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Technology Transfer Manager

Technology Transfer at The University of Bristol



Today

- The role of Universities in Tech Transfer
- UK drivers for Tech Transfer
- Bristol and its approach to Tech Transfer
- Tech Transfer support at Bristol – case examples
- Peer group partnership – SETsquared
- Conclusion

Classical view of Universities' role

- Creation and publication of basic or core knowledge
- Transfer of knowledge through teaching
 - Graduates as knowledge transfer agents
- Commercialisation a threat to core mission
- Global peer group
- Professional bureaucracies
- “... collections of individuals united by a heating system and the need for car parking” (anonymous VC)

Myths of University Commercialisation

- Universities are a vast untapped source of intellectual property
- Researchers despise the concept of business and wealth generation
- Every time we license a technology we are losing everything
- European Universities are way behind their US counterparts

The University Response – past

- Reactive & defensive
- Limited skilled staff and resources
- IP leakage – publication drivers
 - Patent everything - we can decide what to do later
- Value and wealth ‘leaking away’
 - Industry are ‘enemies’ to be beaten down
 - Spinout companies are best
- Conservative view of risk and liability
- US knows everything, just follow them

UK Government Policy Objectives

- Systematic and sustainable change within institutions in how they relate to business,
- More widespread and rapid transfer to businesses of new ideas, products and processes generated within the research base
- The incorporation of teaching of enterprise into the science and engineering curricula
- Contribution to the economic development of the nation.
- Creation of new knowledge based companies

The University Response – now and future

- Recognition of their role in the knowledge economy
- Market driven licensing
 - Intelligent demand?
- Reduction to Practice/Proof of Concept
 - add value to ‘raw’ IP
- IPR facilitates research collaboration
 - Industry needs security for commercialisation
- Realistic expectations on wealth generation
- Systematic evaluation of knowledge
- Sharing of tech transfer learning

The University of Bristol

- A top 10 research intensive UK University
- 12000 undergraduates
- 5000 staff
- \$400m turnover pa
- SW Region – 5m people one of 9 English regions
- Bristol – major city in the region
- Vibrant economy – HP, Airbus, Rolls Royce, ICT and media

Bristol and its approach to Tech Transfer

- Re-organised in 2000 to build an integrated Division within the University
- Research and Enterprise Development
 - Research Strategy
 - Funding Support
 - Contracts management
 - Business Development & project management
 - IP development & management
 - Exploitation – Licensing & Company creation
 - Entrepreneurship Culture & education
 - Incubation

Tech Transfer Team Services

- IP Support at pre-contract/contract stage
- Awareness of IP and issues to academic community
- Disclosure of invention
- Protection go/no go – based on defined criteria
- Commissioning patent drafting and managing process and costs
- Developing strategy to exploit
- Inventorship and management of revenues

Tech Transfer Team Services cont.

- Exploitation Support
 - Licensing (market driven strategies)
 - Who, how, what, costs and revenues
 - Pre spinout Company support
 - Proof of Concept Funding (eg EDF, Wellcome, BBSRC/EPSRC, Sulis etc)
 - Enterprise Leaders
 - Represent Univ. in negotiations with founders
 - Spinout portfolio management & support
 - ‘Investment Readiness’
 - Investors, management, Co development, training

The Enterprise Leader

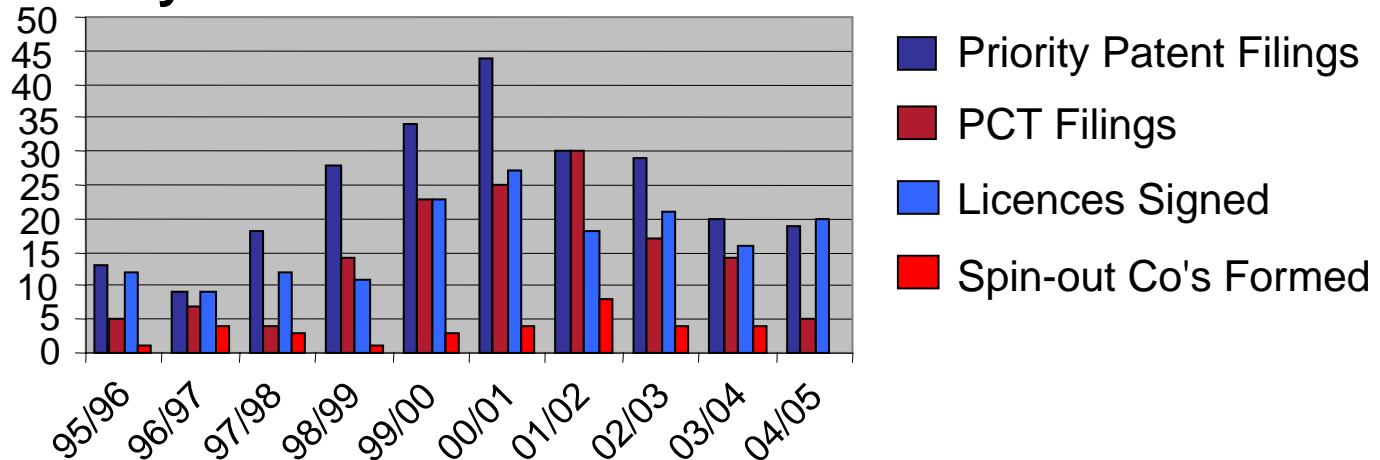
- Championing the culture of entrepreneurship among colleagues and students
- To encourage, recruit and mentor students for the Entrepreneurship Programme
- To maximise the identification and targeting of suitable projects for commercial exploitation
- To work alongside RED to monitor development progress of projects selected for commercialisation
- To build stronger links between scientists and entrepreneurs, finance providers and industrialists who have interests in their particular field.

Deciding on an Exploitation Route – The ‘Stage Gate Process’

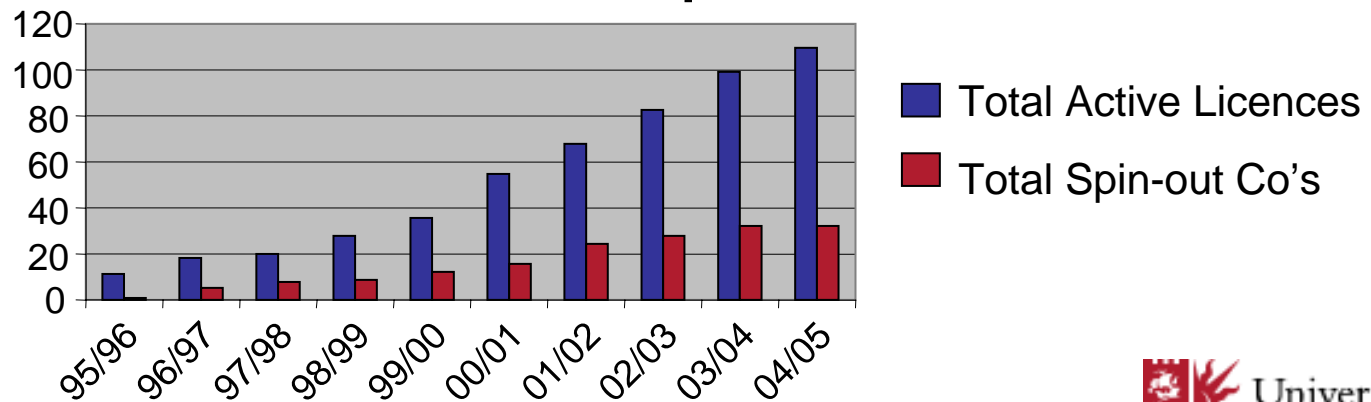
- Peer group review of commercialisation strategy
 - project development milestones (reflect IP strategy)
 - frequently reviewed and refined as technology develops
- Depends on several factors:
 - Type of technology (enabling, therapeutic etc)
 - Development stage of technology
 - Existing market conditions
 - Competition
 - Source of development funding
 - IPR and Patent strategy
 - Inventors

Bristol IP Indicators – Trends in Activity

Key Activities



Total Active Licences/Spin Outs



Case Examples - Licensing

- Exclusive Licence
 - High Risk
 - Long and expensive development
 - Specific target markete.g. Alzheimers/Pain Therapeutic –ReNeuron

- Non-Exclusive Licence
 - Low Risk
 - Quick and cheap development
 - Research toolse.g. VEGF Antibody Production – R&D Systems, Upstate, Abcam

Case Examples – Company Formation

- Spin Out
 - Platform/enabling technology
 - Contract Services
 - Wide market application
 - Current investment trends
 - Driven by strong team of inventor/founderse.g. Aegis Ltd (Hunter Fleming Ltd)
ProXara Ltd
KWS Ltd

Case Examples - Joint Development

- Provides development funding to inventor research group in return for access to technology
- Ideal for early stage technologies not ready for licence

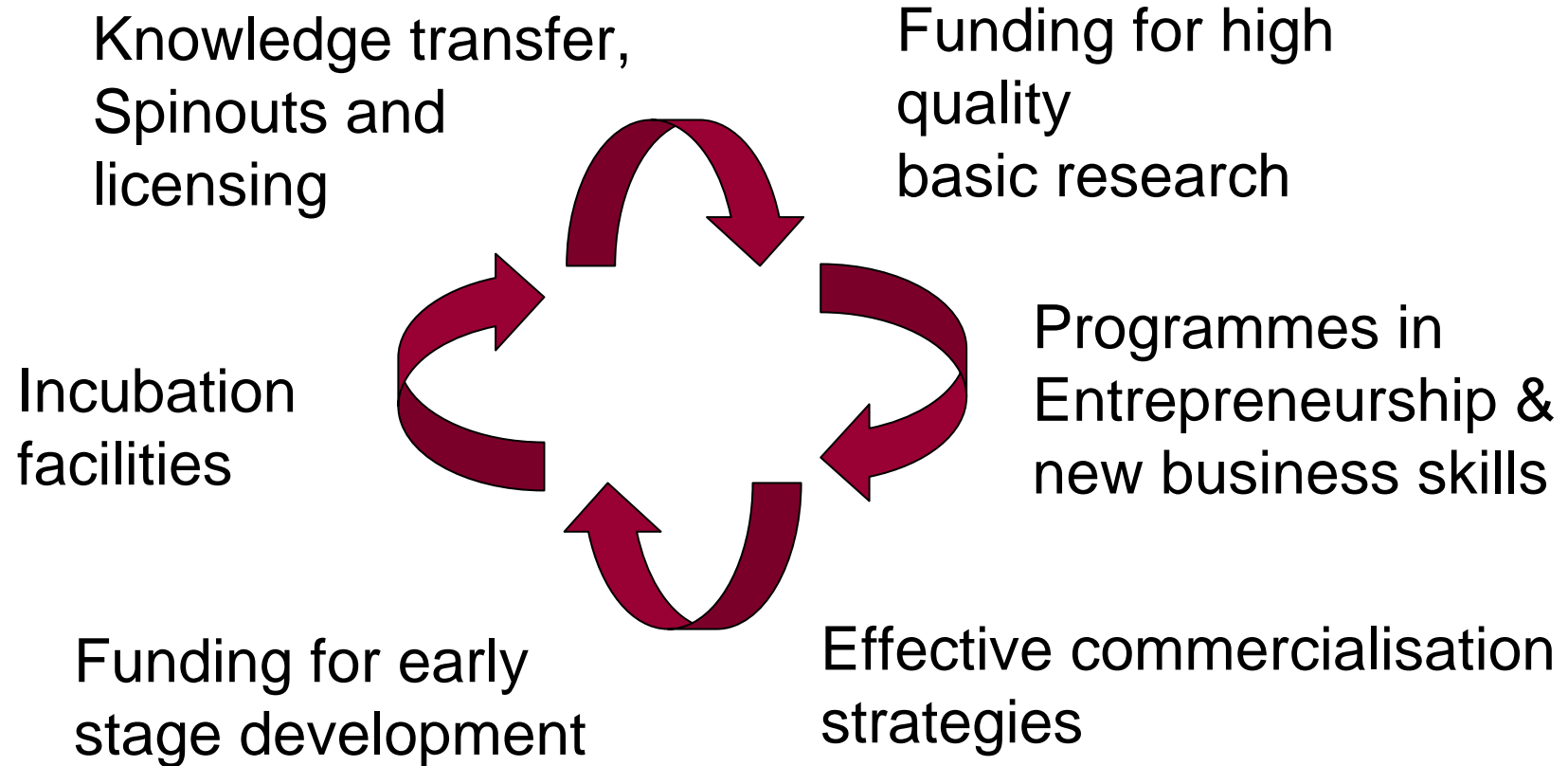
e.g. Novartis (Novel use of existing drug)

SR Pharma (Neuroscience)

Hunter Fleming

GSK (Vaccine)

The Virtuous Circle of Research and Enterprise



The SETsquared Partnership – What..?

- Higher Education Innovation Fund (HEIF)
- A Partnership of four leading research universities maximising their social and economic impact by working together
- Encouraging and supporting successful enterprises across southern England

Transforming university excellence into business success

The SETsquared Partnership – Who..?

- A team of over 100 Knowledge Transfer and Entrepreneurship Education Professionals
- Is the largest single programme for academic knowledge transfer in the UK
 - Ideal exchange of best practice, business contacts and networks
- Has a collective research base of over 6,500 researchers and £250m research income
 - equating to 8% of the UK's university research budget

The SETsquared Partnership – How..?

- Entrepreneurial Education
 - Available to all staff & students
 - 20% students incorporate as part of their studies (more than twice UK average)
- Developing New Business
 - 3 companies achieved IPO, total market cap £170 million
 - Average time to market less than 2 years
- Supporting Existing Business
 - Providing research collaborations, consultancy, networks of business directors and mentors

At The University of Bristol:-



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