



## **The Nine Lives Of CAT: Putting Phage Display To Work To Build The MedImmune Pipeline**

Jane Osbourn, 20 years of Phage Display,  
6 September 2010

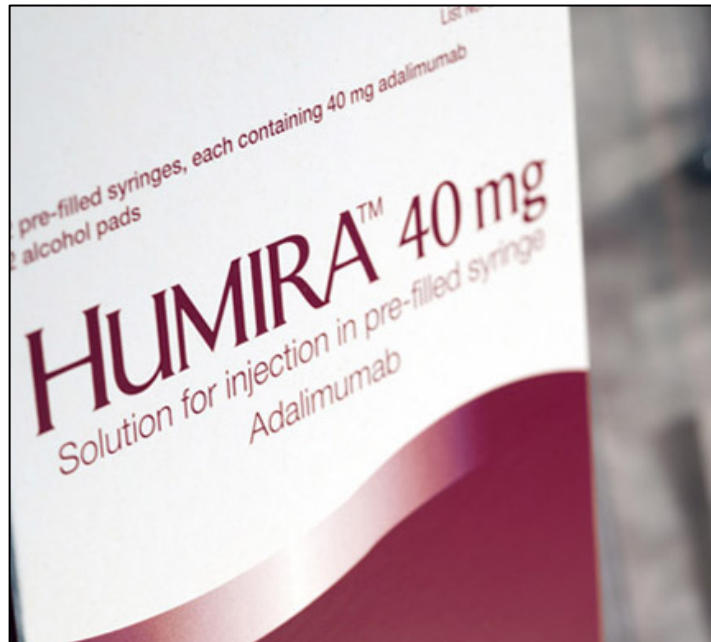
***Advancing Science for Better Health***

# CAT Beginning: 1990



# Now: MedImmune at Granta Park

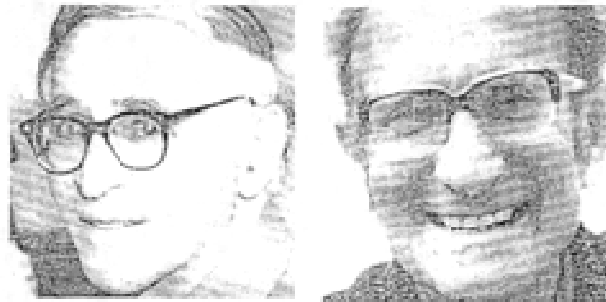




1. Idea <
2. Founding 1990
3. Building the Technology
4. Collaborations and licensing
5. Building the internal product pipeline (1997 IPO)
6. The CAT/AstraZeneca Alliance (2004)
7. AZ Acquisition of CAT (2006)
8. Integration with MedImmune (2007)
9. A global drug discovery and development organisation



## ANTIBODY TEAM GETS TOGETHER



Pioneering advances in medical research ... Dr Cesar Milstein, left, and Sir Aaron Klug.

TWO Cambridge scientists have set up their own company to sell the fruits of their world-leading research.

Cambridge Antibody Technology Ltd (CAT), has already set up shop at Babraham Hall, and started full-time business today.

The company will commercially exploit both recent breakthroughs as the cross-species rat-human antibody, which can kill cancer cells, and the single domain antibody, the so-called "mini-magball."

### Protein

These two discoveries, by Dr Greg Winter and others at the Medical Research Council's Laboratory of Molecular Biology on the Addenbrooke's site, have revolutionised the use of antibodies, the body's natural disease-fighters.

Dr Winter has been appointed chairman of the new company's scientific advisory board, and among the board members are Nobel prize-winners Dr Cesar Milstein, whose invention of monoclonal antibodies made the present work possible.

## Scientists set up firm to sell ideas

Two other members, Dr Terence Robbins and Dr Michael Neuberger, both headed MRC teams which, along with Dr Winter, pioneered a number of molecular engineering techniques leading to a whole new range of antibodies.

The third member of the advisory board is Prof Alan Firth, director of the MRC's Protein Function and Design unit.

The new company, as well as exploiting current developments, aims to market new discoveries for anti-cancer drugs, antiviral agents and for diagnosing disease.

Dr Winter is absent at the moment, but CAT's general manager, Dr David Chowell, said: "It is really ex-

cellent news for Cambridge science. We will be exploiting ideas rather manufacturing, and we hope to do contract work for other companies as well as developing original product ideas and entering into joint ventures."

### Equity

CAT was set up with a modest £250,000 investment from an Australian company, Peptide Technologies of Sydney, and will have 40 per cent of the equity. The remainder will be shared among the staff, consultants and, later, other investors.

The director of the MRC Laboratory of Molecular Biology, Prof Sir Aaron Klug, has a seat on the CAT board.

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MedImmune

# Beech House B1, 1992



Beech House ... letting success at business park.

## Agents sustain letting success

### Long-term ideas for park

MELBOURN Science and Business Park has had a further success with the letting of nearly 4,000 sq ft of space at Beech House to Cambridge Antibody Technology.

The house, which is for five years, is at £10 per sq ft.

CAT and the MRC Laboratory for Molecular Biology recently announced a major breakthrough in being able to make human antibodies using their phage antibody system.

Cambridge Antibody Technology are working with partners in the healthcare industry to create new diagnostic and therapeutic products.

The units at Beech House and the adjacent Ash House are being jointly marketed by Connors Wilton and Partners.

The park, owned by Connors Wilton and Partners, also has long-term development plans, which include a further 10,000 sq ft of space on the park.

The park has on-site catering and conference facilities.

There is also an on-site business centre including a full range of services including law and company offices.

CVT were represented by David T. Ware Associates and Gordon Reed Ltd.

... arrangements at a competitive price.

CVT's chief executive and general manager, Dr David Chivers, said: "Melbourn Science and Business Park was selected as preferred location for science and business parks in and around Cambridge owing to the comprehensive range of facilities just off the A10.

"It will give us easy access to the M10, the M11 and the A10, and the proximity of the M10 and the A10 will ensure that the location will continue to bring us an increasing volume of letting enquiries."

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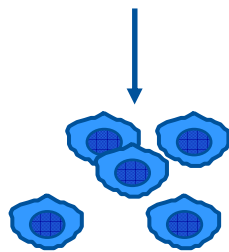
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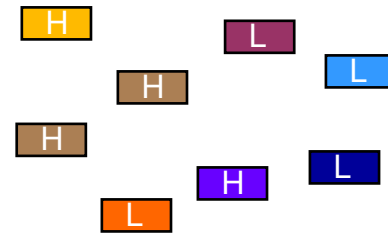
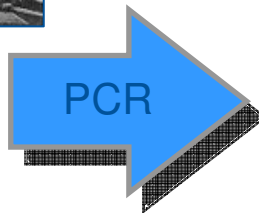
# Antibody Library Construction



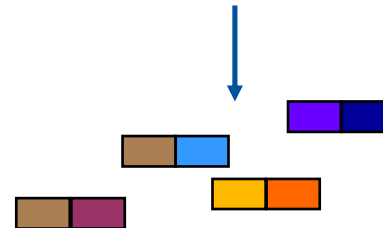
Non-immunised  
Humans, 7-70 yrs



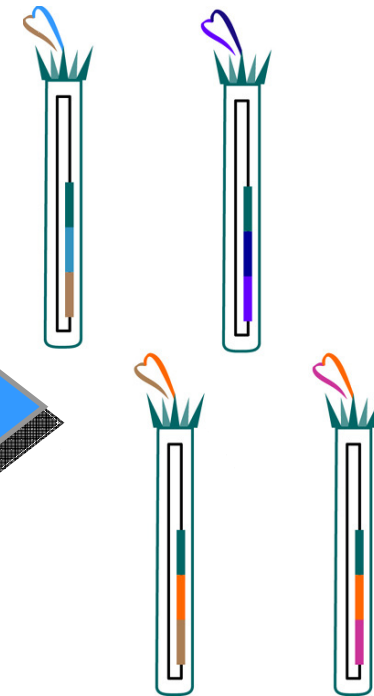
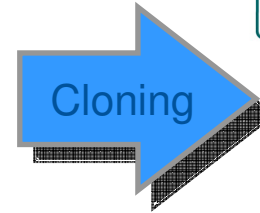
Isolated B cells



PCR amplified  
 $V_H$  and  $V_L$  genes

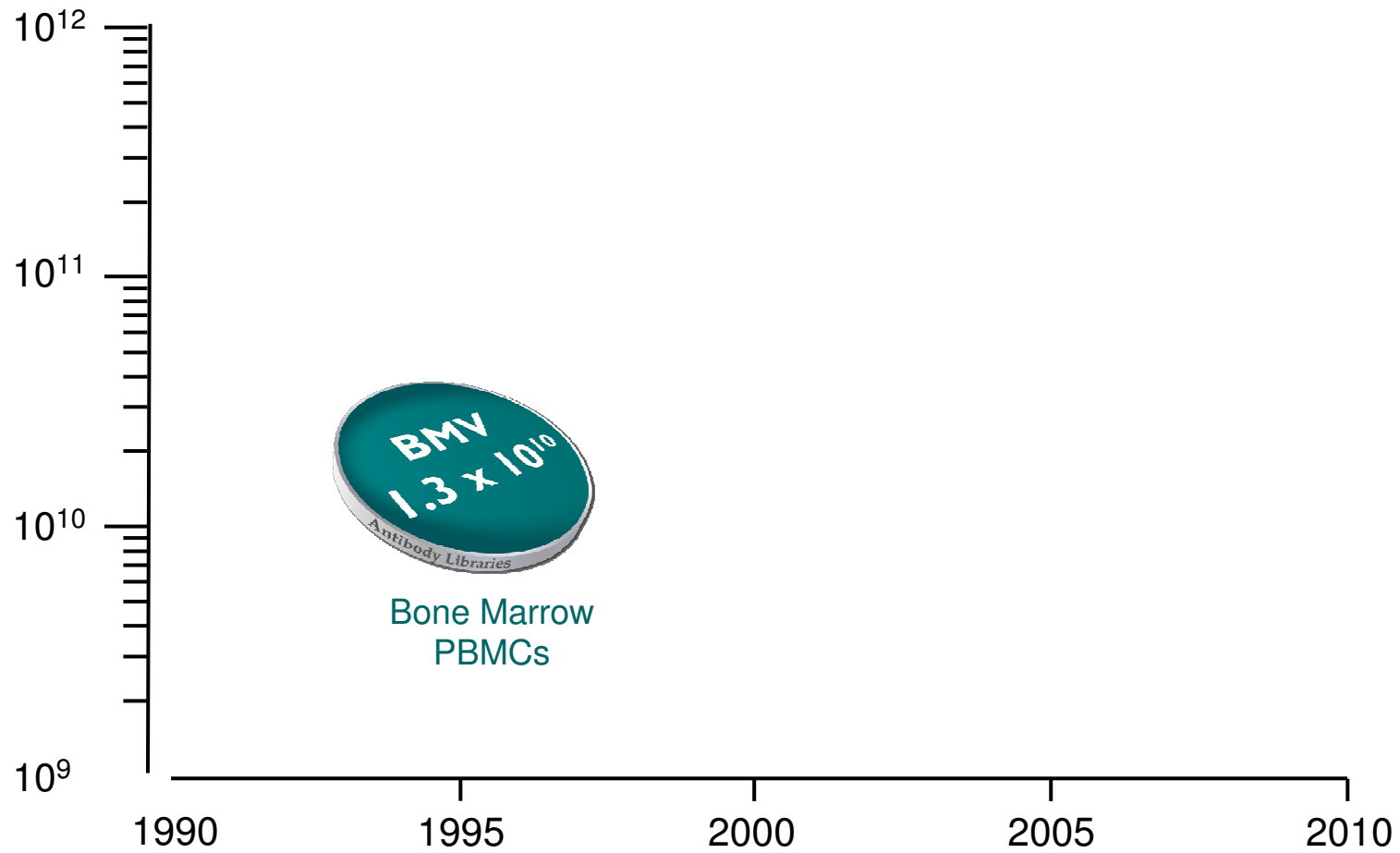


$V_H$  and  $V_L$  genes  
assembled

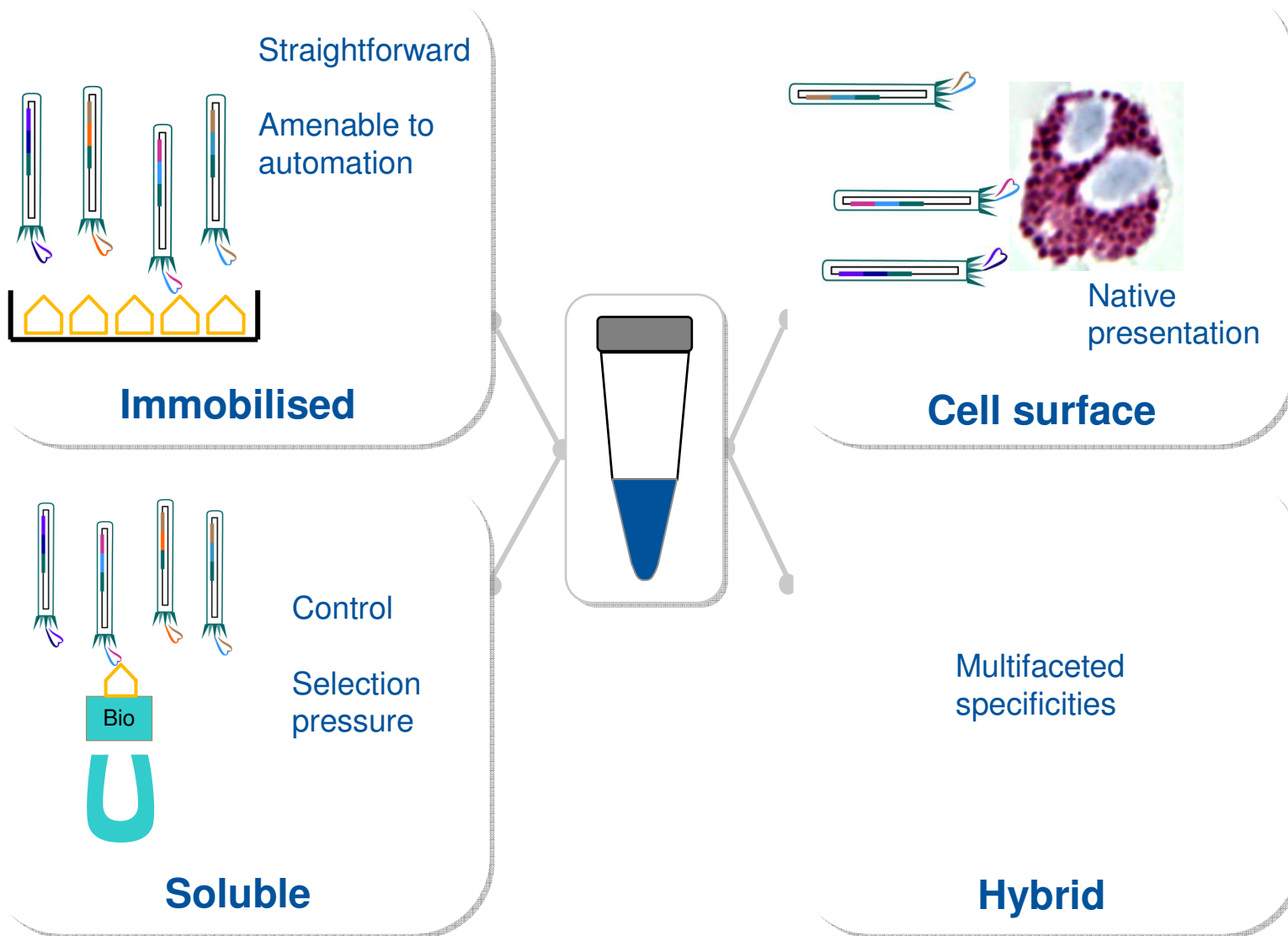


$10^{11}$  Antibody  
Display Libraries

# Evolution Of Our Libraries



# Selection Regimes: Presentation Formats Ensures the Maximum Lead Panel Diversity



# Beech House 1994 First Staff Photo



# The Storming of Beech House



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