immunosuppressive cell populations in tumours and may enable immunotherapy to work in cancer populations that have a generally poor response to checkpoint inhibitor drugs.

Article

FVB (Immune-competent)



When FAK is genetically ablated (FAK<sup>-/-</sup>) from malignant squamous cell carcinoma (SCC) cells transplanted into immune-competent FVB mice, the immune response leads to significant tumour regression compared to SCC cells with wild type FAK cells present (FAK-wt).

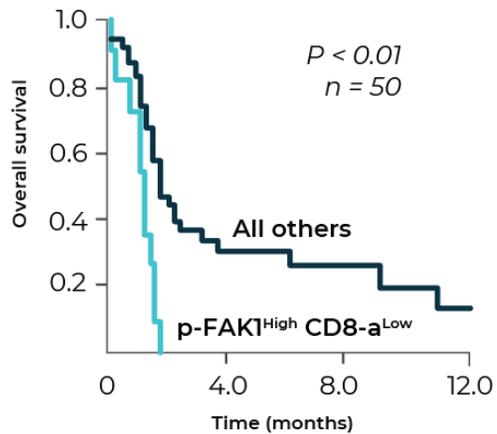
# Pancreatic Cancer responsive to FAKi + combination therapies

nature  
medicine

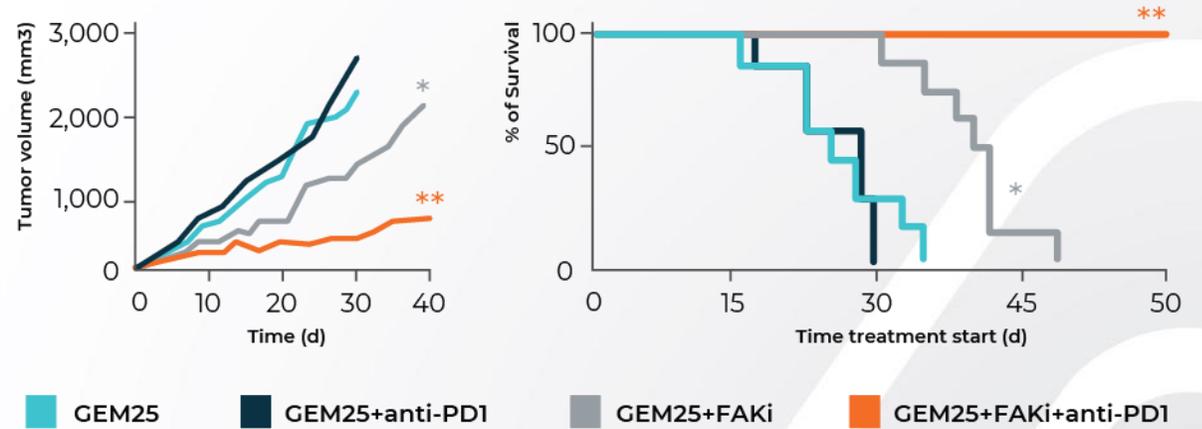
## Targeting focal adhesion kinase renders pancreatic cancers responsive to checkpoint immunotherapy

Hong Jiang<sup>1,2</sup>, Samarth Hegde<sup>1,2</sup>, Brett L Knolhoff<sup>1,2</sup>, Yu Zhu<sup>1,2</sup>, John M Herndon<sup>1,2</sup>, Melissa A Meyer<sup>1,2</sup>, Timothy M Nywening<sup>3</sup>, William G Hawkins<sup>3,4</sup>, Irina M Shapiro<sup>5</sup>, David T Weaver<sup>5</sup>, Jonathan A Pachter<sup>5</sup>, Andrea Wang-Gillam<sup>1,4</sup> & David G DeNardo<sup>1,2,4,6</sup>

VOLUME 22 | NUMBER 8 | AUGUST 2016



In 50 patients with Pancreatic ductal adenocarcinoma (PDAC), high FAK activity and related poor CD8+ cytotoxic T cell infiltration, was associated with poor overall survival



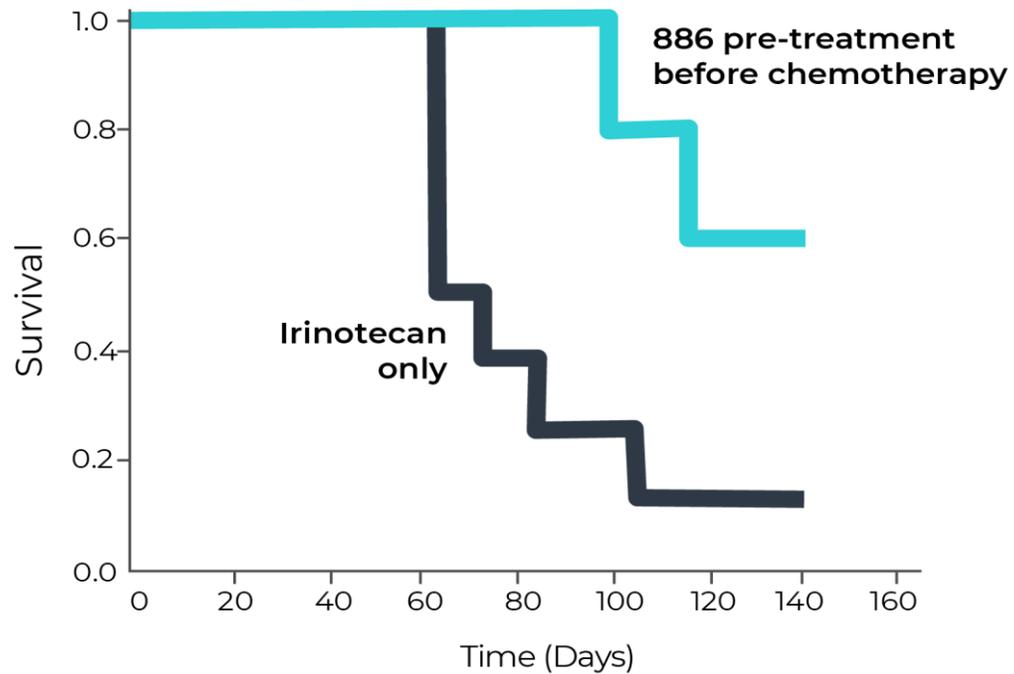
In KPPC transgenic mice, FAK inhibition rendered PDAC tumours responsive to both Gemcitabine chemotherapy and checkpoint immunotherapy with 3-way combination treatment conferring 100% survival

# The Amplia FAK Assets

- Novel orally available small molecule FAK inhibitors
  - **AMP945** – Highly selective
  - **AMP886** – Highly differentiated, multi-action (FAK/FLT3/VEGFR3)
- Excellent potency and selectivity, very promising pharmacokinetics and physical-chemistry properties
- Expected superior safety profile in I-O combo therapy compared to I-O plus immuno-stimulators
- Scale-up (kg scale) chemistry already developed in partnership with an international commercial contract manufacturer
  - Including methods that are suitable for GMP production of clinical trial material
  - Highly cost effective common synthetic routes for both molecules
- Strong intellectual property position
  - National phase filing in commercially important jurisdictions
  - Clear strategy to expand scope of existing IP

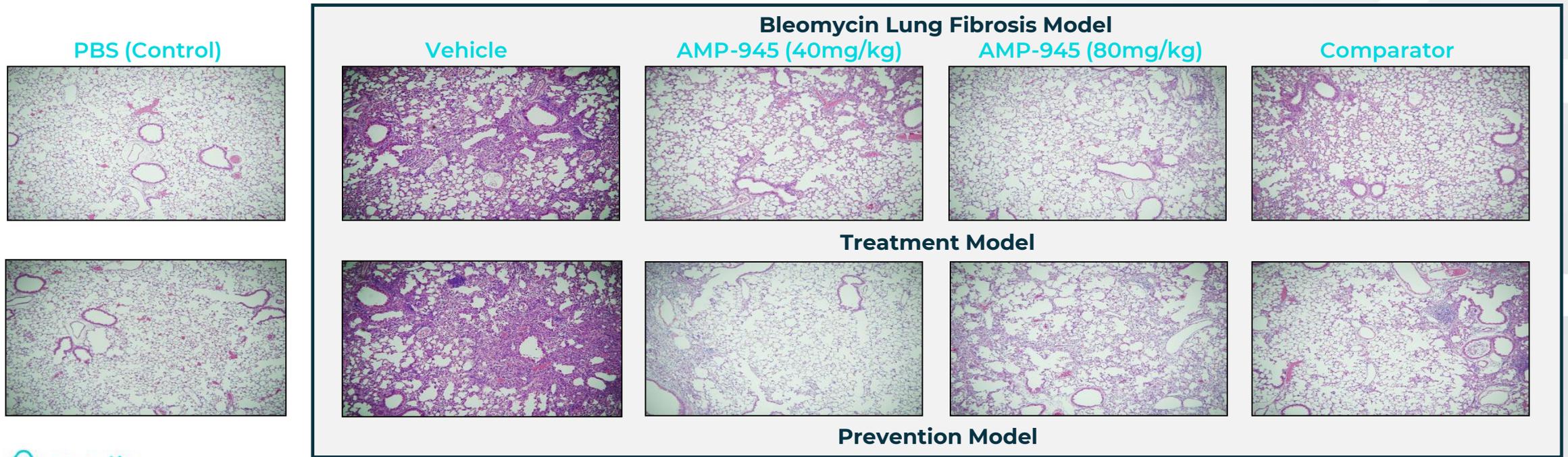
# AMP886 “Triple kinase FAKi” sensitizes tumours to chemotherapy

Inhibiting FAK with the multi-action AMP886 agent combined with Irinotecan, has a significant impact on tumour growth and survival in mouse models of pancreatic cancer (human PANC-1)

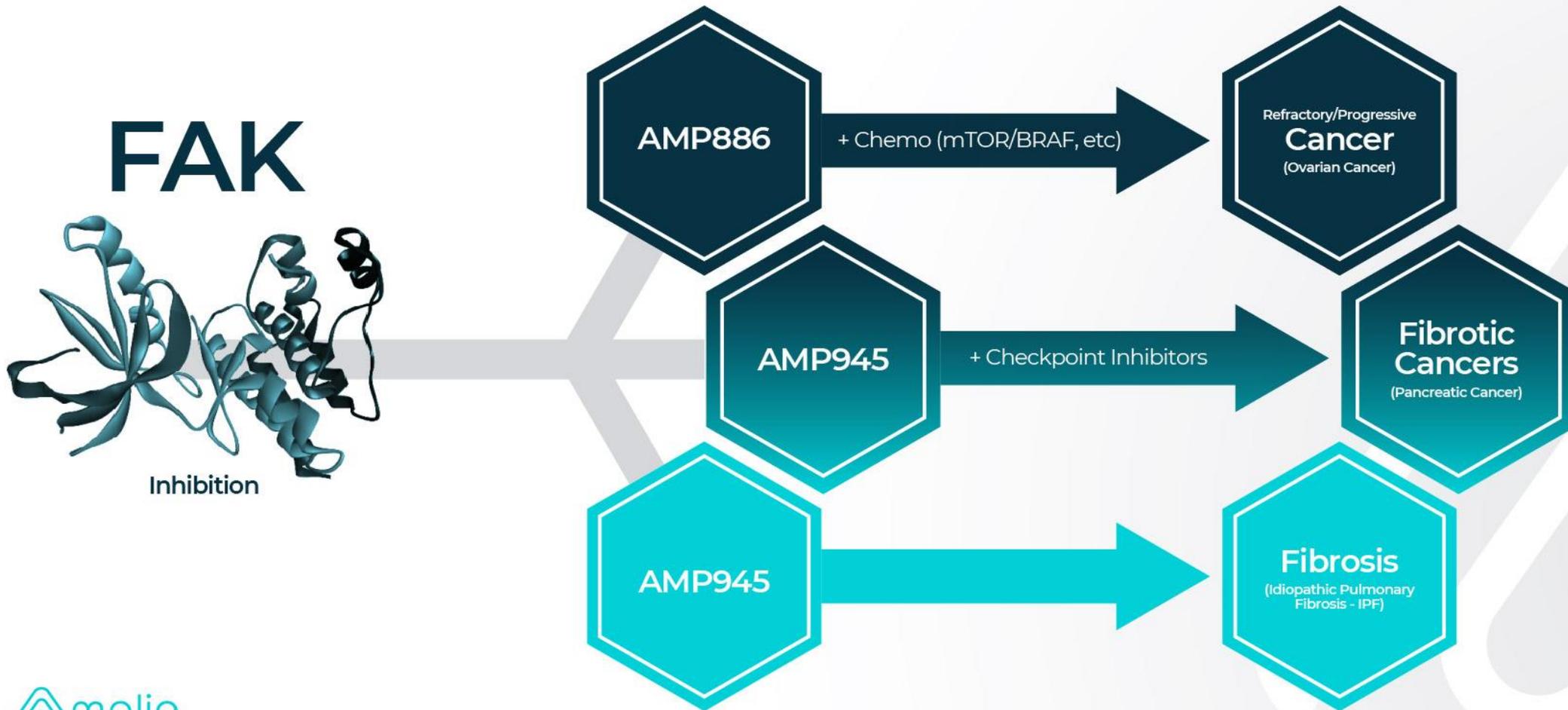


# Non-cancer indications: FAK and fibrosis\*

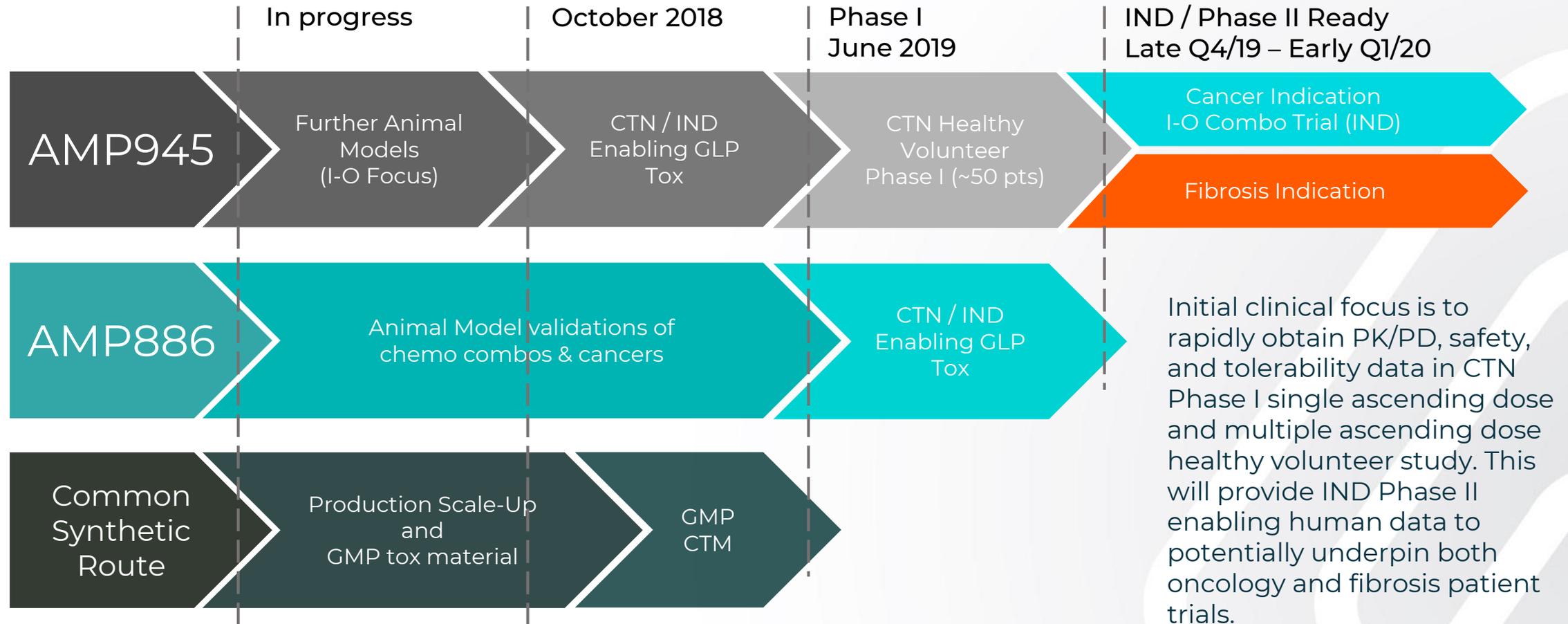
- AMP945 has been extensively evaluated in both prevention and treatment animal models of fibrosis\*, including on a comparative basis with other FAK inhibitors under development
- In these models, AMP945 has demonstrated excellent efficacy
- Current poor treatment options in serious chronic fibrotic diseases provides a significant parallel opportunity



# Leads to a clinical development roadmap with multiple “shots on goal”



# High-level Development Plan (18 months)



# Core IP Granted or 'National Phase'

Patent / Application number			Filing Date		Status	
Selective FAK Inhibitors [AMP945]	FAK Inhibitors [AMP886]	Territory	AMP945	AMP886	AMP945	AMP886
US 61/443,773	US 61/443,773	USA	17 <sup>th</sup> Feb, 2011	17 <sup>th</sup> Feb, 2011	Priority Filing	Priority Filing
US 61/523,489	US 61/523,503	USA	15 <sup>th</sup> Aug, 2011	15 <sup>th</sup> Aug, 2011	Supplemental	Supplemental
US 61/579,729	US 61/579,719	USA	23 <sup>rd</sup> Dec, 2011	23 <sup>rd</sup> Dec, 2011	Supplemental	Supplemental
PCT/GB2012/000176	PCT/GB2012/000175	UK	17 <sup>th</sup> Feb, 2012	17 <sup>th</sup> Feb, 2012	PCT filing	PCT filing
US 9120761	US 9012461	USA	6 <sup>th</sup> July, 2012	6 <sup>th</sup> July, 2012	Granted	Granted
EP 12705384.1	EP12705383.3	Europe	Sept, 2013	Sept, 2013	National phase filing	Granted
US 9174946	US 9421205	USA	15 <sup>th</sup> Aug, 2013	11 <sup>th</sup> Feb, 2015	Granted	Granted
AU 2012216894	AU 2012216893	Australia	12 <sup>th</sup> Aug, 2013	13 <sup>th</sup> Aug, 2013	Granted	Granted
CA 2827172	CA2827171	Canada	12 <sup>th</sup> Aug, 2013	12 <sup>th</sup> Aug, 2013	National phase filing	National phase filing
[JP] 5937112	[JP] 5937111	Japan	19 <sup>th</sup> Aug, 2013	Aug, 2013	Granted	Granted
IN 1744/MUMNP/2013	IN 1743/MUMNP/2013	India	16 <sup>th</sup> Sept, 2013	16 <sup>th</sup> Sept, 2013	National phase filing	National phase filing
ZL201280018816.6	ZL201280018969	China	16 <sup>th</sup> Oct, 2013	17 <sup>th</sup> Oct, 2013	Granted	Granted

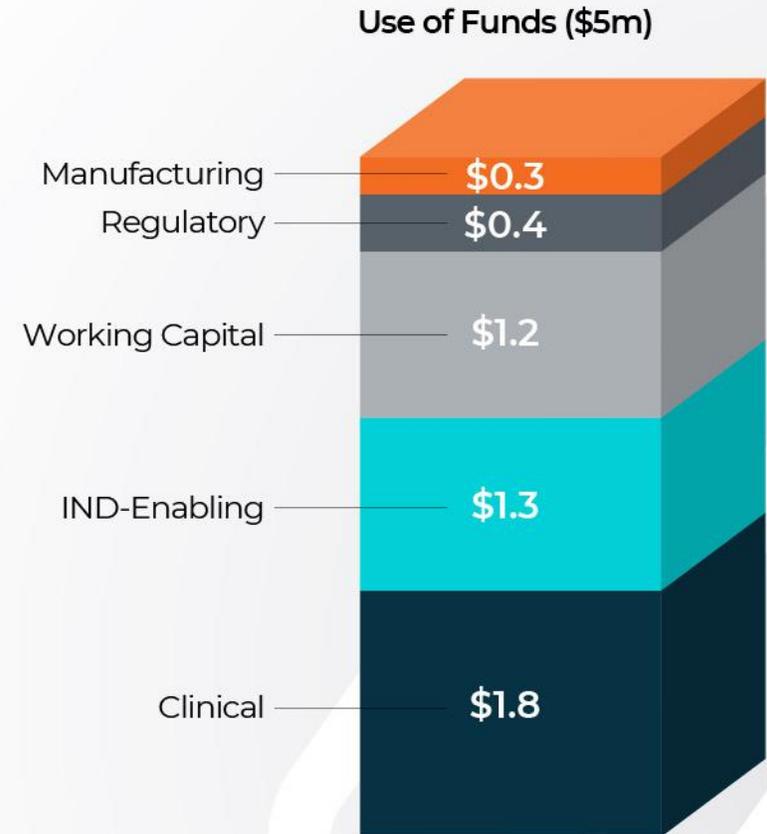
# An Evolving Asset Class: Competitive Landscape

Agent	Company	Status	Notes
VS-4718 (PND-1186)	Verastem	PI	First generation candidate
VS-6063 (PF-04554878)	Verastem	PI/PII	Combo with Pfizer/Merck
GSK-2256098	GSK	PI	Paused
CT-707	Centaurus Pharma	PI-Not yet recruiting	Questions about selectivity
BI-853520	Boehringer-Ingelheim	PI	Two PI trials completed
ASN-006	Asana	Discovery	Early stage

- Established target but still relatively little commercial congestion around novel FAKi compounds
- Increased interest in the use of FAK inhibitors in the immuno-oncology setting as a combination therapy (*Verastem-Pfizer partnership*)
- Verastem (NASDAQ: VSTM, Market Cap USD \$600m) is our nearest comparator
- Our differentiation is:
  - AMP945 is extremely selective / “clean” for FAK inhibition compared with competitive products – important in immuno-oncology combo applications to maximise safety
  - AMP866 has useful multi-target properties for chemotherapy combination use

# Capital Requirements and Use of Funds

- Current balance sheet sufficient to complete remaining Phase I enabling preclinical activities
- Running 'virtually' to minimise cash burn during preclinical and Phase I development with team build-up occurring pre Phase II
- Projected ~AUD \$5m requirement to complete initial human studies and be Phase II ready (Phase II planning assumes US IND)
- Completion of a capital raise targeted by end Q3/2018
- In parallel, several business development discussions with global pharmaceutical companies
  - Potential collaborations (pre-clinical and clinical)
  - Cancer and Fibrosis



# Corporate Snapshot (ASX:ATX)

## Key Statistics as at 04 September 2018

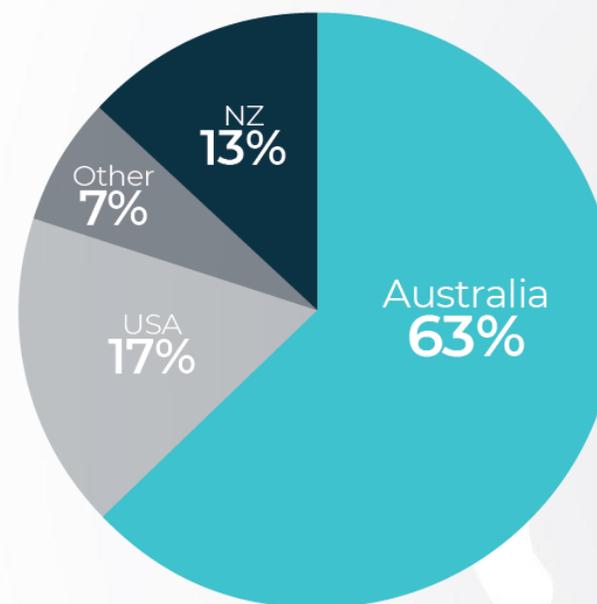
Share price	<b>A\$0.34 [post share consolidation]</b>
Shares on issue	<b>41,023,303</b>
Market Cap	<b>A\$14 million</b>
Options	<b>4,240,000 (A\$0.60 to US\$4.00)</b>
Cash	<b>A\$2.0 million (Appendix 4C 30/06/18)</b>

## Significant Holders

Citicorp Nominees Pty Ltd	<b>15.4%</b>
CTxT Pty Ltd	<b>11%</b>
Elk River Holdings (Chris Behrenbruch)	<b>6.1%</b>
34 <sup>th</sup> Avenue Pty Ltd (Mark Devlin)	<b>5.4%</b>
Christopher Burns	<b>5.4%</b>
Warwick Tong and Mark Sullivan (each)	<b>4%</b>

## Register

Top 20	<b>68%</b>
Total shareholders	<b>3,096</b>
Voluntary Restricted Shares (May 2020)	<b>18,460,308</b>





For further information please contact

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