



Interim Results for the Period Ended 31 January 2016

Presentation to Analysts  
25 April 2016

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# Avacta Group plc (AIM: AVCT)

Affimer® biotherapeutics, research tools and diagnostic reagents

A pre-clinical stage biotech developing medicines based on its proprietary Affimer therapeutic protein platform with early revenues being generated from research and diagnostics Affimer reagents.

## Antibody Therapeutics and Reagents Sales

Research Reagents

\$2bn



Diagnostics

\$11bn



Biotherapeutics

\$75bn



# Highlights

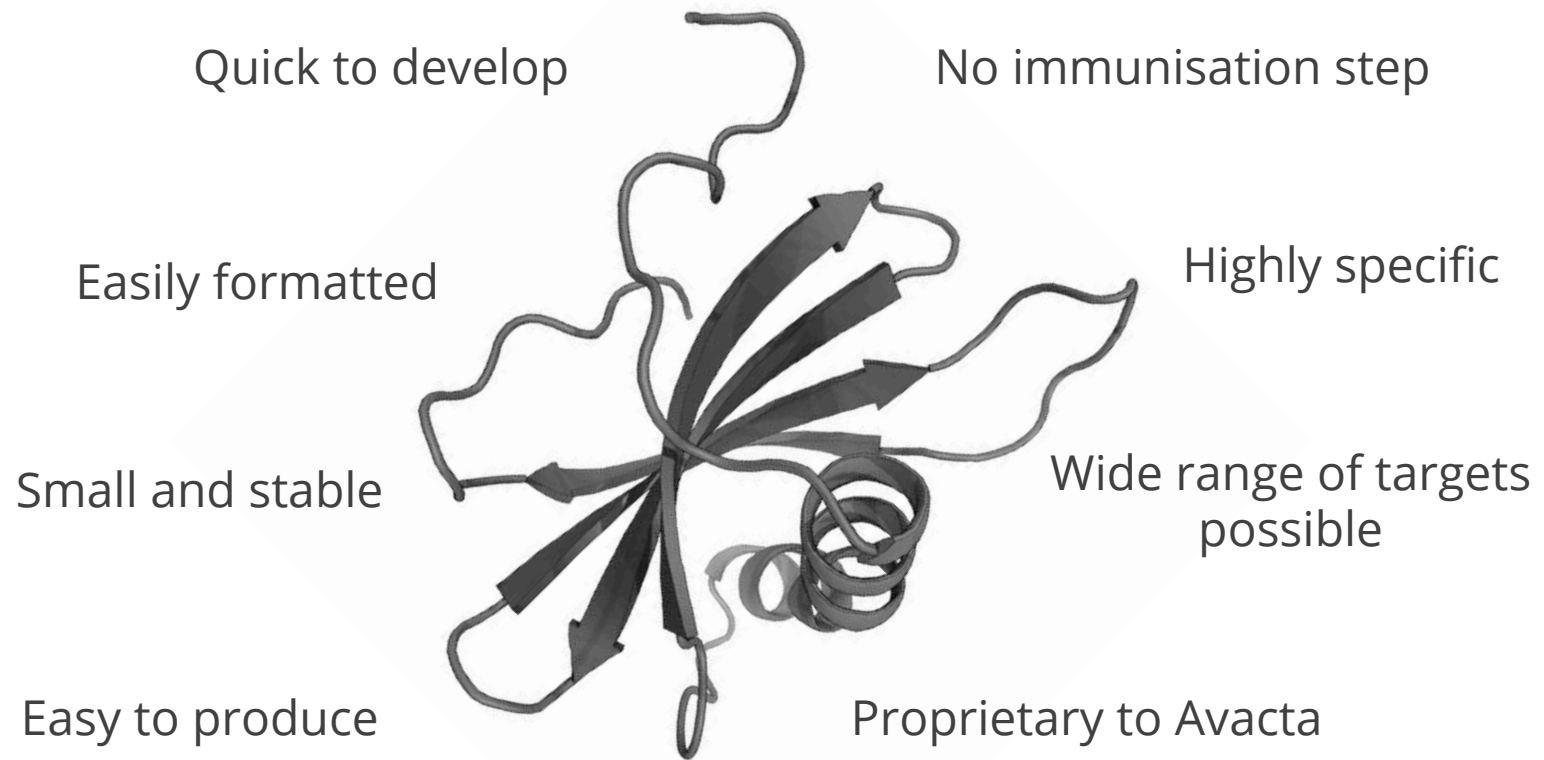
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## Strong progress in 2015 continues into 2016

- Excellent progress in Affimer biotherapeutics programmes
  - Several lead anti-PD-L1 Affimer inhibitors identified and entering pre-clinical studies.
  - Key collaboration initiated to evaluate Affimer drug candidates that modulate blood clotting.
  - Collaboration with Moderna expanding.
- Affimer technology evaluations with numerous partners including large pharma, biotechs and diagnostics providers.
- Strengthened Board and management team.
- Half year revenue of £1.0m (£0.7m FY15)
- Operating loss from continuing operations £2.0m (£1.6m FY15); Reported loss reduced to £1.8m (£6.6m FY15)
- Cash balances increased to £25.0m (£7.3m 31 July 2015)

# Technology Overview

Affimer® technology is a proprietary antibody mimetic with key technical and commercial benefits



# Senior Leadership Team



**Dr Alastair Smith, CEO**

- A leading UK biophysicist until founded Avacta in 2006.
- World class scientific and technical knowledge with a highly commercial mindset.



**Dr Matt Johnson, CTO**

- Genetics & Microbiology Molecular Biology
- 8 years at Abcam becoming global Head of R&D.
- Joined Avacta in 2013.



**Dr Amrik Basran, CSO**

- Over 10 years' experience of both the biotech and pharma industries.
- Head of Topical Delivery (Biopharm) at GSK.
- Director of Protein Biosciences at Domantis, before the company was acquired by GSK in 2006.
- Joined Avacta in 2013.



**Dr Philippe Cotrel, CCO**

- Over 20 years' commercial experience in sales, marketing and customer support.
- Senior positions in Amersham Pharmacia Biotech, Oxford Glycosciences, Affymetrix and Abcam.
- Commercial Director of Abcam since 2008 successfully growing revenue from £36.7m to £144m over a 7-year period.
- Joined Avacta in 2016.



**Mr Tony Gardiner, CFO**

- Joined Avacta from AHR, an international architecture practice.
- Chief Financial Officer of AIM listed Fusion IP plc 2007 – 2011 which was acquired by IP Group plc in 2014.
- Joined Avacta in 2016.



**Mr Craig Slater, COO**

- Over 25 years' experience of commercial, operational and group management roles in manufacturing, construction, software and marketing groups.
- Joined Avacta in 2012.



Financial Results for the Period Ended 31 January 2016

# Summary Income Statement

	Unaudited 6 months 31 Jan 2016 (£m)	Unaudited 6 months 31 Jan 2015 (£m)	Audited Year ended 31 July 2015 (£m)
Revenue	1.05	0.73	1.81
Gross profit	0.61	0.47	1.29
Gross margin	58%	64%	70%
Underlying LBIT	(1.98)	(1.47)	(2.85)
Impairment of R&D (Note 1)	-	-	(2.41)
Other adjusting items	(0.13)	(0.13)	(0.31)
Operating loss	(2.10)	(1.60)	(5.57)
Loss on Optim sale (Note 2)	-	(5.05)	(5.10)
Retained loss	(1.75)	(6.63)	(9.99)
Loss per share (Note 3)	2.61p	0.13p	0.20p

Note 1: Impairment of development cost of Sensipod device.

Note 2: Operating loss to date of sale £305,000, Deficit on asset value sold/impaired £4,793,000.

Note 3: Share consolidation 1 for 100 on 26 January 2016 approved at AGM.



# Summary Cash Flow and Balance Sheet

	Unaudited 6 months 31 Jan 2016 (£m)	Unaudited 6 months 31 Jan 2015 (£m)	Audited Year ended 31 July 2015 (£m)
Operating activities	(1.84)	(1.65)	(2.52)
Investment	(1.55)	(1.98)	(3.86)
Optim disposal proceeds	-	-	2.21
Financing	21.04	0.01	0.02
Net cash flow	17.65	(3.62)	(4.15)
Cash (Note 1)	24.98	7.85	7.33
PPE	1.65	1.76	1.55
Intangible assets	11.54	10.98	10.36
Assets held for resale	-	2.21	-
Other net assets/(liabilities)	0.35	(0.45)	(0.11)
Net assets	38.52	22.35	19.13

Note 1: Placing on 3 August 2015 raised £21.0m (net of expenses) at 1.25p per share.

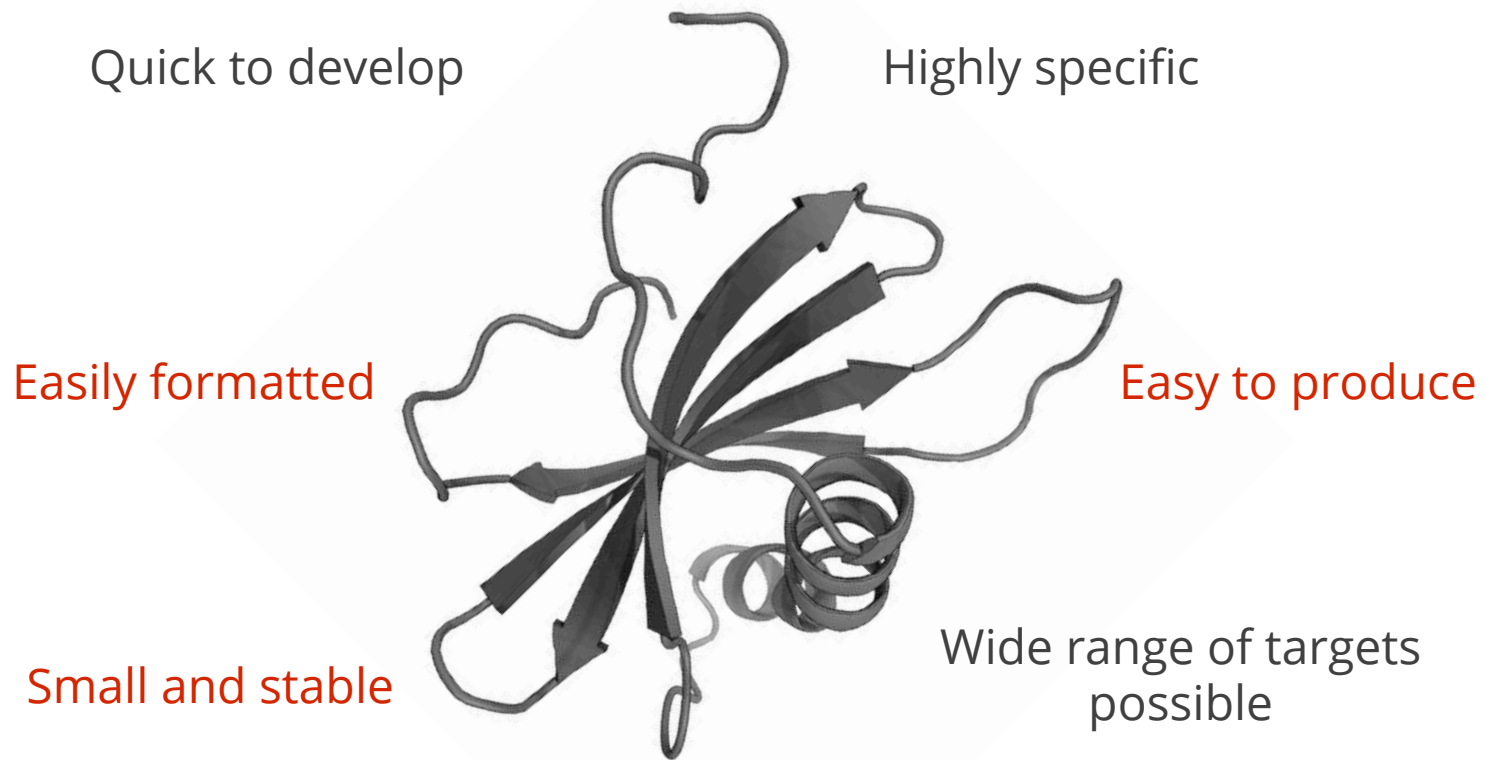


Affimer Therapeutics Programme

*Progress Update*

# Affimer Therapeutics

A next generation biotherapeutic platform technology



# Therapeutic Development Strategy

Generate a pipeline of assets whilst accelerating the Affimer technology into the clinic through partnerships and in-house programmes

## High Level Objectives (3 years)

1. Generate a pipeline of assets primarily in immuno-oncology.
2. Continue to develop the technology platform showing the capabilities and advantages of Affimer therapeutics to support future licensing deals.
3. First Affimer therapeutic to the clinic – a significant value inflection point.
4. Secure further co-development partnerships.

Focus on best-in-class **immuno-oncology** therapies leveraging the Affimer therapeutic platform strengths and limiting target selection risk

# Technology Differentiation

The ease with which multimeric structures can be assembled and produced is a key strength of the Affimer technology

- Multimeric structures for combination therapies or targeting/T-cell recruitment are essential for high value immuno-oncology assets.
- Such structures are often difficult or impossible to manufacture at scale for many biotherapeutic platforms.
- We have demonstrated our ability to generate multimeric Affimer structures including dimers, trimers and even tetramers, and other important constructs such as Fc fusions and pegylated Affimers.
- All of these can be produced with high production yields comparable to the monomer Affimer which makes the Affimer platform highly competitive with other protein scaffolds and ideal for immuno-oncology.



Key Technical Benefits of Affimer Technology for Immuno-oncology

**Ease of formatting**      **Ease of production**      **Tissue penetration**

# Immuno-oncology Strategy

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Focus in-house resources on best-in-class multi-specific inhibitor/agonists and address other immuno-oncology modalities through partnerships

1. **Generate a pipeline** of Affimer immune checkpoint inhibitors and co-stimulatory receptor agonists that can be combined in multi-specific therapies.
2. **Select one bi- or tri-specific** combination therapy to develop in-house.
3. **Seek partnerships** for other combination therapies with large pharma.
4. **Establish R&D collaborations** to drive adoption of Affimer technology in the T-cell engager / CAR-T therapy / ADC applications.

# Immuno-oncology Programme Update

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Affimer proteins have the right attributes to become the best-in-class immuno-oncology platform

- Numerous high affinity PD-L1 inhibitors generated for human and mouse.
- Inhibitory performance compares favourably with a leading monoclonal antibody.
- Complex multimeric formats (dimers, trimers and tetramers) and Fc fusions generated.
- Production yields of these complex formats comparable with the high yield of the monomer (100s mg per litre).
- Now beginning PK and efficacy work packages for PD-L1 inhibitors.
- In discovery phase for a range of other immune check point inhibitors, co-stimulatory receptor agonists and T-cell engagers.

# Established Partnerships

Updates on established partnerships will be provided in due course when substantial milestones are achieved



In May 2015 Avacta signed a research collaboration and exclusive license agreement with Moderna Therapeutics to provide Affimers against selected targets for mRNA therapeutics.

- Resource allocation to Moderna research collaboration increased during the period.

## Deal Structure

- Upfront of \$0.5m to secure exclusivity for a number of targets.
- Exclusivity may be extended by a further payment.
- Revenue generating research services to assist in achieving the pre-clinical milestones.
- Milestone payments for each lead Affimer that could total tens of \$millions.
- Royalty on future sales.



Antibiotic resistance



Phenotypic screening



Liver metabolism



# Post-Period Update

## World class science advisory group and facilities in Cambridge

- **Scientific Advisory Board – world-class immunologists**
  - Mike Owen, Chair, ex-Head of Biopharm R&D GSK.
  - Professor Paul Moss, University of Birmingham and Birmingham NHS Trust.
  - Professor Terry Rabbitts, University of Oxford.
  - Professor Adrian Hayday, Kings College London.
- **Cambridge facilities**
  - 5,000 sqft laboratory fit out in Whittlesford due to be completed mid-May.
- **Patents**
  - Modified Stefin A (“Affimer”) patent to be granted shortly in EU (already granted in US and Japan; CA and others pending).



# Indicative Development Milestones 2016-18

Programme	H2 CY16	H1 CY17	H2 CY17	CY18
Immuno-oncology	Animal efficacy of PD-L1 candidates  <i>In-vitro</i> functional testing and production yield data of first multimeric Affimer construct	Range of immune check point inhibitors and agonists generated  Pre-clinical phase data for at least one multi-specific therapy	Initiate tech transfer to CMO	Initiate tox study  Target IND filing late 2018
Platform Development	Efficacy, PK and <i>in-vitro</i> immuno- genicity data for model systems	HSA half-life extension data		
Blood Clotting		Pre-clinical <i>in-vitro</i> data of clot modulation	<i>In-vivo</i> data of clot modulation  Initiate tech transfer to CMO	Initiate tox study  Target IND filing late 2018

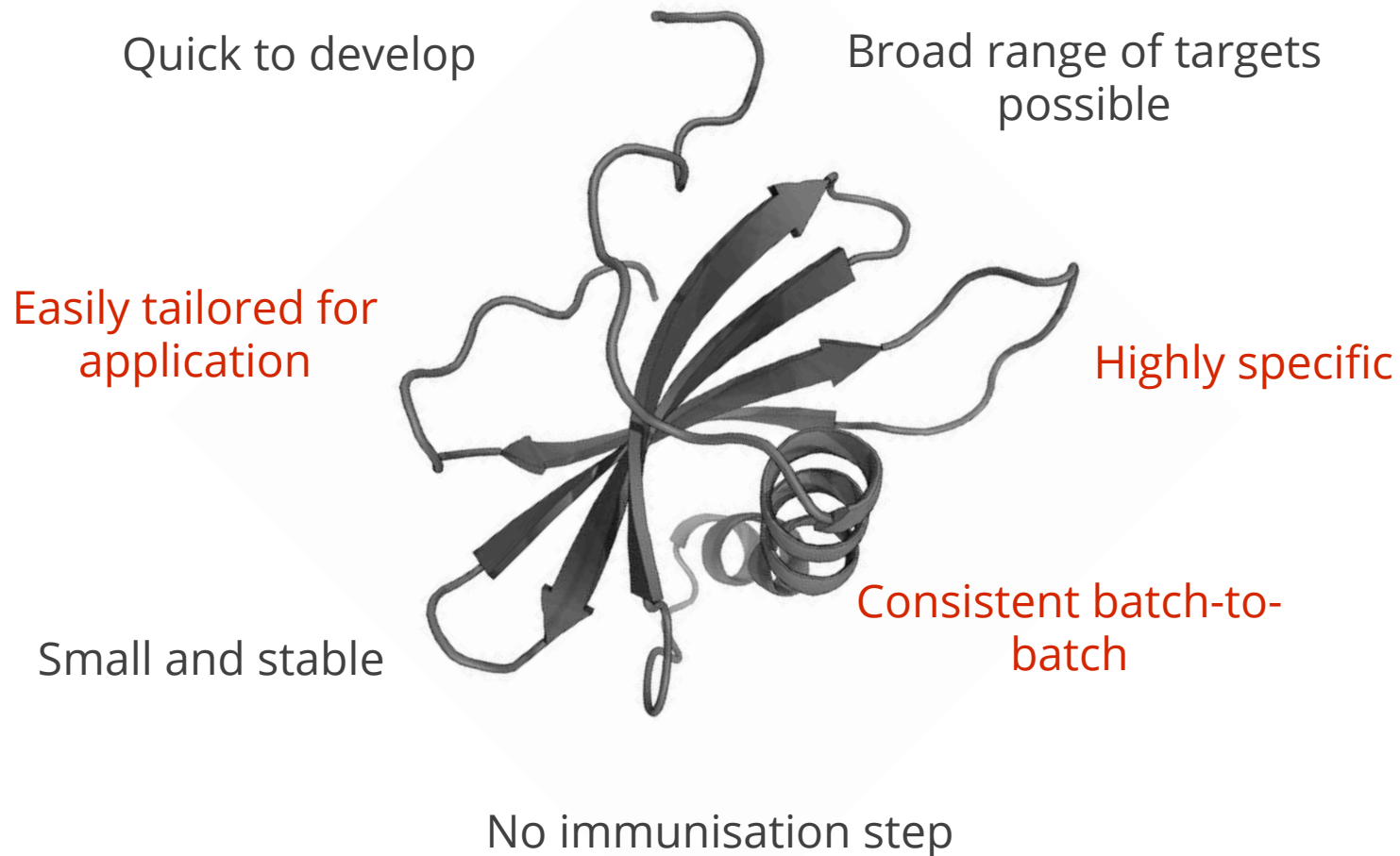


Affimer Research and Diagnostics Reagents

*Progress Update*

# Affimer Research and Diagnostic Reagents

Powerful competitive advantages as a research and diagnostic affinity reagent



# Rx/Dx Commercial Strategy

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Commercial strategy – focus on applications where Affimers have key advantages and complement rather than compete head-to-head with established antibody products

- Good commercial traction achieved in first twelve months; engaged with many high quality customers and potential partners across a wide range of applications.
- Now focus commercial and development resources in a small number of applications to ensure that we can compete effectively.
  - Primary focus on custom Affimer services for high value targets in research and diagnostics.
  - Targeting OEMs to incorporate Affimer technology into their products to drive longer term licensing and supply deals.
  - Select strategic near term application priorities and focus resources on validating Affimers in the relevant application formats.
  - Respond to customer demand in other areas.
- Continued growth of a small catalogue of Affimer products that provide a low price point for Affimer take-up to drive third party validation and publicity.

# Near Term Rx/Dx Strategic Priorities



## Affinity Separation

- \$500m growing @ 10% CAGR
- GE Healthcare, Pall Corp, Thermo Fisher, EMD Millipore



## Immuno-assays

- \$500m for research ELISA; over \$3bn for diagnostics
- R&D Systems, Biorad, Luminex, Abbott, Roche ...



## Lateral Flow Diagnostics

- \$5bn growing at 7% CAGR
- Alere (Abbott), BBI, Roche, Siemens ...

## Affimer Technology Fit

Specificity, stability, small size, speed of development

Specificity, pairs, batch to batch consistency

Specificity, pairs, stability, batch to batch consistency, difficult targets

# Rx/Dx Progress Update

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Continued progress in securing custom Affimer orders and evaluation projects which could lead to commercial deals

- Paid for custom Affimer evaluations
  - Thirteen large pharma and biotechs.
  - Four out of the top ten largest pharma companies.
  - Several large diagnostic companies including one of the top three.
  - Large research reagent supplier.
  - US, EU and Japanese research institutes and government labs.
  - Over 40 custom Affimer developments completed.
  - Several repeat customers.
  
- Total half year Affimer revenues £0.3m (FY15 nil)

# Rx/Dx Progress Update

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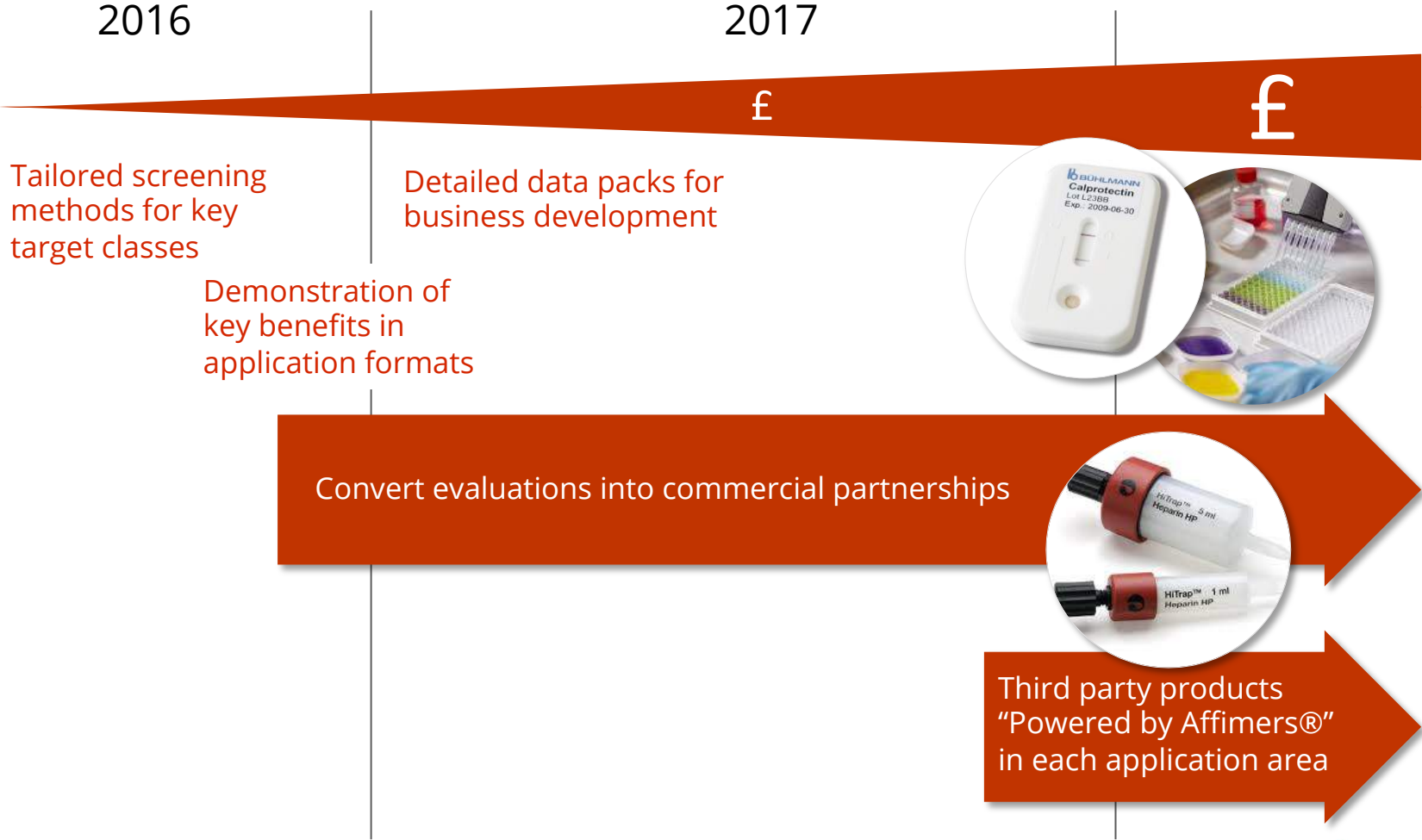
## Strong leadership team and growing third party validation of the Affimer technology

- **Leadership team**
  - Chief Commercial Officer, Philippe Cotrel, joined Avacta from Abcam at the end of January to refine the commercial strategy and lead all customer facing activities across Tx, Rx and Dx.
- **Independent technology validation from third party journal articles and abstracts published in past twelve months**
  - IL-8 biosensor; magnetite crystal growth; complement C3 and fibrinogen binders; HIF1a/p300 (tumour metabolism target) binder.
  - Testimonials from commercial customers are more difficult to extract but several are in the pipeline.
- **Avacta Wetherby facilities slightly ahead of current plan to complete fit-out in mid July**
  - 13,000 sq ft over two floors - 65% laboratory space - housing c.40 staff.
  - Affimer discovery, protein production, R&D, commercial team and centralised Group administration functions.



# Indicative Rx and Dx Milestones 2016-17

Multiple value catalysts: product development and commercial milestones in the three strategic priority areas





Avacta Animal Health Update

# Avacta Animal Health

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## Allergy offering expanded and development pipeline starts to deliver new diagnostics to the veterinary market

- £0.7m revenue in the period (FY15 0.7m).
- Core allergy product maintained market share in highly competitive conditions.
- New equine allergy product launched, initially for UK market and with plans to extend to Europe.
- Deal signed to market and sell premium companion animal nutraceutical range.
- CRO work completed for prestigious animal health partners and KOLs.
- Further new products progressing through the development process with the intention to make use of the benefits of the Affimer technology.



Summary

# Summary

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A pre-clinical stage biotech developing medicines based on its proprietary Affimer® therapeutic protein platform with early revenues being generated from research and diagnostics Affimer reagents

- Solid technical and commercial platform for future growth.
- Complementing antibodies not competing with established products.
- Therapeutic strategy focused on immuno-oncology with plans to generate multi-specific Affimer therapies and targeting technologies for in-house development and future partnering.
- Commercial strategy for Affimer reagents to focus R&D and commercial resources on ELISA, affinity separation and LFD applications.
- Ongoing technology evaluations with a large number of pharma, biotech, diagnostic and research tools providers should lead to multiple value catalysts.
- Strong leadership team combining world-class scientific capability with extensive commercial experience.
- Experienced Scientific Advisory Board established to guide therapeutic strategy and review progress.



Affimer<sup>®</sup>

# Avacta Overview

A pre-clinical stage biotech developing medicines based on its proprietary Affimer® therapeutic protein platform with early revenues being generated from research and diagnostics Affimer reagents

- Avacta Life Sciences established in 2012 to develop and commercialise Affimer IP.
- 44 staff over two sites: Wetherby and Stevenage.
- c.£40m raised to develop and commercialise life sciences research Affimers and to take the first therapeutic Affimers to the clinic.
- Investment to expand infrastructure, R&D, commercial and support teams.
  - 13,000 sq ft of bespoke laboratory, production and logistics space in Wetherby to be completed mid-2016.
  - 5,000 sq ft of bespoke laboratory space in Cambridge to be completed May 2016.



# Avacta Group plc

AVCT share price 109p

Market Capitalisation £75m

## A strong Board with extensive experience of commercialisation of life sciences and therapeutic technology platforms

Dr Trevor Nicholls	Non-executive Chairman
Dr Alastair Smith	Chief Executive Officer
Mr Tony Gardiner	Chief Financial Officer
Mr Craig Slater	Chief Operating Officer
Mr Alan Aubrey	Non-executive Director
Dr Michael Albin	Non-executive Director
Dr Mike Owen	Non-executive Director

## World class Scientific Advisory Board with wide-ranging scientific and clinical experience in immuno-oncology

Dr Mike Owen, Chair  
Professor Adrian Hayday, Kings College London  
Professor Terry Rabbitts, Oxford University  
Professor Paul Moss, University of Birmingham

## Main Institutional Shareholders

IP Group	25.2%
Henderson Global	12.2%
Aviva	10.5%
Ruffer LLP	7.2%
Fidelity	5.7%
Baillie Gifford	5.5%
NFU Mutual	3.6%
JO Hambro	3.3%

## Advisors

Joint Broker and Nomad	Numis
Joint Broker	WG Partners
Investor Relations	FTI