UK Biobanking Showcase

Research Perspectives

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Innovate UK
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The UK’s Innovation Agency

• A non-departmental public body spun out of the DTI in 2007, sponsored by the Department of Business, Energy & Industrial Strategy

• Remit to grow the UK economy by stimulating innovation in science, technology and business

• Since 2007, the organisation has:
  – invested up to £1.8bn of public money in innovation, drawing on a similar investment from industry and partners
  – Supported ~ 7600 companies
  – Returned up to £13.1bn to the UK economy and created up to 55,000 jobs, translating to over 7 jobs per company we’ve worked with

Five point plan
• Working with the research community and across Government
• Accelerating UK economic growth
• Building on innovation excellence throughout the UK
• Developing Catapults within a national innovation network
• Evolving our funding models

New sector structure
• Emerging & Enabling Technologies
• Health & Life Sciences
• Infrastructure Systems
• Manufacturing & Materials
Precision Medicine Programme

- Launched October 2010
- Aims to realise the potential of stratified medicine in the UK

- Right patients treated
- Right time
- Right therapy

- Improved outcomes
- Fewer complications
- Better use of finite resources

Driven and enabled by

- Better understanding of pathology
- Ability to measure multiple markers faster and cheaper
- Development of more selective therapies
- People’s expectations
- Advances in digital health
- Health economics

This is the natural evolution of existing medical practice when presented with better information.
Precision Medicine Programme

• Key roadmap themes
  – Incentivising adoption
  – Increasing awareness
  – Patient recruitment – consents and ethics
  – Clinical trials
  – Data – collection, management and use
  – Regulation and standards
  – Intellectual property
  – Bio-banks and biomarkers
  – Increasing the impact of R&D investment

• 18 competitions run (including infectious disease platform). Supported 140 projects with an investment of £61.8m and an additional £31.2m from industry
Converging technologies

- Biomarker discovery and validation
- Biosensors
- Novel chemistries
- The omics (proteomics, genomics)
- MEMS (including microfluidics)
- Engineering
- Sequencing technologies
- Nanotechnology
- Advanced materials
- Bioinformatics
- Information and communication technologies
- Data mining and fusion
- Big data
- High value manufacturing
- Social and behavioural science
- Design
Converging technologies

What’s the relevance?
What’s the impact?
Results must lead to a decision
It’s not all about the technology!
Stratified Medicine – public dialogue

• Definition and communication
• Implications for patients and care
• Social issues and consequences
• Research, testing and data sharing
Large requirement for interoperability and linkage
We can’t stop thinking about the future

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