

# The Future for the Biotechnology Industry in the UK



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The Foundation for Science and Technology  
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# BIA Background



- Encouraging commercial success of UK bioscience industry
  - Promoting human health benefits of bioscience
  - Supporting member interests through policy development in the UK and EU
  - Providing information, business services, education
- Founded in 1989
- Currently over 350 members and growing
- Offices in London and Edinburgh
- Strong links and cooperation with EuropaBio and industry bodies in the US and Japan

# UK 'Bioscience 2015' Vision



- **Improve National Health**
  - Through improved clinical performance and early access to innovative medicines
- **Improve National Wealth**
  - Enhanced GDP by maintaining and supporting a high growth, high margin, high value added knowledge based industry

# What Type of Bioscience Industry?



## Human Healthcare

- Service Suppliers
  - Amersham (GE Health Care), Qiagen, Cobra, Lonza
- Speciality Pharma
  - Shire
- Innovation led Drug Developer
  - Celltech (UCB), Actelion, Serono, GSK

# Profitable Bioscience



Company	Market Cap (£m) 2004
Amgen	75.5
Genentech	85.0
Chiron	7.1
Medimmune	6.5
Gilead	18.9
Genzyme	15.6
Biogen Idec	12.5
Cephalon	2.3
Millennium	2.44
UCB Celltech	29.4
Actelion	2.8

# Key Drivers



- Research push
- Health Market pull
- Corporate development drivers



# Key Drivers

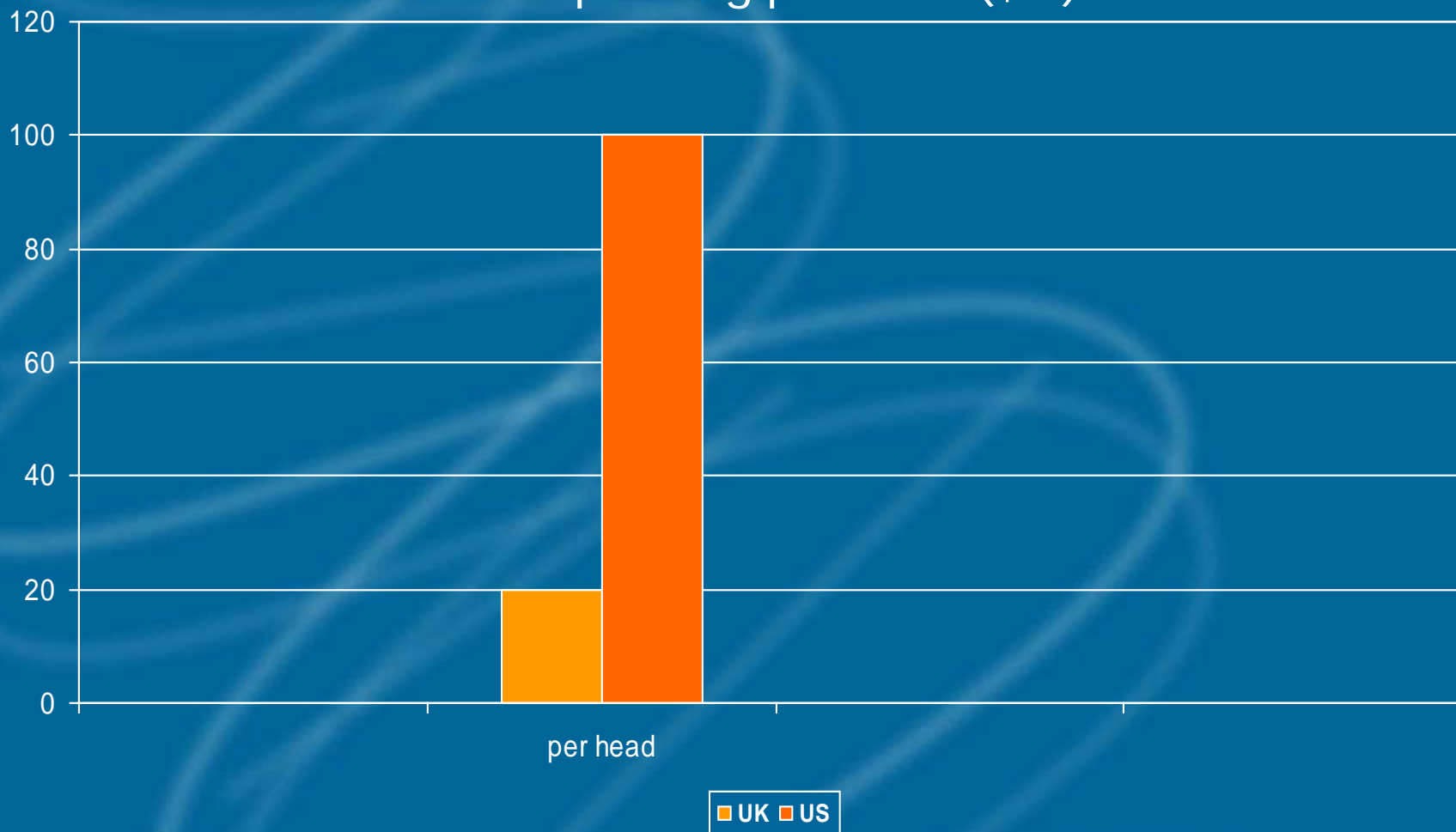


- Research push
- Health Market pull
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# Research Push



Government Research Spending per head (\$m)





# Key Drivers



- Research push
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- Corporate development drivers

# Health Market



- USA
  - One market
  - One regulator
  - Values and pays for innovation
- Europe
  - 26 markets
  - 27 regulators
  - Value and pay for innovation?

# Health Market Regulation



- EU
  - Where is the driver to speed up drug approvals?
  - Do the Lisbon principles mean anything?
    - Technology Transfer Block Exemption
    - European Patent
    - Patient access to new drugs delayed

# Health Market

Delayed Patient access



- Herceptin example

- |                  |                |
|------------------|----------------|
| – FDA approved   | September 1998 |
| – Swiss approved | August 1999    |
| – EU approved    | August 2000    |

# Key Drivers

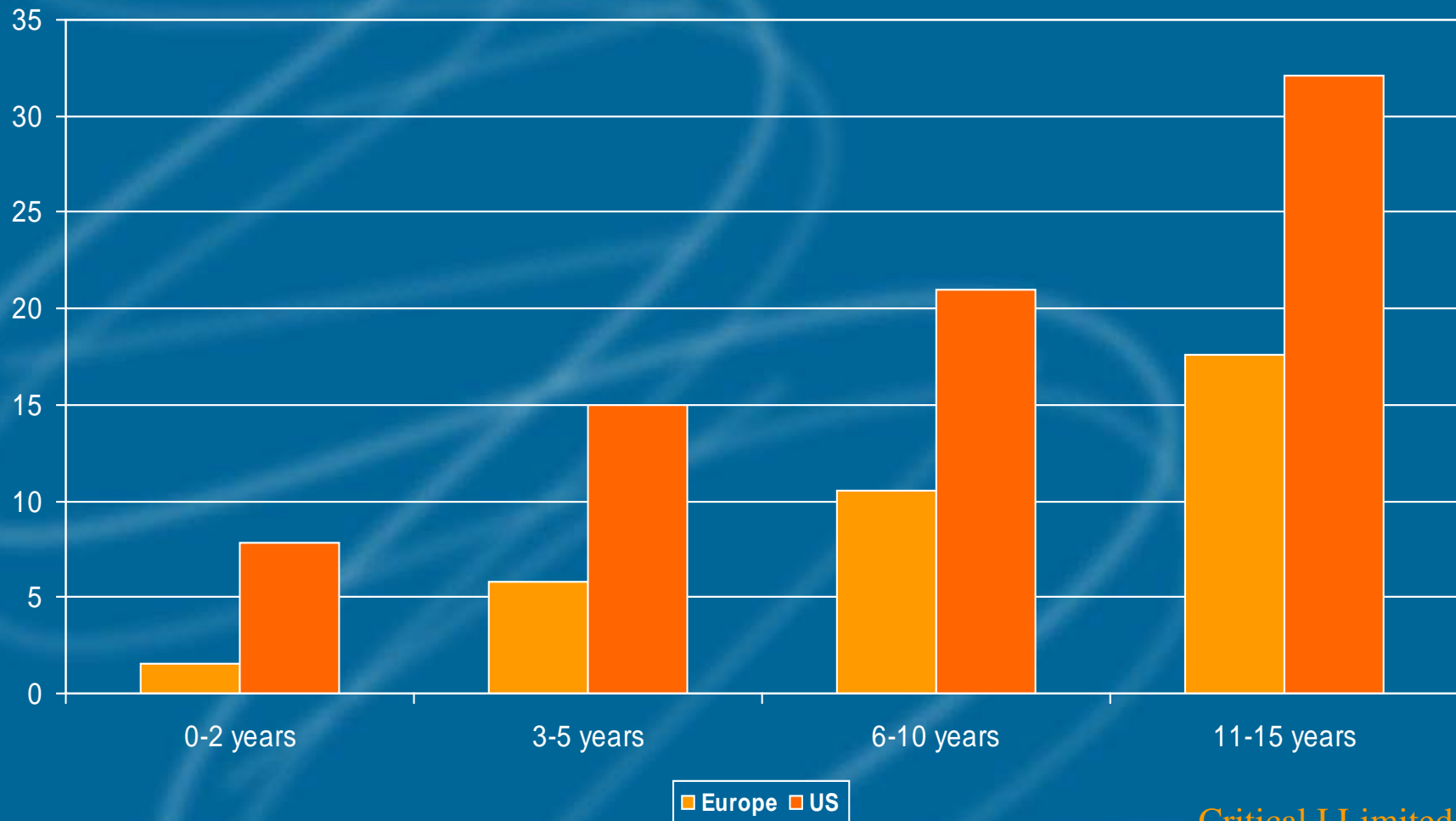


- Research push
- Health Market pull
- Corporate development drivers

# Corporate Development



R&D Spending per company (€m)

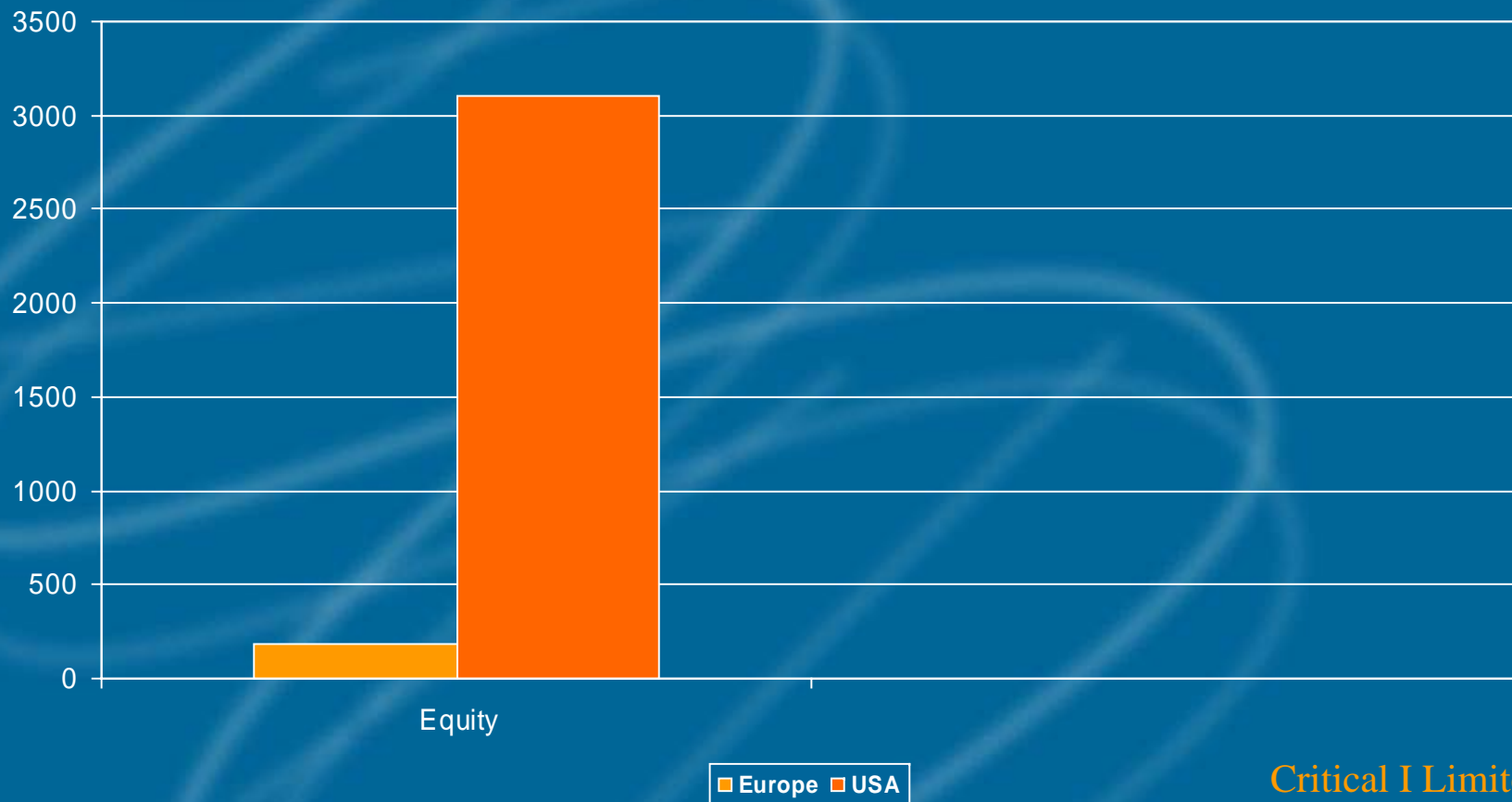




# Corporate development



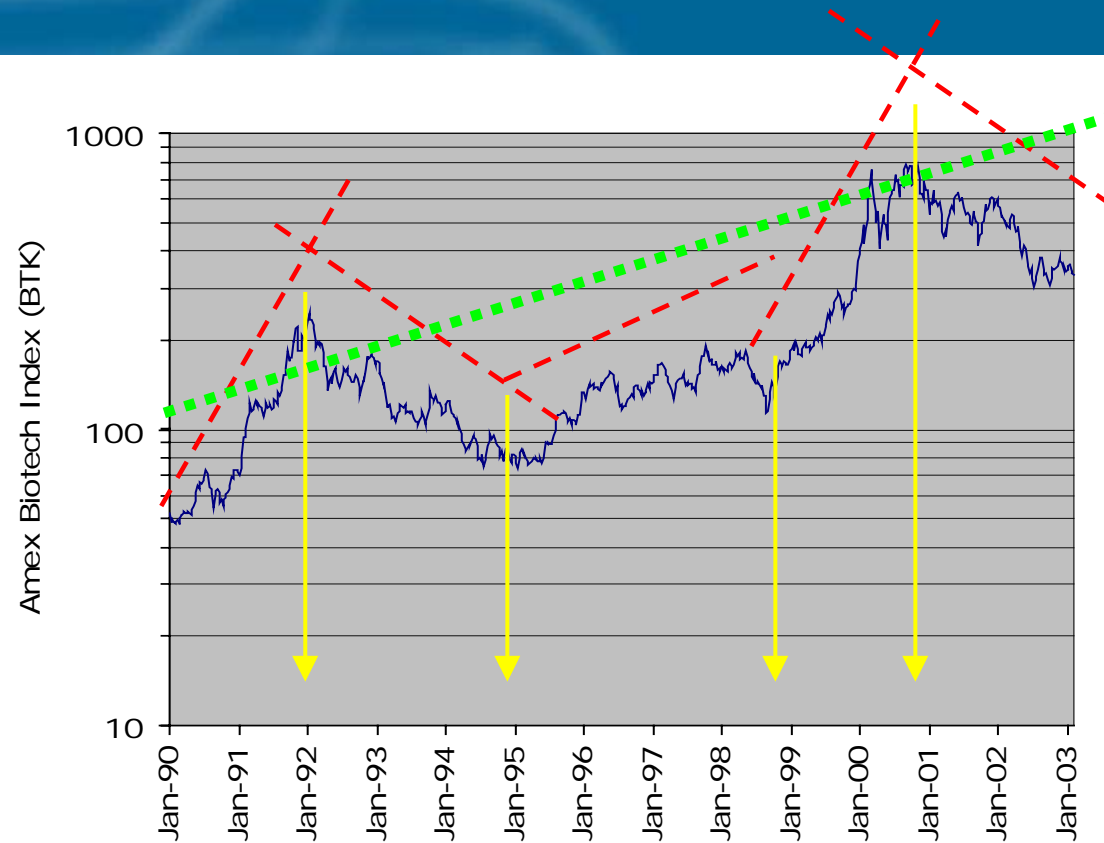
Fundraising by 6-10yr old companies (€m)



Critical I Limited

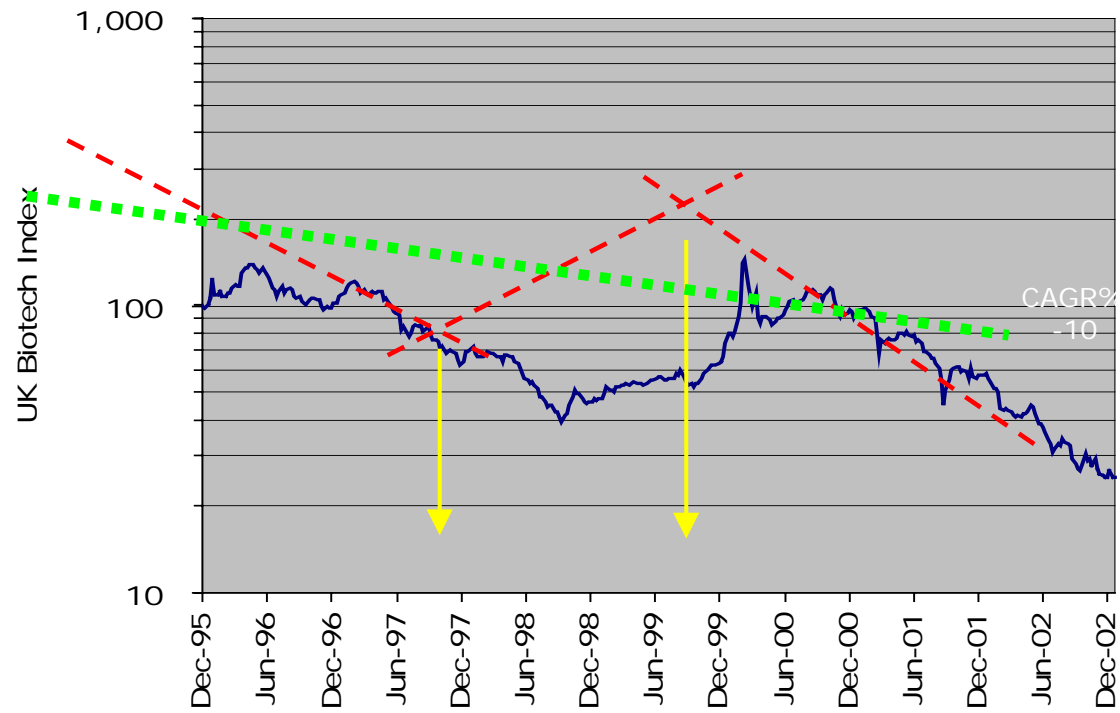
thinking allowed

# USA Valuation Trends



Apax

# EU Valuation Trends



Apax

# USA



- Biggest health market
- Critical mass of established, profitable bioscience companies
- Deep talent pool
- Generous research funding
- Most developed public capital markets
- Will the whole bioscience industry (re-)locate to the US?

# A Way Forward

Public Research push



- Accept USA will stay ahead in gross spending
  - But use to pressure for increased funding
- Build on Europe's tradition of excellence
  - Concentrate on good people and/or good centres
- Raise the status of science as a career
  - Start with the schools
  - Pay researchers well, within a good career structure
    - Industry does but does academia?

# A Way Forward

## Health Market Pull



- Accept that improvements in health have to be paid for
  - Governments, taxpayers and patients
- Build the value of innovation into regulatory debates
  - Innovation can improve national health and national wealth
- Involve the patients
  - Patients on clinical trials have better outcomes
  - Should European patients accept second class status?
- Move more rapidly to a single approval
  - Introduce Europe-wide Fast track approvals for innovative medicines that significantly improve treatment



# A Way Forward

Corporate development Drivers



- Single European exchange for Tech stocks
  - Increase liquidity and expertise
  - Actelion should be positive example for London generalist funds
- Remove impediments to fund raising
  - Structural: Pre-emption rights
  - Cultural: investors to recognise asset value of cash and that good cash positions enhance their returns

# A Way Forward

Corporate development Drivers



- Companies to be more successful
  - Raise the money required and spend it well
  - Educate the markets that substantial funds will be required

# BIA Real Results



- Introduction and extension of R&D tax credit
- Protection from animal extremism through Senior Organised Crime and Police Act
- Ensured Human Tissue Act achieved its aims whilst allowing ground-breaking research to continue
- Successful votes in the European Parliament on Tissues & Cells Directive and stem cell research funding
- Delayed implementation of Clinical Trials Directive for further consideration by MHRA
- Driven forward implementation of 'Bioscience 2015' recommendations
  - £100m (+) for Clinical Research in NHS and the formation of the UK Clinical Research Collaboration "UKCRC"
  - £3m grant to create a Knowledge Transfer Network (KTN) 'bioProcessUK'

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