A Sticky Business: Who funds Science Research?

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Who Funds Research?

Many of you will be familiar with the idea of scientific research in the lab.
Who Funds Research?

But how many of you have stopped to consider who funds that research?

Aim: To cure cancer

Idea: Design a new drug

Test the idea in the lab
- Chemicals
- Equipment e.g. microscope
- Safety equipment
- Heating, lighting, security
- Staff salaries
Who Funds Research?

- Research councils (e.g. MRC)
- Private funders (e.g. Wellcome Trust)
- Charities (e.g. CRUK and BHF)
- Foundations (e.g. the Gates Foundation)
What about company funding?

Business Development Team exists to help academics:

- talk to companies
- negotiate with companies
- secure funding from companies

https://www.qmul.ac.uk/research/collaborate-with-us/
Why is industry funding important?

Most early stage research fails to make it to patients. Industry funding for university research helps to bridge the ‘valley of death’
Who owns discoveries?

• Intellectual property = ideas, know-how, patents, inventions
• Who owns the discoveries depends on:
  - intellectual contribution
  - financial contribution
  - existing IP brought to the collaboration
  - previous contracts

• Technology Transfer professionals deal with IP, patents and spin-out companies
What is a Knowledge Transfer Partnership (KTP)?

KTP = three way partnership for the transfer of knowledge from a University to a Company
What is a Knowledge Transfer Partnership (KTP)?

Company has problem it can't solve
What is a Knowledge Transfer Partnership (KTP)?

Company engages with a university
What is a Knowledge Transfer Partnership (KTP)?

University knowledge allows Company to overcome problem and achieve greater prosperity.
Sugru is a mouldable glue used to stick anything to anything; to fix things that would otherwise be thrown away.

**Obstacle:** To enter new markets Sugru needed to develop its product, but didn't know how

**Solution:** Work with QMUL chemists to learn about flexible-linker chemistry

**Realisation:** KTP with QMUL

**Benefits for company:** New, improved Sugru is now usable in toys and factory processes

**Benefits for university:** - two academic papers  
- won a Future Innovator Award  
- new IP generated

'Fix, improve and reimagine the things we already have. If we double the life of our stuff, we halve what goes to landfill'.
KTP Case Study  

Lucideon is a materials development company, working in medical ceramics & healthcare.

**Obstacle:** High outsourcing fees for cell/ceramic testing

**Potential solution:** develop in-house cell culture facility

**Realisation:** KTP with QMUL

**Benefits for company:** Company can do its own cell testing indefinitely, saving money and facilitating innovation

**Benefits for university:** - long-term relationship with company  
- papers & case studies  
- new IP generation
My Journey

2005
- Degree, Biochemistry

2007
- PhD, C&M Physiology
- 2 years UK, 2 years Japan

2009
- Post-doc

2010
- Research Study Coordinator

2014
- Outside of work

2016
- Business Development Manager

2021
- MBA
- Research Ethics Committee

Study / work
Wrap-up

• The importance of funding for making research happen
• Sources of funding - Research Councils, Charities etc
• Company funding for translation of research
• Intellectual Property
• Knowledge Exchange/Transfer
• Alternative careers in science & innovation:
  - PhD & post-doc (laboratory scientist)
  - Research study coordinator (patient consent, sample & data management, ethics & regulatory)
  - Business Development & Partnerships (connecting academics to companies, research funding, contracts)
  - Technology Transfer (university intellectual property & licensing)
  - KTP Associate (similar to a post-doc but based at a company)
  - Research policy or grants (work for university or research funder)