The significance of academia-industry interaction in translational research: a survey of over 200 UK PIs receiving industry funding.

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Introduction

- The first gene therapy was administered to a human patient over 25 years ago.
- Relevant clinical success in several diseases and the approval of Glybera (UniQure) in 2012 have heralded a new wave of investment from the private sector, and the formation of several high profile academia-industry collaborations.
- As the frequency of such interactions increase, understanding the role of industry in the development of academic discoveries is increasingly important.
- The University of Oxford received more than 20% of total industry funding awarded to all UK universities between 2008-13, more than any other UK university.

Aim: To understand the characteristics of academia-industry interaction at the University of Oxford, in terms of the type of interaction, phase of clinical development, and key barriers to collaboration.

Methods

- A survey instrument to assess the experiences of these PIs was designed, validated and piloted, encompassing both closed and open-ended questions.
- A list of PIs who have received industry funding in translational medicine was compiled from data submitted to the Higher Education Statistics Agency (HESA) and assessed for inclusion criteria.
- This crucial case study provides an insight into the nature of academia-industry interaction at the University of Oxford.

Results

- 86% of respondents agree that universities should strive to increase and encourage collaboration with industry.
- 80% of respondents have a professorial title, 37% hold both MD and PhDs, and 75% were male.
- Recent clinical success in several diseases and the approval of Glybera (UniQure) in 2012 have heralded a new wave of investment from the private sector.
- The key barriers that identified concern mismatches in the expected timing of both groups (i.e. short term industry focus and long contracting processes). Interviews indicate that these issues can be encountered together, i.e. a short window of interest from industry is further complicated by lengthy contracting processes, although further work is needed to identify links between barriers.
- The high incidence of consulting as a proportion of total industry income indicates that it may be a ‘gateway’ activity that leads to further industry funding. This may be because academics who have an influence into the culture and practice of industry, in addition to forming the contacts required for future collaboration.
- Most academic funded industry research is at the T2 stage of development. This is surprising, because the potential return on investment for this type of research is many years away.
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Discussion

- This crucial case study provides an insight into the nature of academia-industry interaction at the University of Oxford.
- The key barriers that identified concern mismatches in the expected timing of both groups (i.e. short term industry focus and long contracting processes). Interviews indicate that these issues can be encountered together, i.e. a short window of interest from industry is further complicated by lengthy contracting processes, although further work is needed to identify links between barriers.
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Future Plans

- Conduct semi-structured interviews with academics and industrialists in gene therapy to identify key themes.
- Identify how developed academic work needs to be to warrant industry interest and investment.
- Explore how investment from industry impacts the development of a novel field.
- Devise strategies and test strategies to improve collaboration in novel technologies or disease areas.

Conclusions

- Short-term industry research and extended contracting processes were the most significant barriers to collaboration.
- The majority (9%) of PIs receive some funding for pre-clinical or early phase clinical research.
- There are fewer instances of industry funding in later phases of translation, and very few PIs received all of their industry funding for research in these phases – only 4% of PIs received 100% funding for T3, T4 and T5 combined.

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References

- Available online with registration at https://heidi.hesa.ac.uk/