AdAlta

next generation protein therapeutics

i-body: a unique drug discovery platform

February 2020

AdAlta Limited (ASX:1AD)

Tim Oldham, CEO and Managing Director

t.oldham@adalta.com.au

Disclaimer

Investment in AdAlta is subject to investment risk, including possible loss of income and capital invested. AdAlta does not guarantee any particular rate of return or performance, nor do they guarantee the repayment of capital.

This presentation is not an offer or invitation for subscription or purchase of or a recommendation of securities. It does not take into account the investment objectives, financial situation and particular needs of the investor. Before making any investment in AdAlta, the investor or prospective investor should consider whether such an investment is appropriate to their particular investment needs, objectives and financial circumstances and consult an investment advisor if necessary.

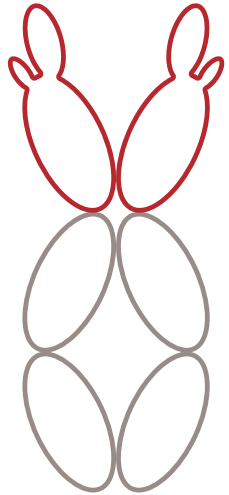
This presentation may contain forward-looking statements regarding the potential of the Company's projects and interests and the development and therapeutic potential of the company's research and development. Any statement describing a goal, expectation, intention or belief of the company is a forward-looking statement and should be considered an at-risk statement. Such statements are subject to certain risks and uncertainties, particularly those inherent in the process of discovering, developing and commercialising drugs that are safe and effective for use as human therapeutics and the financing of such activities. There is no guarantee that the Company's research and development projects and interests (where applicable) will receive regulatory approvals or prove to be commercially successful in the future. Actual results of further research could differ from those projected or detailed in this presentation. As a result, you are cautioned not to rely on forward-looking statements. Consideration should be given to these and other risks concerning research and development programs referred to in this presentation.

AdAlta’s purpose

AdAlta Limited (ASX:1AD) is a late pre-clinical stage biotechnology company using a promising new class of single domain antibodies, known as i-bodies, to discover and develop novel therapeutics for treating a wide range of human diseases

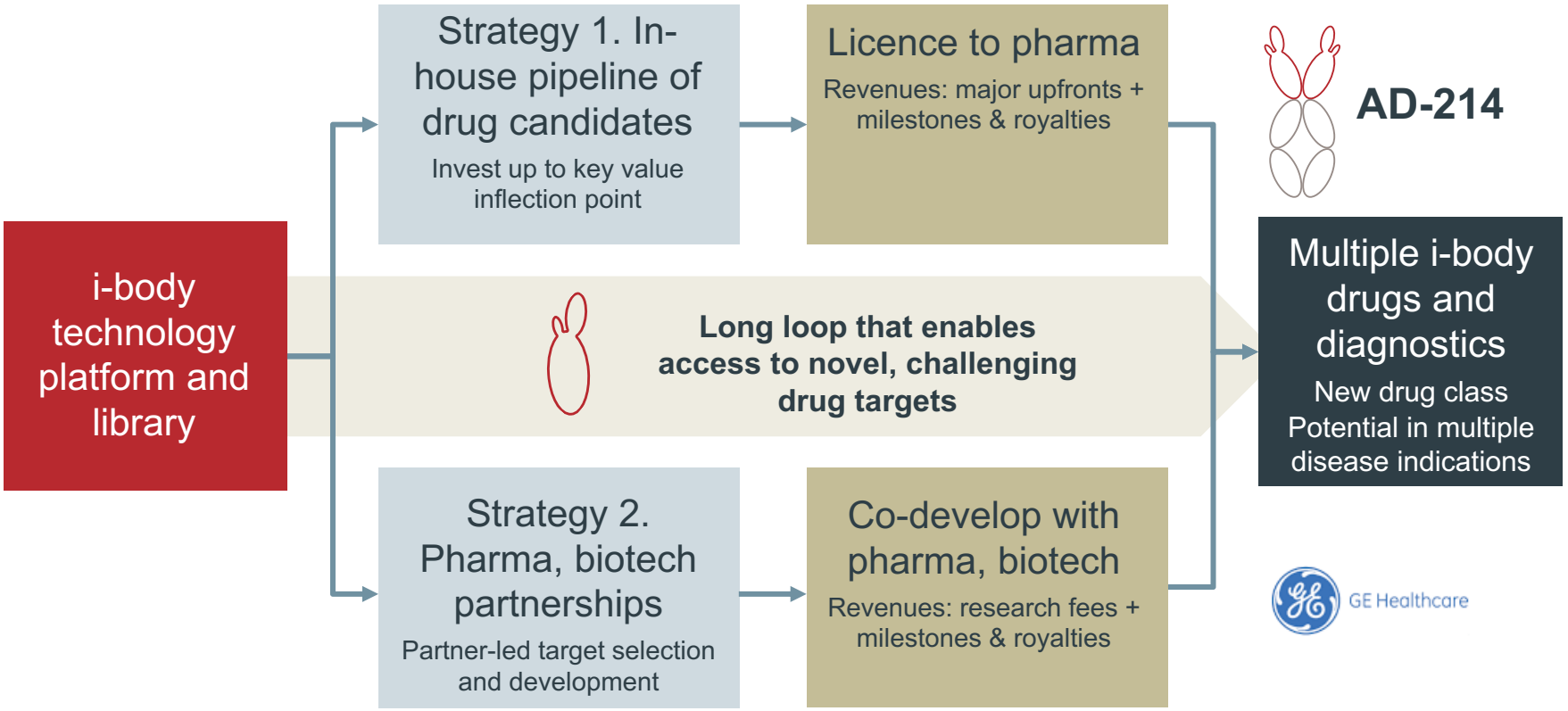
AdAlta summary

- **i-body platform for generating multiple products against “difficult” targets**
  - Novel structure (small scaffold, long binding loops) provides new way to access unique epitopes on tough biological targets such as GPCRs and ion channels that can be difficult to access with conventional approaches
  - Human based single domain scaffold
- **First in class lead internal program, AD-214, due to commence human Phase 1 clinical trial in mid-2020**
  - Targeting fibrosis of the lungs (Idiopathic Pulmonary Fibrosis), a clinical indication with high unmet medical need and early transaction potential, and other fibrotic diseases
  - USA FDA Orphan Drug Designation and strong pre-clinical data
- **Collaborations, providing additional opportunities to leverage the i-body platform**
  - Recently secured licensing deal with global medical technology firm, GE Healthcare, to develop i-bodies for diagnostic imaging
- **Experienced drug development team driving strategic focus on pipeline expansion**



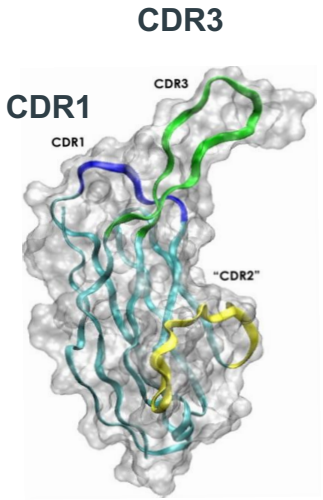
AD-214

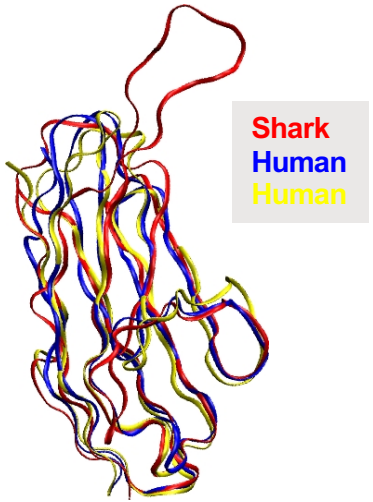
AdAlta strategy and business model to create value

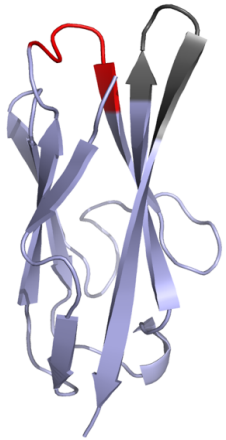


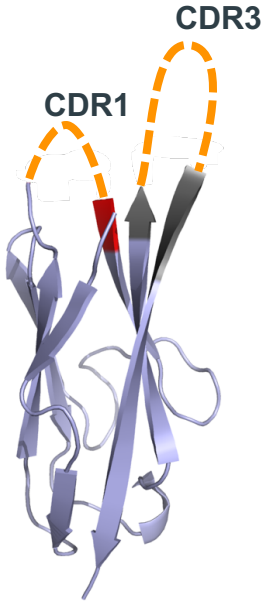
AdAlta

i-bodies: human single domain antibodies









Shark VNAR*

Basic research on unique shark immune system …

Ribbon overlay

… led to discovery of human proteins with same scaffold structure …

hNCAM Domain 1

… leading to choice of human NCAM-1 as best mimic …

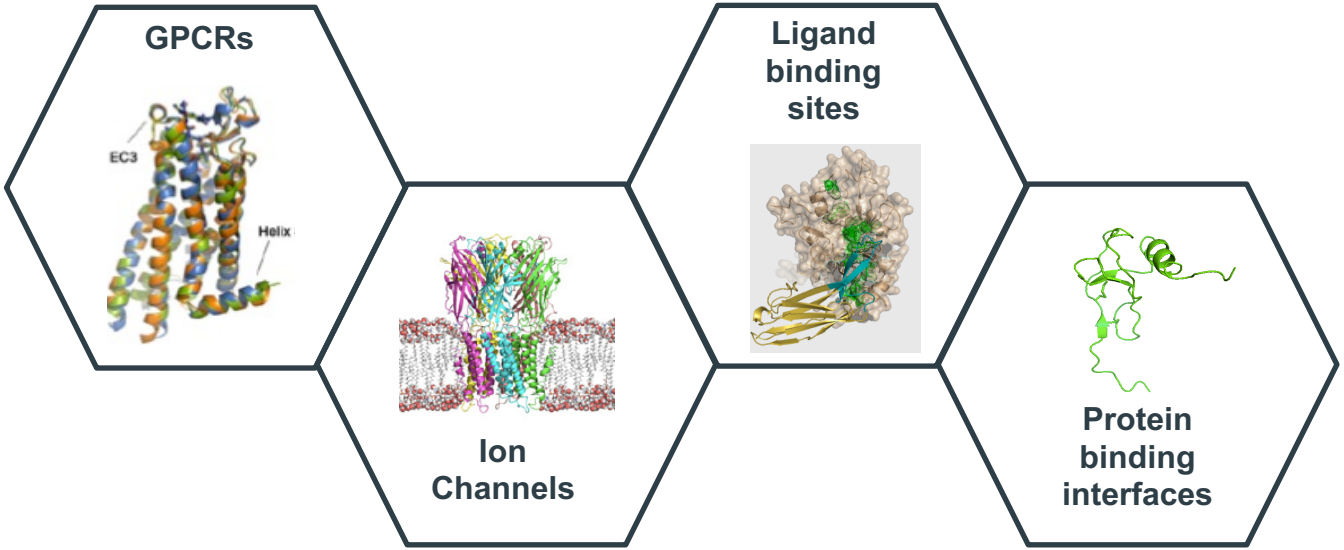
i-body library

… and invention and patenting of i-bodies by adding randomized VNAR-like binding loops to NCAM-1

* Known as an IgNAR when coupled to a fibronectin scaffold

i-bodies: targeting “difficult to drug” targets

Small size, long loop of i-body can access unique epitopes



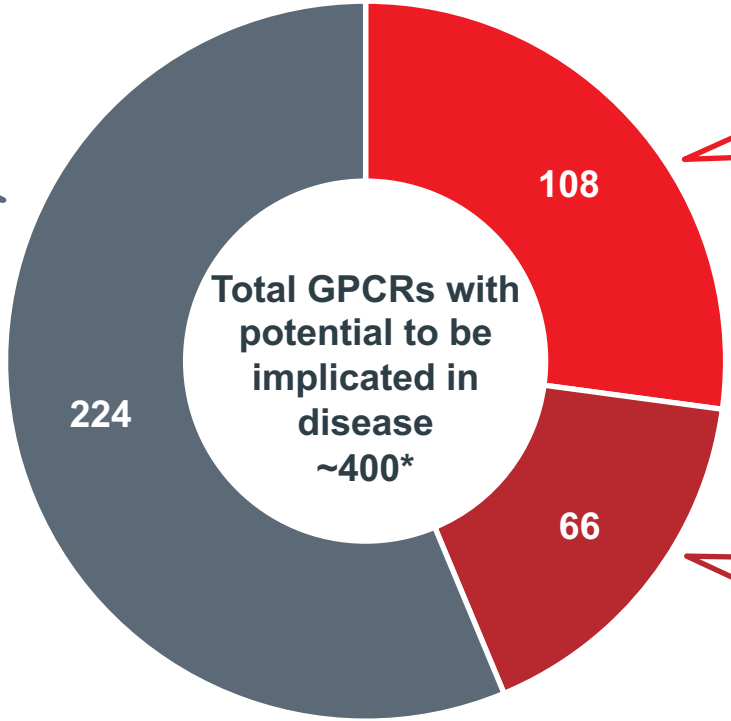
Additional unique i-body properties

- Novel, tunable pharmacology
- Flexible half-life
- Stability to pH and temperature cycling
- Multiple potential routes of administration

AdAlta

Many potential “difficult to drug” targets: G-protein coupled receptor (GPCR) example

- 224 GPCRs with “broad, untapped therapeutic potential”



- 34% (475) of FDA approved drugs target 108 GPCRs

- ~130 GPCRs are peptide or protein receptors that are particularly attractive for biological drugs
- GPCRs often involved in multiple cell signaling pathways

- 20% (~60-65) of novel drug candidates in clinical trials target 66 more GPCRs

* Excludes ~400 olfactory GPCRs

Source: AS Hauser, et al, “Trends in GPCR drug discovery: new agents, targets and indications”, Nature Reviews Drug Discovery, 2017 (16) 829

AdAlta pipeline

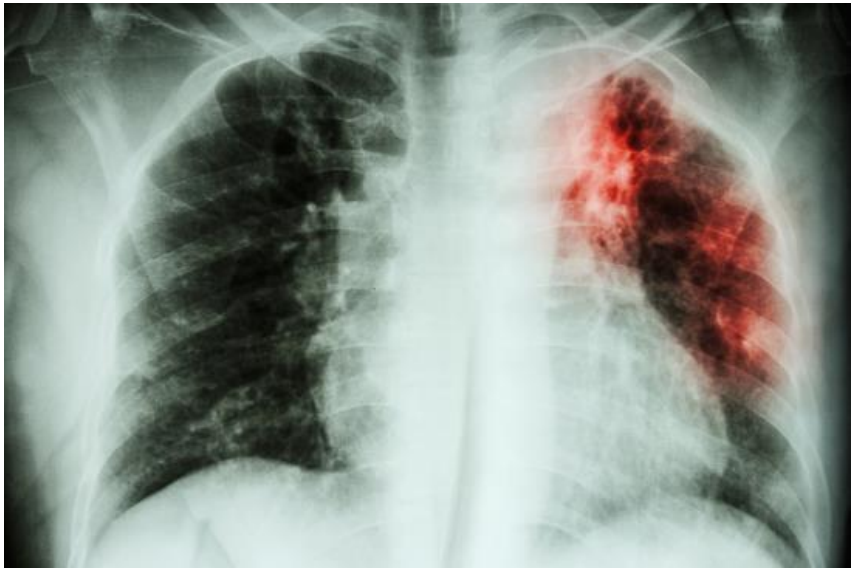
Partner	Product/ Indication	Target	Class of Target	Discovery	Preclinical	Manufact-uring	IND enabling studies	Phase I
AdAlta	**AD-214**: Idiopathic Pulmonary Fibrosis	CXCR4	GPCR	Orphan Drug Designation				
AdAlta	**AD-214**: Other fibrotic indications (kidney, eye, liver, skin)	CXCR4	GPCR					
Excellerate BIOSCIENCE	Not disclosed	Not disclosed	GPCR					
GE Healthcare	Diagnostic agents	Granzyme B + others	Serine protease					
AdAlta	i-body discovery engine	Various						

Binders obtained to 20 separate targets including 10 GPCRs and ion channels

AdAlta

Fibrosis: significant unmet medical need

- Fibrosis is the build-up of connective issue
- Results from repeated inflammation and uncontrolled wound healing
- Causes scarring of vital organs such as the lung, liver, skin, eye, heart and kidney
- Leads to irreparable damage and eventual organ failure



Fibrosis contributes to the pathophysiology of **45-50%** of diseases

There is **no clinically satisfactory therapeutic** approach to fibrosis

Market opportunity for IPF (lung fibrosis)

Idiopathic Pulmonary Fibrosis (IPF) is an irreversible, unpredictable and incurable disease

THE STATISTICS

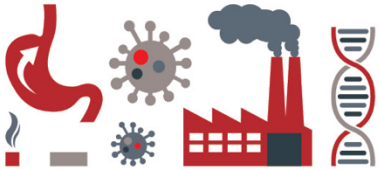
People living with IPF
300,000

People die from IPF every year
40,000

Median length of survival after IPF diagnosis
3.8 years

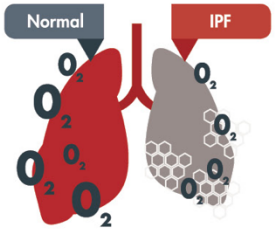
IPF incidence

Causes



The cause is unknown but risk factors may include: smoking, environmental exposures, chronic viral infections, abnormal acid reflux and family history of the disease.

Pathology



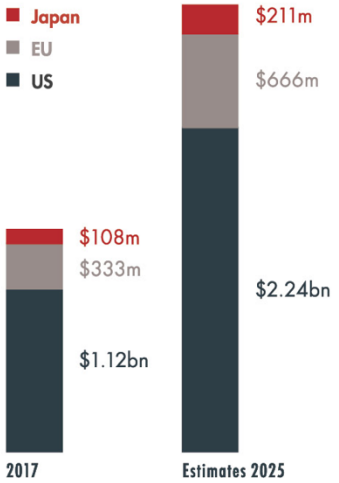
Resultant scarring/honeycombing in the lung restricts breathing and oxygen exchange.

Current IPF treatments

Pirfenidone — Roche

Nintedanib — Boehringer Ingelheim

IPF Therapy Sales (US$)



Source: GlobalData 2018

* AdAlta uses pirfenidone and nintedanib as positive controls in pre-clinical development

AdAlta

AD-214 targets CXCR4, a GPCR involved in fibrosis and other disease states

- CXCR4 is important in maintaining stem cells in bone marrow
- HIV-1 uses CXCR4 as a co-receptor for viral entry into host cells
- CXCR4 has been associated with more than 23 types of cancers
- CXCR4 has more recently been recognised as a critical player in development of fibrosis including in:
  - Lung
  - Kidney
  - Heart
  - Eye
  - Skin

MOZOBIL® (plerixafor injection)

Mozobil (plerixafor or AMD3100)* is only approved drug targeting CXCR4

- Indicated for stem cell mobilization (is also anti-fibrotic)
- Indicated for single use only (toxicity prevents chronic use)

AD-214 is a first in class anti-fibrotic

* AdAlta uses AMD3100 as a positive control in pre-clinical development

AD-114* specifically reduced migration/invasion with IPF lung fibroblasts *in vitro*

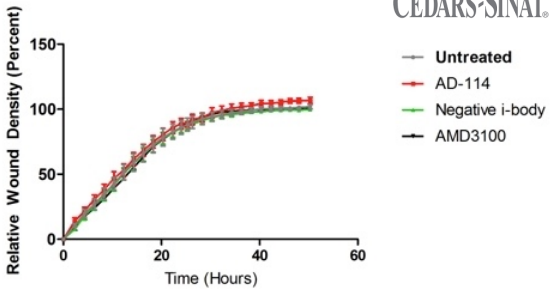
CEDARS-SINAI

AD-114

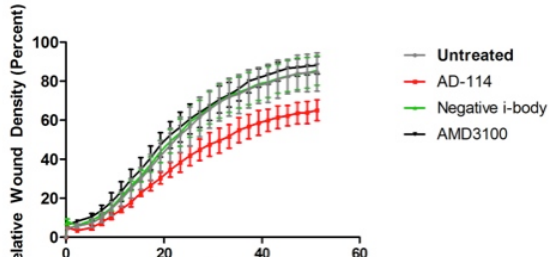
- Specifically inhibited migration of fibroblasts from slow and rapidly progressing IPF patients but did not affect fibroblasts from normal subjects
- Has greater *in vitro* efficacy in this assay than approved therapies Nintedanib and Pirfenidone
- Also reduced soluble collagen 1 deposition

MIGRATION	No effect on normal fibroblasts	Inhibits IPF fibroblast migration
i-body AD-114	✓	✓
Nintedanib (Boehringer)	✗	✓
Pirfenidone (Roche)	✓	✗
Other CXCR4 drug (Sanofi)	✓	✗

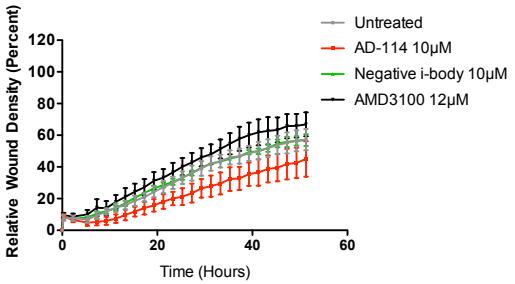
Normal fibroblasts



Slow/stable IPF progressor fibroblasts



Rapid IPF progressor fibroblasts



* AD-114 is AdAlta's anti-CXCR4 i-body that is incorporated into lead clinical candidate AD-214

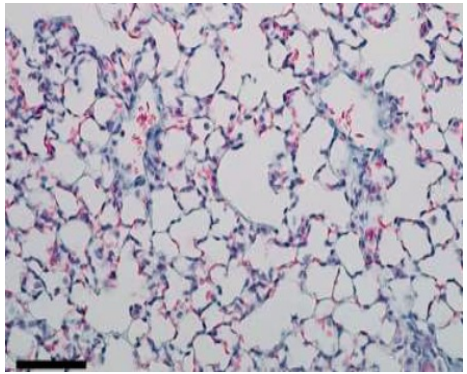
Source: Griffiths K, et al, "Anti-fibrotic effects of CXCR4-targeting i-body AD-114 in preclinical models of pulmonary fibrosis", Nature Scientific Reports 2018

AdAlta

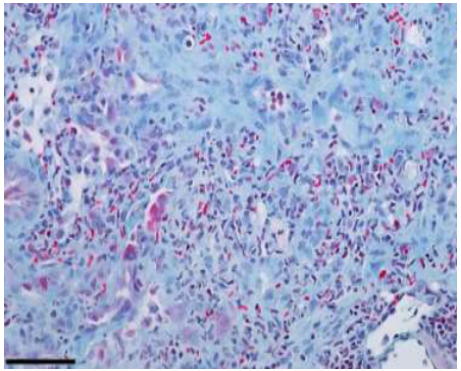
AD-114* *in vivo* activity in Bleomycin-induced mouse model of lung fibrosis

Prophylaxis setting

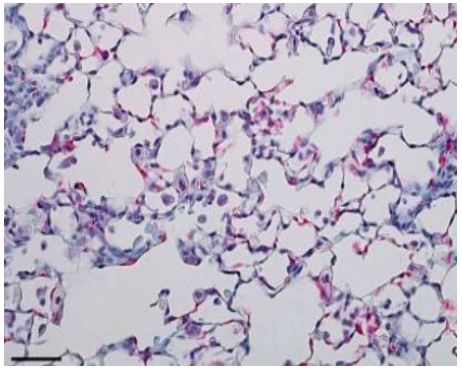
AD-114 has demonstrated* in vivo *activity (reduced collagen content, reduced inflammatory cell infiltration, improved tissue architecture) in a bleomycin-induced mouse model of lung fibrosis



Normal mouse lung tissue



IPF mouse lung tissue
(21 days after bleomycin)



IPF mouse lung tissue + AdAlta anti-CXCR4 i-body AD-114 dosed for 21 days

Blue staining represents collagen, a hallmark of fibrosis

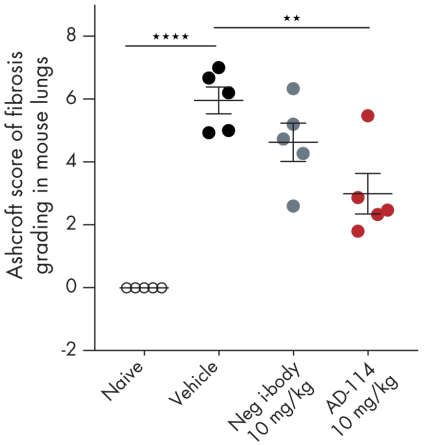
* AD-114 is AdAlta's anti-CXCR4 i-body that is incorporated into lead clinical candidate AD-214

AdAlta

AD-114* prevents fibrosis in 21-day bleomycin-induced mouse lung fibrosis model

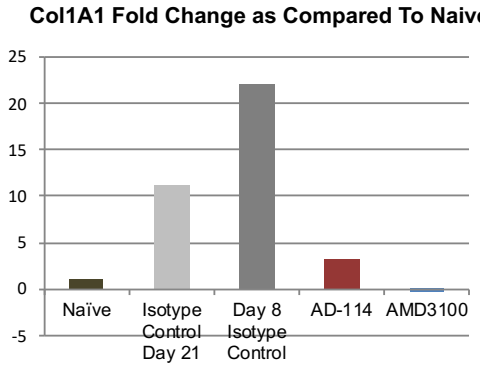
Prophylactic setting

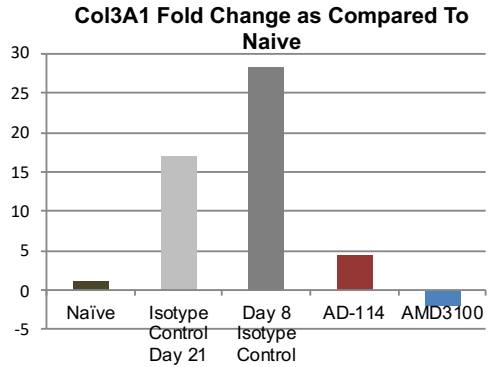
Ashcroft score



Protocol

Fibrotic gene expression





* AD-114 is AdAlta's anti-CXCR4 i-body that is incorporated into lead clinical candidate AD-214

AdAlta

From single domain antibody to AD-214

When combined, the i-body and Fc fragment create a superior drug, which will be better for patients and for potential commercial partners

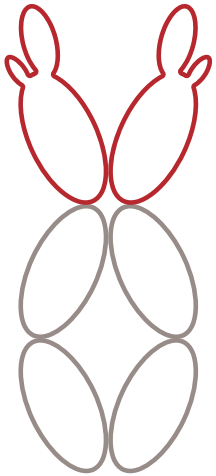
AD-114
Binds to CXCR4 on the cell surface and has anti-fibrotic activity

Proof of concept molecule: used PASylation for half-life extension

Monoclonal Antibody

Fc Fragment
Binds to cells expressing the Fc receptor (FcRn) to extend the half life

AD-214



i-body binds to CXCR4 to have anti-fibrotic activity

Fc fragment binds to extend half life

Therapeutic candidate: Fc fusion for half-life extension, manufacturability

AdAlta

AD-214 safe in 4-week toxicology study

RECENT DATA

- 3 non-human primate studies completed
- Most recent: a Good Laboratory Practice (GLP) study to evaluate safety and toxicology prior to initial human studies
  - 10mg/kg, 30mg/kg and 100mg/kg multiple doses over four weeks plus recovery (human equivalent dose 32mg/kg)
  - AD-214 well tolerated with no deaths, no AD-214-related clinical signs, no changes in a panel of clinical observations, and only slight transient and completely reversible haematology changes

Tox study results were in line with expectations and in keeping with previous studies

Additional pre-clinical disease model study to be completed to inform clinical dosing

AdAlta

AD-214 radio-labelled PET tracer to enhance clinical development

Challenge

- No good biomarker for CXCR4 blocking in patients
- Difficult to confirm AD-214 binds to CXCR4 in fibrotic tissue

Solution

- Radio-label AD-214 so it can be detected by PET imaging

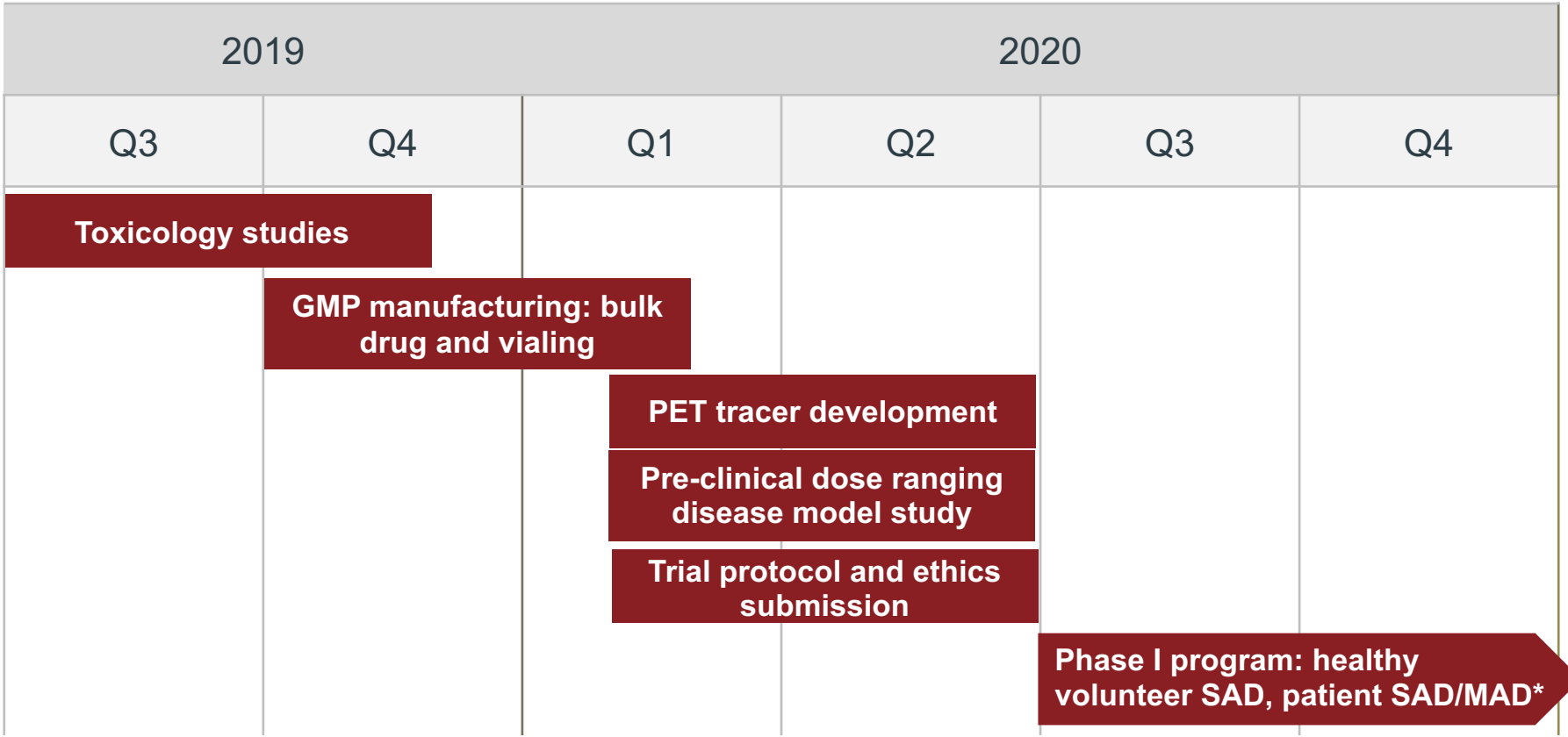
Benefits

- Confirm binding of AD-214 to CXCR4 in patients
- Determine duration of binding
- Determine AD-214 tissue distribution
- Visualise severity of fibrosis
- Enable Phase I studies to include patients

Funding

- AdAlta awarded up to A$1m from MRFF Biomedical Translation Bridge Program to cover up to 50% of development and clinical testing costs

AD-214 development: key milestones



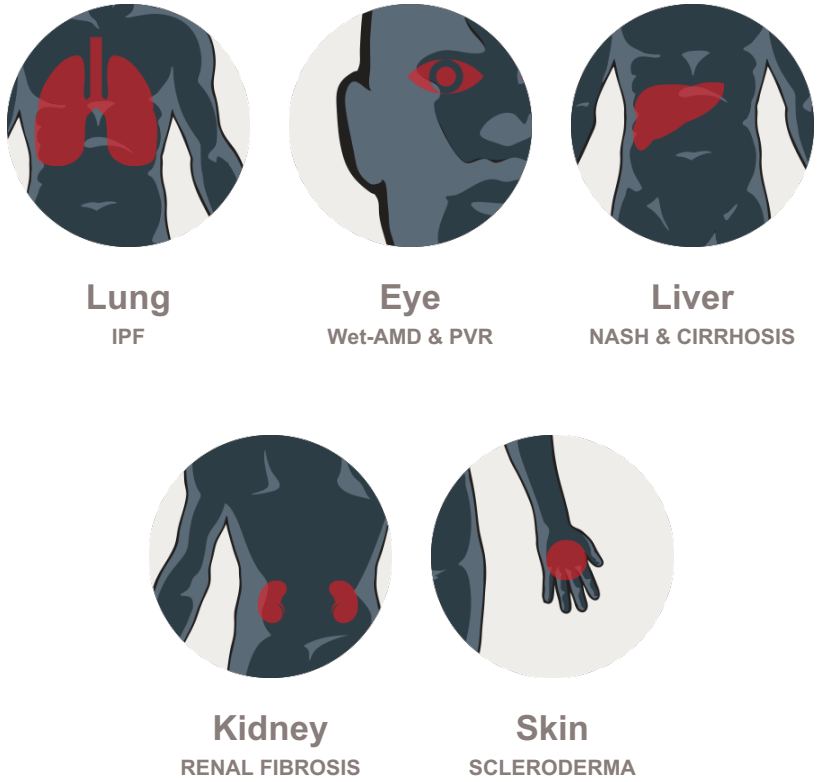
* SAD – single ascending dose; MAD – multiple ascending dose

AD-214 has broad application in treating fibrosis

AdAlta data suggests that AD-214 can improve fibrosis across a range of fibrotic diseases

- **LUNG:** Idiopathic Pulmonary Fibrosis
- **KIDNEY:** Chronic kidney disease
- **EYE:** Wet-Age Related Macular Degeneration
- **LIVER:** NASH
- **SKIN:** Hypertrophic scar

AdAlta has demonstrated broad anti-fibrotic and anti-inflammatory effects in several animal models of disease and with human tissues with its lead i-body candidate.



AdAlta

GE Healthcare licensing deal: i-body platform

Overview:

- Agreement with global medical technology and diagnostics firm, GE Healthcare
- AdAlta will screen its novel i-body library on a number of targets in order to identify i-bodies that GE can use as imaging agents, starting with Granzyme B

Summary of commercial terms:

- Upfront payment of GBP100,000 and initial research fee received following target selection
- GE Healthcare will pay AdAlta research fees on staged basis
- Further milestone payments and royalties expected if development successful

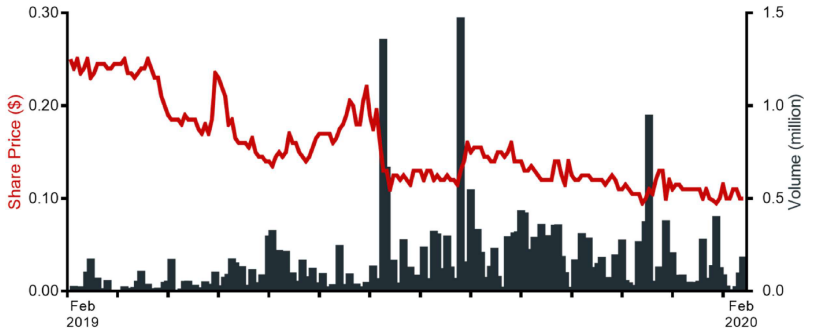
AdAlta aims to develop a range of therapeutic and diagnostic partnerships

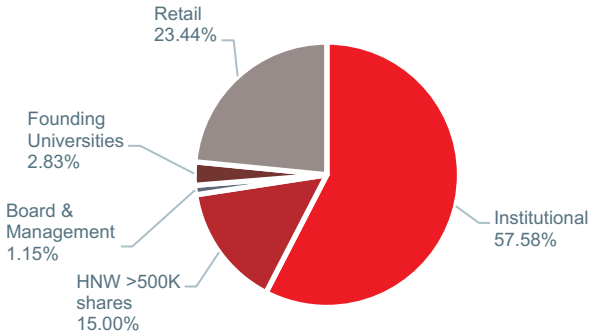
Financial position

Key financial details	
ASX code	1AD
Share price (3 February 2020)	AUD$0.10
Market capitalisation	AUD$16.39m
Ordinary Shares	163,945,613
Listed Options	23,348,803
Unlisted Options	7,514,067
Current cash (31 December 2019)	AUD$5.03m
Trading range (last 12 months)	AUD$0.085 to $0.27
Average daily volume	103,880

Major shareholders	%
Yuuwa Capital LP	32.97
Platinum Asset Management	8.66
Brispot Nominees Pty Ltd	4.79
CS Fourth Nominees Pty Ltd	3.08
Meurs Holdings Pty Ltd	3.05
Other shareholders	47.45
Total	100%

Share price performance (last 12 months)





AdAlta

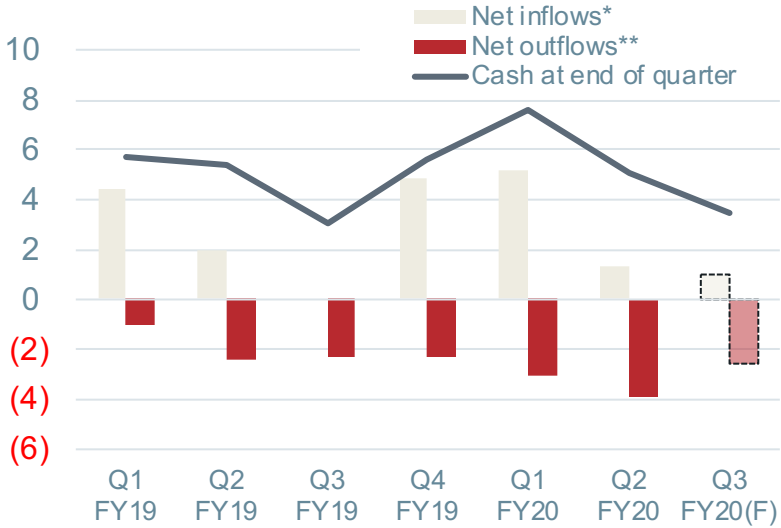
Financial results: funded into Phase I

AUD million

Financial year cash flows

Cash	FY18 (AUD million)	FY19 (AUD million)	FY20 H1 (AUD million)
Operating inflows	1.86	2.11	3.88
Operating/investing outflows	(5.79)	(8.10)	(7.00)
Financing cash flows	0.01	9.24	2.59
Starting cash	6.22	2.31	5.56
Ending cash	2.31	5.56	5.03

Quarterly cash flows



Key drivers

- Capital raising Q1FY19 ($4.3m) and mid-2019 ($7.0m)
- R&D Tax refund Q2FY19 ($2.0m) and Q1FY20 ($3.5m)
- Platform partnering revenues and R&D Tax loan facility H1 FY20
- Key drivers of outflows: GMP manufacturing, NHP toxicology study; clinical trial costs are lower burn rate

Outlook

- ***Cash balance plus cash management strategies fund the Company to complete healthy volunteer Phase 1 clinical studies***

* Net inflows include R&D Tax Incentive (RDTI) refund, proceeds of capital raising activity after capital raising costs and RDTI loan facility (Radium Capital), platform licensing revenue (GE contract)

** Net outflows includes all operating expenses and equipment purchases

Market benchmarks

Breaking: Jan-20 Boehringer Ingelheim and Enleofen ink $1 Billion+ fibrosis deal

Fibrosis lead AD-214	adheron THERAPEUTICS Sep-15 acquired by Roche $105m + $475m milestones phase I	bridgebio therapeutics Jul-19 license by Boehringer Ingelheim €45m + €1.1b phase I	Promedior **Nov-19 acquired by Roche $390m + $1b – Phase II** Aug-15 BMS option to buy $150m + $1.25b milestones
Micro-antibodies	arGEN-X April-16 license by Abbvie $40m upfront + $645m milestones & royalties	pieris Feb-18 collaboration with Seattle Genetics (3 targets) $30m upfront + $1.2b milestones & royalties	Ablynx Feb-18 acquired by Sanofi €3.9b
GPCRs	HEPTARES therapeutics Feb-15 acquired by Sosei $400m Phase Ib asset + 7 pre-clinical leads	receptos Jul-15 acquired by Celgene $7.8b Ph III, Ph II and GPCR platform	Ablynx April-16 license with Boehringer €8m + €125m milestones PhI GPCR nanobody

AdAlta

Significant 2019 achievements

AD-214

- ✓ Successfully completed AD-214 cell-line and manufacturing process development; completed manufacturing of clinical AD-214 bulk drug substance
- ✓ Completed Phase I-enabling non-human primate toxicity (safety) studies (pharmacology data pending)

i-body platform partnerships

- ✓ Entered partnership with GE Healthcare to develop pre-clinical targets for diagnostic imaging – received first ever partnering revenue

Pipeline research

- ✓ Key data published in *mABs* peer reviewed scientific journal, i-body half-life customisation
- ✓ Entered partnership with Excellerate Biosciences to accelerate characterization of GPCR binders

Organisation

- ✓ Board skills expanded with appointment of Dr Ros Wilson
- ✓ Appointment of new CEO & Managing Director, Dr Tim Oldham

FY20 news flow

- **H2 2019**
  - ✓ Partnership announcement – GE partnership September 2019
  - ✓ Publication of key i-body data in well recognised, peer reviewed scientific journal, mAbs
  - ✓ 4-week NHP toxicology study – completed October 2019 (plus GMP production of AD214 bulk for Phase I study)
  - ✓ Cash runway extension strategies – *Radium RDTI loan facility, BTB Grant Dec 2019*
- **H1 2020**
  - ✓ Patent granted covering AD-214 granted in the US
  - – Publication of further key i-body/fibrosis data – *estimated February 2020*
  - – Additional pre-clinical PK/PD results for AD-214
  - – AdAlta strategy update (AD-214 clinical development and i-body platform growth)
  - – Ethics committee approval for Phase I human clinical studies
  - – **Phase I human clinical studies with AD-214 commence mid-year**

Management focused on milestone delivery

Tim Oldham, PhD
CEO & Managing Director

Appointed October 2019, Tim brings >20 years of life sciences business development, alliance management, portfolio and product development, and commercialisation experience in Europe, Asia and Australia, with a particular focus on biologics, cell and gene therapies and pharmaceutical products. He has significant ASX listed company experience, is currently a Non-executive Director at Acrux Ltd (ASX:ACR) and serves as Director of BioMelbourne Network Inc.

Mick Foley, PhD
Chief Scientific Officer

Founding scientist of AdAlta and a key inventor of lead i-body candidate, AD-214. Recognized expert in phage display. NIH, NHMRC, ARC, Gates funding and over 70 scientific publications.

Dallas Hartman, PhD
Chief Operating Officer

Prior to joining AdAlta, Dallas was Vice President of Product Development at the NASDAQ listed biotechnology company Nexvet. Undertook postdoctoral research at the University of Texas Southwestern and the University of Melbourne where his work was supported by fellowships from the Howard Hughes Medical Institute. Over 14 years experience at CSL with analytical focus on biologics.

International Board, Scientific Advisory Board

Extensive track record of drug, antibody development, capital raising and exits

Board

Dr Paul MacLeman
Chair

Liddy McCall
Director

Dr Robert Peach
Independent Director

Dr James Williams
Director

Dr Ros Wilson MBBS
Independent Director

Scientific Advisory Board

Dr Mick Foley
AdAlta CSO
Expert in phage display

Brian Richardson
Drug discovery and development expert

Steve Felstead
Clinical development

John Westwick
Pulmonary drug discovery and development

AdAlta Limited (ASX:1AD) Summary

- **i-body platform technology for multiple products against "difficult" targets**
- **First in class lead internal program AD-214 to commence Phase I clinical trial mid-2020**
  - Has significant pre-clinical validation demonstrating broad anti-fibrotic and anti-inflammatory effects as well as safety in multiple fibrotic diseases
  - Initial focus on treating Idiopathic Pulmonary Fibrosis (IPF): orphan drug designation obtained; market history of early commercialisation transactions in fibrosis
  - Key manufacturing and toxicology milestones achieved
- **Partnering providing additional opportunities to expand pipeline**
  - Recent licensing deal with global medical technology firm, GE Healthcare, to develop i-bodies for diagnostic imaging: first licensing revenue received
- **Experienced leadership driving strategic focus on pipeline expansion (internal and partnered)**
- **Cash balance and cash management strategies sufficient to fund healthy volunteer Phase 1 clinical studies for AD-214**

AdAlta

next generation protein therapeutics

Contact us:

Tim Oldham, CEO and Managing Director

t.oldham@adalta.com.au

www.adalta.com.au