

EUROPEAN SCIENCE AND BREXIT

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Three priorities for Brexit negotiations

1. Mobility of researchers
 - Collaborations and multinational consortia
2. Funding and participation in Horizon Europe
3. Regulation – especially for clinical trials and rare disease research and medicines

Mobility (1)

- **International Collaboration**
- Developing networks: Meetings at conferences and events a factor in 62% of scientific collaborations:
 - *1981 - 5% of UK research publications had overseas authors*
 - *Now - almost 50%*
- Research impact of these collaborative publications
 - *~ 50% > than output from UK/EU researchers alone*
- 2016/17: 17% of academic staff at UK HEI's were non-UK EU nationals
- The World's workforce is rebalancing – China produces more STEM graduates than any other country

Mobility (2)

- 31% of UK Nobel Prizes in Physiology or Medicine, Chemistry and Physics were awarded to people not born in the UK
- 2007-2013: EU supported > 3,000 UK researchers at other centres in the EU. Currently - 1,159 British researchers in German higher education facilities and > 1,000 at research institutions
- Nearly 60% of research students in the UK are non-UK nationals
- The UK is an important training destination for EU nationals:
 - *It is the top destination for MSCA (Marie Curie) fellowships*
 - *It hosts 22% of ERC grant holders*
- 5 UK institutions are among the top 10 receiving fellows under FP7 (2007-2013)

Mobility (3)

Quote: *“The UK is attractive for young people from Germany to move to and get research experience. It is a good training ground for young researchers, with universities of great visibility and reputation”.*

Professor Detlev Ganten,
German National Academy of Sciences Leopoldina;
President, World Health Summit
Charité – Universitätsmedizin Berlin

Mobility: Position of the BNA, Royal Society and Academy of Medical Sciences



- International mobility is mutually beneficial for medical research and the sharing of expertise, ideas and perspectives. EU citizens should feel welcome in the UK, allowing individuals, teams and institutions to plan ahead
- Following the UK's departure from the EU we call for continued close association with European research and innovation programmes to retain the widest range of funding sources for collaborative research
- It is essential that both the UK and EU immigration systems facilitate short-term visits/conferences/collaboration/ exchanges and enable both the UK and EU to attract and retain talented scientists, and enable easy movement of students

Funding (1)

- The UK is an attractive research hub for EU science:
- FP7 and Horizon 2020 (to March 2017): 2,300 UK participants in > 1,000 health-related projects, value €1.2 billion (18% of research funding in health programmes)
- The European Commission reports: for every €1 from FP7 the direct and indirect economic effects produce €11
- Between 2007 and March 2017, a total of 351 UK coordinated projects have delivered €110 million of EU research funding for the UK but also secured €366 million of funding for partners in EU27 countries
- The Wellcome Trust (a UK charity) has funded non-UK EU science £89 million 2010-2017, including 865 research fellows

Funding (2) Innovative Medicines Initiative (IMI)

- This is the largest public private partnership in the life sciences aimed at improving the drug development pathway. Current budget is €3.276 billion of which 50% contributed by the European Commission through Horizon 2020
- Since 2007: UK received 28% of total IMI funding – both UK academic institutions and SME's receive the highest levels of IMI funding in the EU
- IMI's electronic data initiative (EMIP) consolidates EU wide metadata. Simon Lovestone (Oxford, UK) states "*saved a decade of work in our studies on Alzheimer's disease*"

Position of The BNA, Royal Society and Academy of Medical Sciences



We welcome the UK Government's desire for an “*ambitious*” future relationship with EU research and innovation. We note negotiation to secure association to Horizon Europe will be separate from the Article 50, Brexit negotiations.

Comments:

Carlos Moedas, EU Commissioner for Research:

“It is very important for the UK and it is very important for the EU to have a relationship in science and innovation. We have had this relationship for so long, so many of our scientists live in the UK and so many of the UK scientists live in the EU, that we really want this to work”

Donald Tusk, President of the European Council:

“We invite the UK to participate in EU programmes in the fields of research and innovation, as well as in education and culture. This is key to maintain mutually beneficial and enriching personal networks in these vital areas, and for our community of values to prosper also in the future”

Regulation (1) - Research and innovation

The EU and UK need to share regulatory approaches related to our common values in data privacy, animal welfare and consumer protection. Specific to this science perspective: the new EU Clinical Trials Regulation (CTR) was passed in 2014 and is expected to take effect in 2019 (after UK exit)

- 2 in 5 UK clinical trials are run in association with other EU centres
- UK participates in the highest number of pan-EU trials for rare diseases and childhood diseases of any member state
- UK ranks in top four for clinical trials in mental health, cancer, cardiovascular disease and musculoskeletal disorder
- From 2008-2016, the UK MHRA was appointed as Scientific Advice Co-ordinator by the EMA on 20% of centralised medicine approval procedures, and provided data to 50% of all decentralised medicine approval procedures

Regulation (2) - devices and isotopes

- EU regulation on medical devices and on *in-vitro* diagnostic medical devices will fully apply in 2020 and 2022 respectively
- Euratom facilitates supply of radioisotopes for medical imaging, cancer treatment, palliative care and radiation research

Position of The BNA, Royal Society and Academy of Medical Sciences

- Post Brexit the regulatory framework linking the UK and EU should ensure continued alignment of UK and EU regulations across clinical research and clinical trials
- CTR harmonisation and access to EU clinical trials portal should be prioritised
- Close regulatory alignment for medicines approval will be mutually beneficial for patients across Europe – including post-marketing efficiency and pharmacovigilance studies through the EU EudraVigilance database
- Associate membership of the EMA would be very beneficial
- Harmonisation of regulation on medical devices should be prioritised
- Formal agreement with Euratom (as Switzerland) should be prioritised

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