



AdAlta
next generation protein therapeutics

i-bodies: next generation protein therapeutics solving difficult drug target challenges

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AdAlta Limited (ASX:1AD)

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AdAlta's purpose

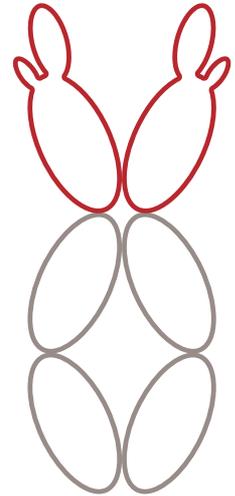


“Next generation protein therapeutics”
“Solving difficult drug target challenges”

AdAlta Limited (ASX:1AD) is a late pre-clinical stage biotechnology company using its i-body platform to discover and develop next generation protein therapeutics addressing drug targets that are challenging for other technologies

AdAlta (ASX:1AD) summary

- ▶ **i-body platform for generating multiple products against “difficult” targets**
 - Internal pipeline focused on GPCRs implicated in fibrotic and inflammatory disease and cancer
 - External pipeline leveraging partner expertise to pursue wider range of targets, indications
- ▶ **First in class lead asset, AD-214, due to commence human Phase 1 clinical trial in mid-2020 provides catalyst for growth**
 - Efficacy demonstrated in gold-standard animal model of IPF; receptor occupancy data supportive of desired weekly dosing and potential therapeutic window within Phase I dose range
 - Multiple additional indications with emerging proof of concept data
- ▶ **Clear plan to fully use the i-body platform to expand pipeline, grow value**
 - Bring AD-214 to the clinic, expand indications ahead of first partnering window at end of Phase I
 - Add new internal pipeline candidates in a clearly defined “sweet spot”
 - Add external pipeline candidates by replicating the recent GE deal
 - Support growth with continuous improvements to i-body platform and AD-214 product
- ▶ **Experienced drug development team driving strategic focus on the foundation**
 - Developing network of partners and investors to share in the opportunity ahead



AD-214

Executive leadership



Tim Oldham, PhD
CEO & Managing Director



- >20 years of international life sciences business development and commercialisation experience
- Significant ASX listed company experience



Mick Foley, PhD
Chief Scientific Officer



- Founding scientist of AdAlta and inventor of lead i-body candidate, AD-214
- Recognized expert in phage display; >70 scientific publications



Claudia Gregorio-King, PhD 
VP Clinical Product Development



- 15 years experience in clinical operations, regulatory affairs and R&D program management



Dallas Hartman, PhD
Chief Operating Officer



- >20 years experience in protein product development and characterisation

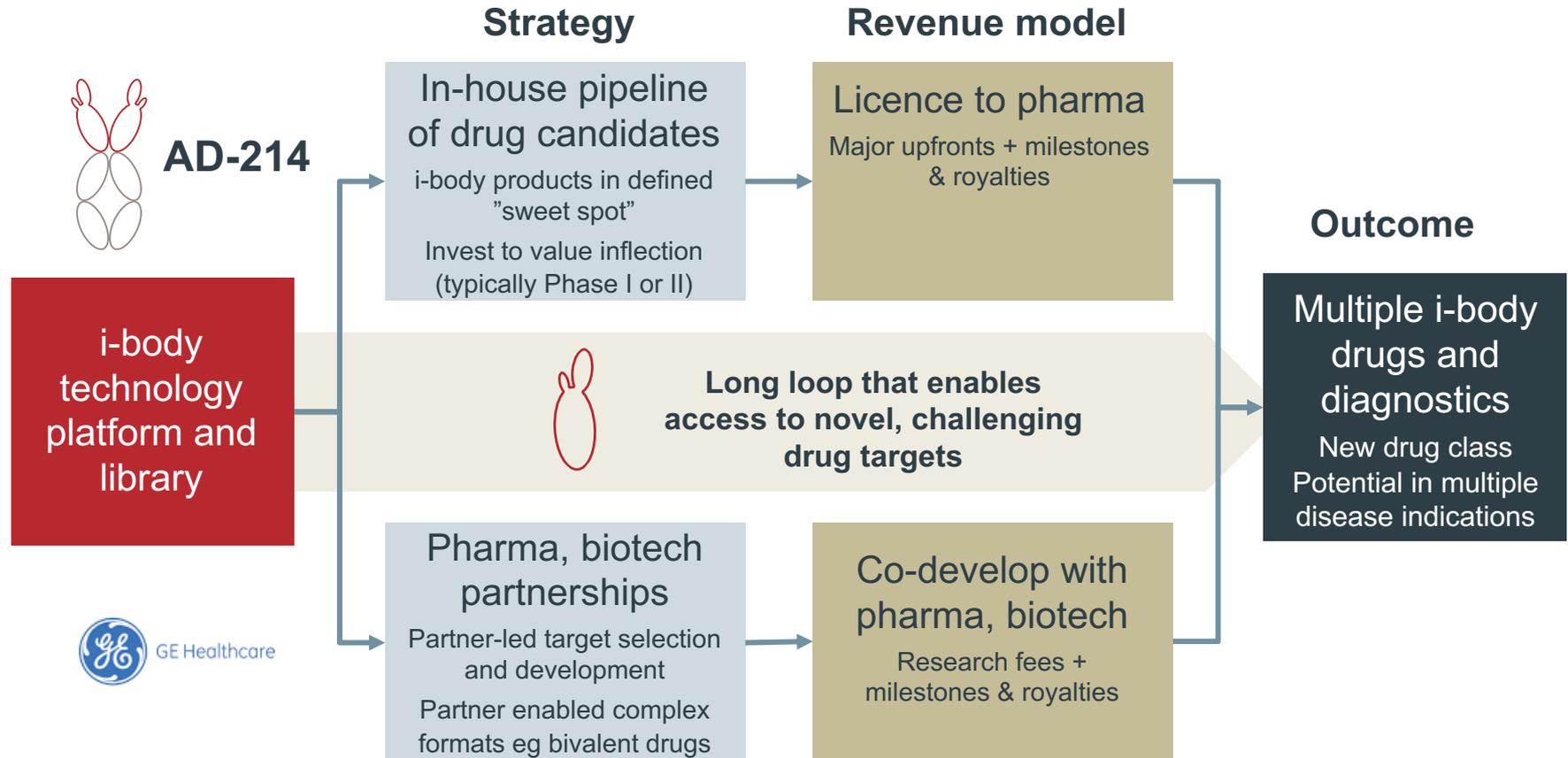


Kevin Lynch, MD
Consultant Medical Expert



- >25 years experience across all phases of clinical development, regulatory and reimbursement approval and medical affairs

AdAlta's strategy, business model to create value



Near term strategic priorities

Create value inflections for lead candidate AD-214

- Advance to clinic in Idiopathic Pulmonary Fibrosis
- Expand indications and licensing options

Build *internal* pipeline in our “sweet spot”

- G-protein coupled receptors (GPCRs)
- Fibrosis, inflammation, cancer

Build *external* pipeline through partnerships

- Earlier revenue; access to additional target expertise

Continuous i-body platform and AD-214 product improvement

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

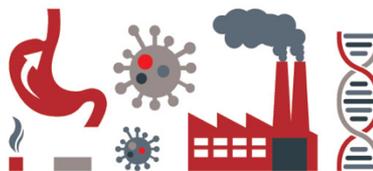
IPF incidence



of sufferers die within 2 to 3 years following diagnosis

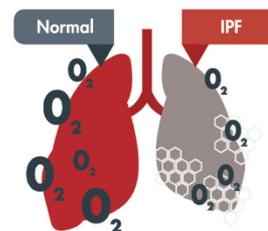


Causes



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.

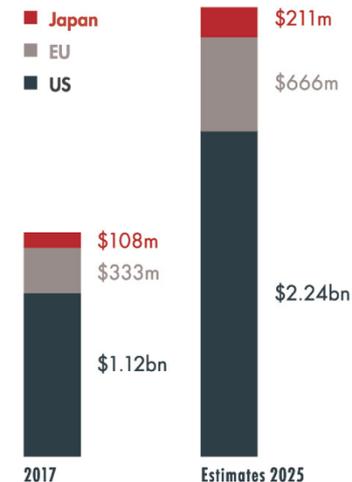
Current IPF treatments

Pirfenidone

Nintedanib



IPF Therapy Sales (US\$)



Source: GlobalData 2018

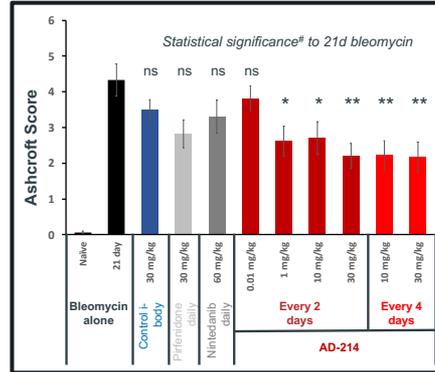
Significant recent AD-214 achievements

A\$1m BTB grant to radiolabel AD-214 for PET imaging



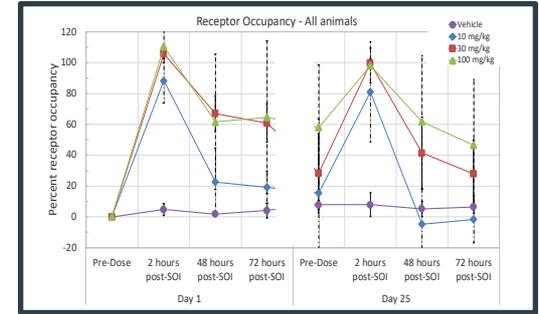
- ▶ AD-214 distribution and target engagement information in lungs of IPF patients earlier than planned
- ▶ **Adds significant commercial and clinical value to Phase I**
- ▶ Potential product in own right

Pre-clinical efficacy: mouse bleomycin model



- ▶ AD-214 efficacy demonstrated in gold standard animal model of IPF
- ▶ Adds to favorable NHP toxicity profile
- ▶ **Enables progression to Phase I in mid-2020**

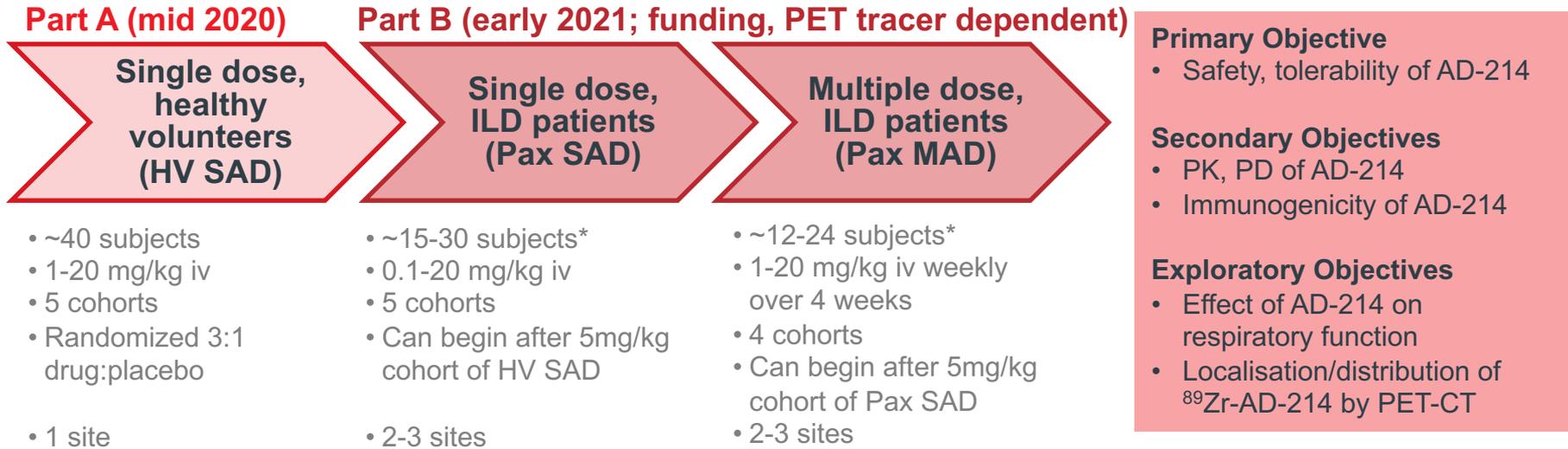
Pharmacokinetics and pharmacodynamics: non-human primate



- ▶ AD-214 exhibits high target receptor binding for at least three days in NHP
- ▶ Supports potential therapeutic effect at weekly or every second week human dosing
- ▶ **Phase I study includes potential therapeutic window**

Proposed two-part phase I design

Phase I, dose-escalating study of the safety, tolerability, PK & PD of single and repeat doses of AD-214 in healthy volunteers (HVs) and patients with interstitial lung disease (ILD)



Contracted vendors

Partners in development and clinical validation of PET tracer



AdAlta's "sweet spot" facilitates more rapid screening of internal product ideas

AdAlta's internal development "sweet spot" – i-bodies to G-protein Coupled Receptors (GPCRs)

- Clinically validated
- Indications in fibrosis, inflammation or oncology
- Not adequately addressed with small molecule or conventional antibody approaches due to complex pharmacology

Partnering will enable platform to be deployed more widely including:

- Other "challenging to drug" targets needing new approaches eg ion channels
- Products that require complementary formatting technology eg bispecifics



SUBJECT TO FINANCE,
TECHNICAL SUCCESS

AdAlta target pipeline evolution



Target	Class of Target	Partner	Product/ Indication	Discovery	Preclinical, product dev	IND enabling studies	Phase I	Phase II
CXCR4	GPCR	AdAlta	AD-214: Idiopathic Pulmonary Fibrosis	[Dark red arrow from Discovery to Phase I] [Light grey arrow from Phase I to Phase II]				
			AD-214: Indication 2	[Dark red arrow from Discovery to Preclinical]		[Light grey arrow from Preclinical to Phase II]		
			AD-214: Indication 3	[Dark red arrow from Discovery to Preclinical]		[Light grey arrow from Preclinical to Phase II]		
Target 2-3	GPCR	AdAlta	TBD	[Light grey arrow from Discovery to Phase II]				
Target 4-6	GPCR	AdAlta	TBD	[Light grey arrow from Discovery to Phase II]				
Granzyme B	Serine protease	GE Healthcare	PET imaging agents	[Dark red arrow from Discovery to Preclinical]		[Light grey arrow from Preclinical to Phase II]		
TBC		3-5 Partners		[Light grey arrow from Discovery to Phase II]				

Market benchmarks

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

Fibrosis lead AD-214



Sep-15 acquired by Roche
\$105m + \$475m milestones
phase I



Jul-19 license by Boehringer
Ingelheim €45m + €1.1b
phase I



Nov-19 acquired by Roche
\$390m + \$1b – Phase II
Aug-15 BMS option to buy
\$150m + \$1.25b milestones

Micro-antibodies



April-16 license by Abbvie
\$40m upfront + \$645m
milestones & royalties



Feb-18 collaboration with
Seattle Genetics (3 targets)
\$30m upfront + \$1.2b
milestones & royalties



Feb-18 acquired by Sanofi
€3.9b

GPCRs



Feb-15 acquired by Sosei
\$400m Phase Ib asset + 7 pre-
clinical leads



Jul-15 acquired by Celgene
\$7.8b Ph III, Ph II and GPCR
platform



April-16 license with
Boehringer
€8m + €125m milestones
PhI GPCR nanobody

Growth trajectory to build value

Timing and rate of growth dependent on financial resources

A

Maximise catalysts from current funded base (2020)

AD-214

- Phase I healthy subject single dose
- Develop PET imaging agent

Internal pipeline

- Target selection

External pipeline partners

- GE collaboration

Continuous platform improvement

- Design i-body2.0, AD-214 continuous improvement plan

B

Expand (~mid 2020 to late 2021)

AD-214

- Phase I patient single dose + PET
- New indications: proof of concept

Internal pipeline

- Initiate discovery

External pipeline partners

- Fill, progress business development pipeline

Continuous platform improvement

- Build i-body2.0 libraries
- Lab scale AD-214 process improvements

C

Accelerate (from ~mid-2021)

AD-214

- Phase I patient multi-dose + PET
- Phase I licensing window opens
- Next indication pre-clinical

Internal pipeline

- ~5 new internal targets in discovery and proof of concept

External pipeline partners

- 3-5 co-development contracts active

Continuous platform improvement

- File i-body2.0 IP
- Scale up AD-214 process improvements

Building a diversified, valuable pipeline

Metric	From AD-214 focus today ...	To multi-product by 2023 ...
AD-214 development	<ul style="list-style-type: none"> ▶ Pre-clinical in IPF 	<ul style="list-style-type: none"> ▶ Clinical in two indications ▶ Phase I partnering window
Internal pipeline	<ul style="list-style-type: none"> ▶ Substantial “proof of principle” ▶ <i>Ad hoc</i> target selection 	<ul style="list-style-type: none"> ▶ GPCR target selection rigor ▶ 2 pre-clinical programs ▶ >3 discovery programs
Revenue generating partnerships	<ul style="list-style-type: none"> ▶ 1 (GE Healthcare) 	<ul style="list-style-type: none"> ▶ 3-5 co-development partnerships in multiple target, product classes
News flow	<ul style="list-style-type: none"> ▶ Large gaps between inflection points 	<ul style="list-style-type: none"> ▶ Frequent news flow, regular inflection points
Financing	<ul style="list-style-type: none"> ▶ Primarily equity; frequent, small raises for “next steps” to date 	<ul style="list-style-type: none"> ▶ Partnerships: low double-digit share of annual costs ▶ >18 months cash to achieve inflections



Numerous milestones, inflection points and transactions along the way

News flow

▶ Early 2020

- ✓ Patent granted covering AD-214 granted in the US
- ✓ Publication of role of CXCR4 in fibrosis
- ✓ Pre-clinical efficacy and PK/PD of AD-214
- ✓ AdAlta strategy update (AD-214 clinical development and i-body platform growth)

▶ Mid-2020

- Ethics committee approval for Phase I human clinical studies
- **Phase I healthy volunteer studies with AD-214 commence**

▶ Late 2020

- PET tracer pre-clinical images in bleomycin mouse
- **Phase I healthy volunteer studies – top line results (safety and PK)**
- **Ethics approval to introduce PET tracer to Phase I patient single dose studies**

▶ Early 2021

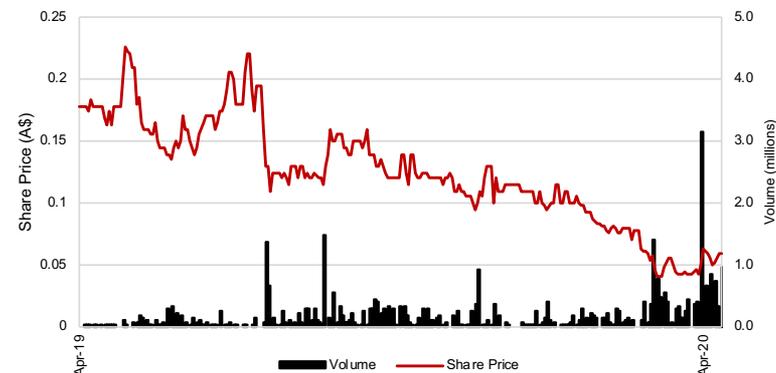
- **First patient image with PET tracer (early 2021)***
- Proof of concept *in vitro* and *in vivo* (animal) data and in new AD-214 indications*

Financial position and results: funded to end of Phase I health volunteer study (late 2020)

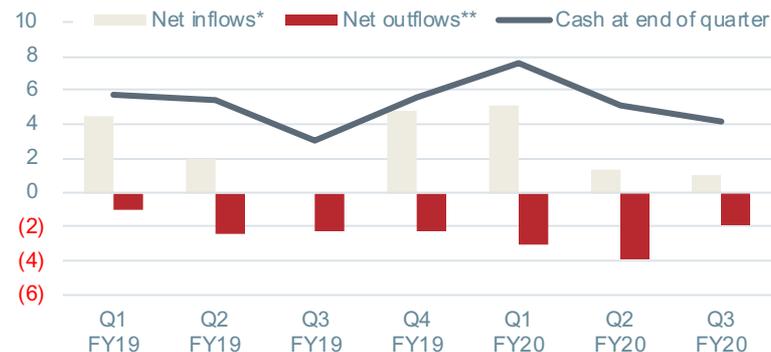
Key financial details	
ASX code	1AD
Share price (29 April 2020)	AUD\$0.06
Market capitalisation	AUD\$9.84m
Ordinary Shares	163,945,613
Listed Options	23,348,803
Unlisted Options	7,514,067
Current cash (31 March 2020)	AUD\$4.14m
Trading range (last 12 months)	AUD\$0.04 to \$0.22
Average daily volume (last 6 months)	212,000

Major shareholders	%
Yuuwa Capital LP	32.97
Platinum Asset Management	8.54
CS Fourth Nominees Pty Ltd	3.07
Meurs Holdings Pty Ltd	3.05
Brispot Nominees Pty Ltd	2.21
Other shareholders	49.96
Total	100%

Share price performance (last 12 months)



Quarterly cash flows



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
Alternate to Liddy McCall



Scientific Advisory Board



Dr Mick Foley
AdAlta CSO
Expert in phase display



Brian Richardson
Drug discovery and
development expert



Steve Felstead
Clinical development

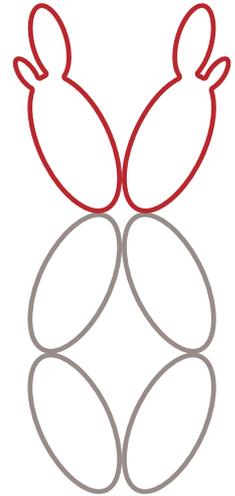


John Westwick
Pulmonary drug discovery
and development



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AD-214



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