



fusion**antibodies**

# Antibody Development services for the Pharma and Diagnostics Sectors

FY 2019 Results Presentation

July 2019

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# Why Antibodies?



Since the development of biologic drugs such as human growth hormone and insulin several decades ago, drug targets have increased exponentially with the discovery of new genetic information and a better understanding of disease processes.

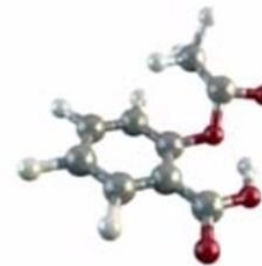
With a better understanding has come the need for more targeted therapies.

Monoclonal antibodies are specialised in targeting a very specific structure on a cell surface.

For example when used in cancer therapy, they bind selectively to the receptors of cancer cells, making it possible to mark and fight specific abnormal cells.

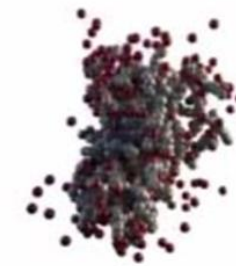
Healthy cells are usually not attacked in this process, **so that biologics often cause fewer side effects than classic chemotherapy.**

SMALL MOLECULE DRUG



Aspirin  
21 atoms

SMALL BIOLOGIC



Human Growth Hormone  
~ 3000 atoms

LARGE BIOLOGIC



Monoclonal antibody  
~ 25,000 atoms

modelling  
docking

DNA synthesis

**This has lead to the rapid growth and opportunity for targeted therapies such as monoclonal antibodies as evident in the market size.**

# Your Full Service Antibody Solution



Discovery

Optimization

Preclinical

Clinical



## Discovery

HYBRIDOMA GENERATION  
B CELL SCREENING  
ANTIBODY SEQUENCING



## Engineering

CDRx™ HUMANIZATION  
REFORMATTING TOOLKIT  
ANTIBODY DEVELOPABILITY  
AFFINITY MATURATION



## Supply

TRANSIENT EXPRESSION  
cGMP STABLE CELL LINE DEVELOPMENT  
ANTIBODY CHARACTERIZATION

# Where we Trade

International client base which includes a number of the top ten ranked global biopharma and diagnostic companies by revenue.

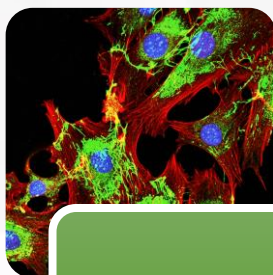
Potential for further international expansion.



# Strategy for Growth

Organic growth plus addition of new, high value, market differentiating services

2019



Current  
Services

- Biopharma industry collaborations for antibody discovery & humanisation using CDRx™
- Antibody engineering services for large pharma outsourcing due to capacity issues
- Focus on high value, Cell Line Development for Mabs going to the clinic

2019



Antibody  
Affinity  
Maturation

- A technically advanced platform to improve performance of antibody based drugs
- The Directors believe that there will be significant demand for this service

2020



Mammalian  
Antibody  
Library

- A 'plug and play' platform designed enabling direct biologic drug discovery
- Antibodies discovered and developed using this library would be subject to licence / royalty payments
- Breaks into high value market for fully human therapeutic antibodies

# CDRx™ Humanisation Platform



- Continues to be hugely successful for Fusion Antibodies
- Enable rapid design & generation of humanized antibody constructs
- Multiple client projects now in the clinic in phase 1 & phase 2
- On the Patent of Roche Her3 target
- Over a dozen projects with success milestones either 1% royalty share or payments up to £250K on candidates entering the clinic
- We continue to seek milestones where possible going forward



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# Rational Affinity Maturation Platform RAMP™

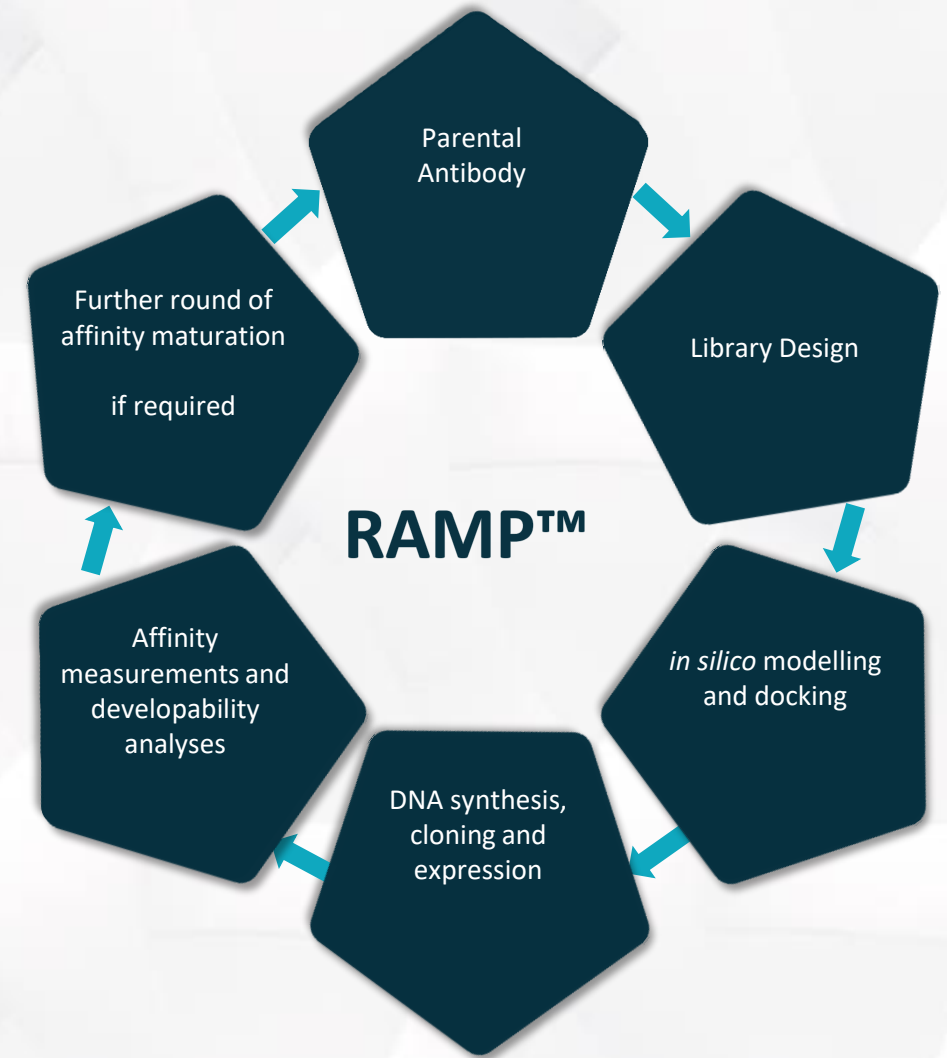
A technically advanced platform to improve performance of antibody  
based drugs



# RAMP™ Advantages

- Next Generation from phage display technologies
- No need to generate large physical library of variants
- Selection of focussed library using *in silico* modelling
- No bias for scFv format or bacterial expression (required for phage display)
- Characterisation of variants in full-length format
- Platform can be applied to optimise any biophysical property, not just affinity

**A technically advanced platform to improve performance of antibody based drugs**



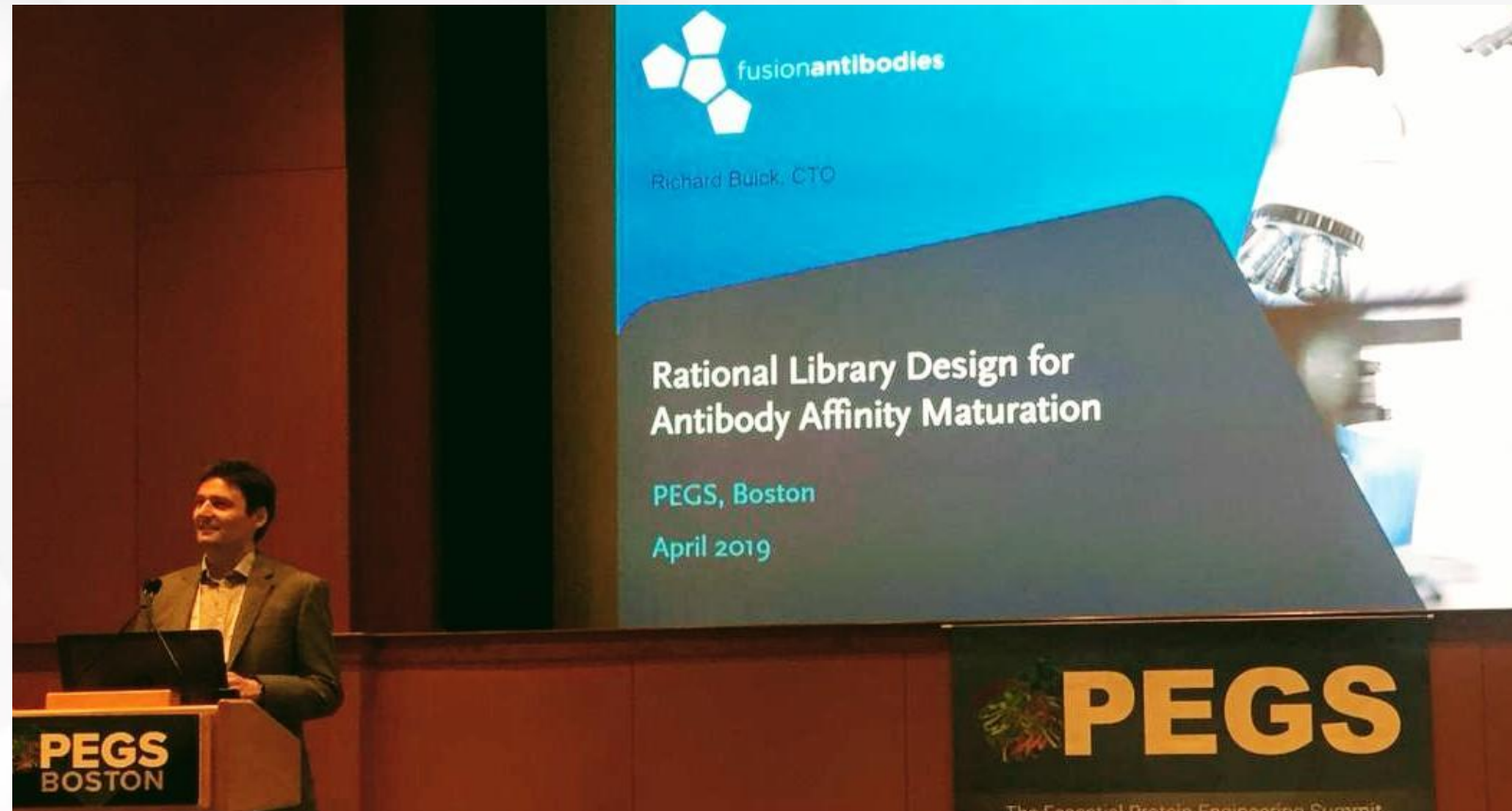


# Rational Affinity Maturation Platform™ (RAMP)



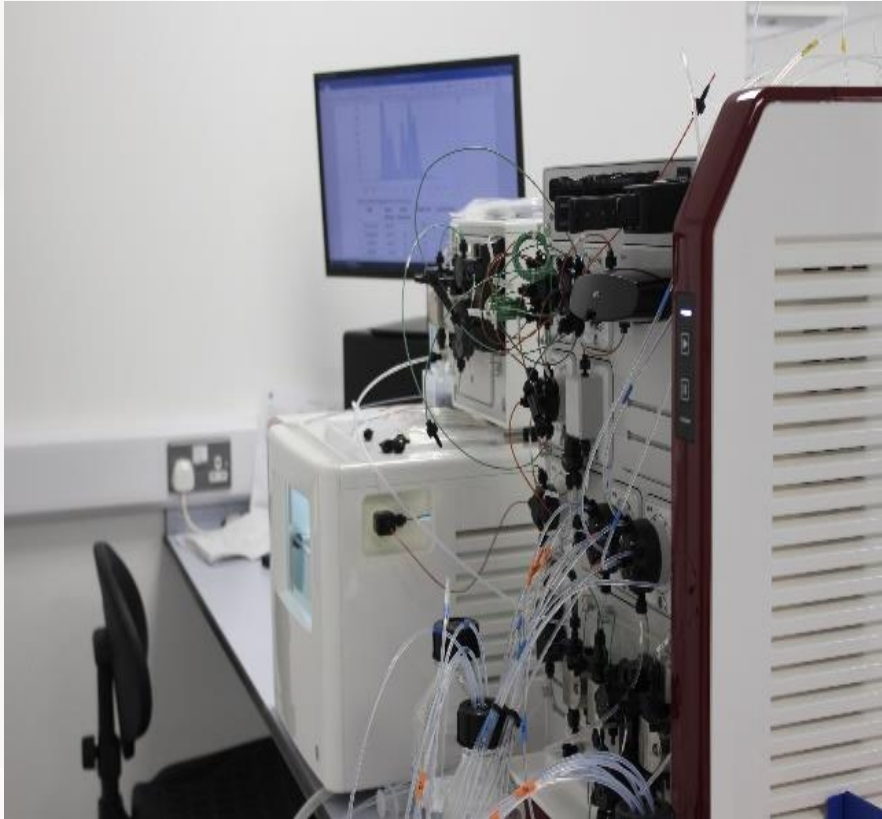
- Initially showcased in December 2018
- Considerable interest from customers
- Expect meaningful revenues in 2019 as it moves to full roll out this year

Discovery



# Expansion of capacity

- Increasing laboratory and office space from 10,000 sq ft to 26,000 sq ft
- Building work completed August 2018 **under** budget



# Strategy for Growth



- Confident that recent order level from existing core services will be sustained in FY2020
- Augmented by new orders from RAMP™ services
- Strengthening the senior management team – new Business Development Director and Marketing Director
- Continue to seek new commercial partnerships, distributors and commercial alliances
- Continue to seek milestone and/or royalty payments in customer contracts where possible

# Financial Summary

| Year ended 31 March | 2017<br>£'000<br>Actual | 2018<br>£'000<br>Actual | 2019<br>£'000<br>Actual |
|---------------------|-------------------------|-------------------------|-------------------------|
| Revenue             | 1,914                   | 2,691                   | 2,181                   |
| Revenue growth      | 29%                     | 41%                     | (19)%                   |
| EBITDA adjusted*    | 288                     | 132                     | (1,077)                 |
|                     |                         |                         |                         |
| Net cash            | 286                     | 4,490                   | 1,984                   |

\* Adjusted to exclude IPO costs in 2017 and 2018

# Year ended 31 March 2019



- Significant increase in orders and revenues in H2 FY 2019
- Full year revenues fell by 19% to £2.2m due to weak H1
- £1.5m revenues in H2 FY 2019 was the Company's strongest-ever 6 month period
- Loss for the year of £1.3m (2018: £0.7m)
- New Rational Affinity Maturation Platform (RAMP™) introduced in December 2018
- Capacity expansion completed
- Business development team expanded and strengthened
- Cash position at the year-end £2.0m (2018: £4.5m)

# Post year end highlights



- Commercial roll out of RAMP™
- New senior recruitment in business development and in marketing
- Mammalian antibody library on track for delivery in 2020





## Thank-you

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