## Online annex B: Academia-industry mobility schemes

There are a number of UK-wide schemes that exist to promote mobility between industry and academia. Tables 1 and 2 are not exhaustive lists, but are intended to highlight a flavour of the schemes provided by UK funders.

**Table 1: Examples of industry–academia mobility grants available from major funders, Research Councils, UK national academies and learned societies**

| Organisation | Name of grant | Aims/remit | Length | Maximum award | Number awarded |
|---|---|---|---|---|---|
| Biotechnology and Biological Sciences Research Council | Industrial Partnership Awards | Academic-led, responsive mode grants that have significant industrial involvement.<br>*Note: A recent evaluation of the scheme recommended that the BBSRC should consider how to adapt it to address any barriers which limit participation by SMEs and other under-represented industry.* | | Industry partners contribute cash at least equivalent to 10% of the full project costs. | 128 projects have been funded since the scheme's inception in 2001. |
| | Knowledge Transfer Partnerships (KTP) | KTPs serve as a mechanism to transfer knowledge and to develop graduate and postgraduate personnel for industrial careers.<br><br>Each partnership employs one or more high-calibre KTP Associates (early career researchers) to work on an innovative project within industry. Associates are jointly supervised by the participating industrial and academic partners. | Between one and three years. | Innovate UK part funds the cost of the project. Annual costs of a KTP average about £60,000. A small or medium-sized business (SME) will contribute around a third of total project costs – or £20,000 on average. A larger company is responsible for about half of total project costs – or £30,000 on average. | In 2011/12, for every £1 million of government money invested in KTPs, 30 new jobs were created and 279 company staff were trained. |
| Cancer Research UK | Biotherapeutic Drug Discovery Project Awards | For early career researchers and established independent researchers, both clinical and non-clinical.<br>*Note: Successful applicants have the opportunity to access the CRUK-MedImmune Alliance Laboratory (CMAL). CMAL provides access to MedImmune's proprietary phage display library.* | Typically 12–36 months. | £100,000 per annum. | |
| Encompass (collaboration between the Universities of Glasgow, Strathclyde, Aberdeen and Stirling) | First Step Awards | Financial support for small projects between the university and Scottish SMEs. The funding is used to buy out academic time spent on the project. SME partners can contribute in kind. | | £5,000 per project. | |

| | | | | | |
|---|---|---|---|---|---|
| Medical Research Council | Industrial CASE studentships | Provide students with experience of collaborative research with a non-academic partner. From 2016, the MRC will allow the recruitment of clinicians to undertake CASE studentships. | Three to four years. | | 30–35/year. Receives 120 applications /year. |
| | Proximity to Discovery: Industry Engagement Fund | The MRC will give £3 million to support universities to help develop new collaborations with industry. Allows two-way short-term knowledge and people exchange. Intentionally broad to encourage applications from all career stages. Applications do not need to specifically address a translational aim. Can be used for projects that would enhance academic understanding of industry or vice versa. | Eighteen months. | Up to £250,000. | 17 awards made in two rounds since the scheme started in 2014. |
| | Confidence in Concept | Institutions to be used flexibly to support the earliest stages of multiple translational research projects before seeking more substantive funding. | | Annual awards of between £250,000 and £1.2 million. | 22 awards made since 2012. |
| Royal Academy of Engineering | Industrial Fellowships | Early-mid career academics to undertake a project in industry. | Six months full-time or 12 months part-time. | £30,000 towards salary costs. | ~8-10/year. |
| | Enterprise Fellowships | Engineering academics (PhD and above) to develop a spin-out business around their technological idea. | Twelve months full-time. | £35,000 salary support for a year. Additional £25,000 for development of the innovation. | ~8/year. |
| | Visiting Professors | Senior industry practitioners to deliver face-to-face teaching and mentoring at a host university. | Three years (one day/month commitment). | £10,000 per year over three years. | ~20/year. |
| | Sainsbury Management Fellowships | Professional engineers to attend a full-time MBA programme at one of 14 major international business schools. | Twelve months full-time. | £30,000 to cover tuition fees. | ~10/year. |
| | Visiting Teaching Engineers | Industrial engineers or technicians to deliver face-to-face teaching and mentoring at a host college. | One year (with 10 days commitment from the technician). | £2,500 award to the college. | |
| The Royal Society of Edinburgh | Enterprise Fellowships | Academic and research staff, postdoctoral researchers, postgraduates and graduates with relevant experience to develop and launch innovative enterprises in Scottish or UK bioscience (depending on the funder). | Twelve months full-time. | £37,000 salary support for a year plus NI and pension costs. Additional £10,000 for development of the innovation. | ~8/year. |
| Wellcome | Pathfinder Awards | Awards fund discrete projects from applicants in the UK and Republic of Ireland. Partnerships between academia and industry based anywhere in the world. | Up to 18 months. | £100,000–£350,000. Costs can include staff and research expenses. Lead applicant salary not offered. | Demand was originally around five to ten applications per round with two |

| | | | | |
|---|---|---|---|---|
| | | The majority of applicants are non-clinical researchers.<br>*Note: The eligibility was originally just for partnerships between academia and industry in low- and middle-income countries but it was broadened to include high-income countries and individual awards in the UK. The original criteria led to a very low number of applications, and so were widened to increase the impact of the scheme.* | | rounds a year. Since the criteria were changed demand has been increasing by 25% per round with 104 in the most recent round. |
| | Interdisciplinary Training Programme for Clinicians in Translational Medicine and Therapeutics (TMAT) | Initiated in 2009, this was a one-off five year £11 million initiative by Wellcome to promote clinical pharmacology and collaboration with industry. It attracted clinically active candidates at several levels of seniority, ranging from MB PhD students to clinical lecturers. This scheme has now closed. | Each institution received £2.75 million. | Four institutions. |

Table 2: Examples of mobility grants and partnerships supporting mobility driven by industry (big pharma and small biotech)

| Organisation | Name of programme/partnership | Remit/notes |
|---|---|---|
| Astex Pharmaceuticals | Sustaining Innovation Postdoctoral Fellowships | Postdoc training programme for structural biologists/chemists/biophysics/bioinformaticians. They offer participation in collaborations with world-leading academic groups and use fragment-based drug design for drug discovery. |
| AstraZeneca | GLAZgo Discovery Centre | A collaborative project between AstraZeneca and the University of Glasgow which has established this centre within the university's Institute of Infection, Immunity and Inflammation. Investment through the centre supports 10 staff and PhD students. Furthermore, a two-way secondment programme has been initiated between the university and AstraZeneca. |
| Evotec | Yale/Open innovation | Open innovation alliance between Evotec and Yale University. They have defined a wide range of scientific fields where they jointly assess and potentially pursue novel assays, screens and models but in particular exploratory drug targets and compounds. |
| GSK | Discovery Partnerships with Academia (DPAc) | Academics come to GSK with a concept for a potential medicine based on their research. The GSK panel judges the proposal. If successful, GSK collaborates to explore the concept and provides GSK resources/equipment to accelerate drug discovery. |
| | Crick-GSK Biomedical LinkLabs | A collaboration was established in 2015 between The Francis Crick Institute and GSK. A key focus of the collaboration is the development of both Crick and GSK scientists. They work side by side on projects, with scientists based at either location to take the project forward, enabling effective knowledge development and shared understanding. Leading scientists from GSK second into the LinkLab for 12–18 months, allowing them to immerse themselves in a new environment at the Crick and work in different areas of science. |
| | Immunology Catalyst postdoctoral training programme | GSK selects leading academic immunologists to join their R&D facility in Stevenage, UK, where they work alongside GSK's scientists while pursuing their own independent research programmes focused on basic immunology questions. |
| | R&D postdoctoral global training programme | Training aims to prepare postdocs for a career in academia, industry, a regulatory or non-profit healthcare organisation. |
| | Stevenage Bioscience Catalyst | Joint venture between the Department for Business, Innovation and Skills, GSK, Wellcome and Innovate UK. Their open innovation campus offers access to equipment and facilities that would otherwise be beyond the reach of SMEs. |
| | University of Cambridge collaboration | In 2015, AstraZeneca and the University of Cambridge announced three new joint schemes to support more than 80 PhD scholarships and eight clinical lectureships over the next five years spanning translational science, basic and clinical research. Students will be appointed by the University of Cambridge and will be supported by an academic supervisor from the university and an industrial supervisor from AstraZeneca or MedImmune. |
| Heptares | ORBIT | ORBIT (Opportunities in Receptor Biology for Industrial Translation) was set up in January 2016 to fund collaborations with academia. Heptares is committing up to £5 million over the next three years to fund this new initiative. The first collaboration is with academics at Imperial College London's National Heart and Lung Institute (NHLI). |