## Brexit: a view from the BSI

On the 23<sup>rd</sup> of June the British public voted to leave the European Union. The result was narrow but conclusive: 52% voted to leave, but 48% to stay. Those wishing to remain tended to be younger, better educated and to live in prosperous cities such as London, or in Scotland.

The campaign was criticised for an abundance of misleading 'factoids', a rejection of reliable and authoritative data and avuncular (and often witty) rejection of rational argument and careful analysis. The outcome surprised many, even some of those who voted for it. The reaction of the scientific community was generally of shock, horror and incomprehension.

Those with an eye on political history were not so surprised. To quote a Conservative minister: "It is sad that an organisation which began with such high hopes, and to which this country has contributed so much in the past, should have gone so wrong". That was 1985 and Prime Minister Margaret Thatcher's minister for overseas development, Timothy Raison, was referring to the UK's decision to withdraw from the UN Educational, Scientific and Cultural Organisation (UNESCO). Britain re-joined UNESCO in 1997. Perhaps the EU will be a very different organisation in ten years' time, and perhaps we will not have completely left it.

The new Prime Minister, Theresa May, has been clear that "Brexit means Brexit". But what exactly does "Brexit" mean for members of the BSI? Does it really mean tearing down every agreement that has been made since we joined the EU in 1973? Does it mean that we cease to work with our European friends and colleagues? Surely the answer to both these questions must be 'no'. However, it is certainly true that for now that vote blights our ability to lead applications for European grant funding but how it will affect participation in collaborative consortia remains unclear. For now, we are still very much part of Europe and we remain Europeans.

Key issues are money, commerce and mobility. The UK has been very successful in attracting EU science funding and it seems highly improbable that the UK government will be able or willing to make up the shortfall that will result from leaving the EU funding system. Between 2007 and 2013, the Office for National Statistics estimates that the UK put €5.4bn to the EU research budget and in return received €8.8bn of science funding. Given the negative impact of Brexit on the UK economy, how will we make up for that loss? There are especial concerns over decisions that may be taken with respect to relocation of key organisations such as the European Medicines Agency and associated pharmaceutical business <a href="http://www.reuters.com/article/us-britain-eu-corporates-pharmaceuticals-idUSKCN0ZA26J">http://www.reuters.com/article/us-britain-eu-corporates-pharmaceuticals-idUSKCN0ZA26J</a>, but these are yet to be resolved.

Immunology shares with other branches of science an in-built internationalism that must continue to thrive whatever the political climate. UK scientists and institutions, working closely with colleagues in Europe and beyond, have always been at the forefront of immunology. The BSI's annual congress in December <a href="http://bsicongress.com/">http://bsicongress.com/</a> — organised jointly with the Dutch Society for Immunology — will be a showcase of cutting-edge research from around the world and a great reminder of the rich internationalism in immunological research. These are exciting times for the discipline, with several promising new therapeutic approaches and innovations beginning to emerge after decades of hard investment and scientific collaboration. In a changing landscape we must continue to celebrate and support our internationalism, recognising what can be achieved by scientists working together in the pursuit of shared goals.

Great science is only made possible by great scientists. What does the result mean for friends, colleagues, and students who have come to the UK from overseas to study or contribute so valuably to vitally important research? The BSI's recent report on the internationalism

https://www.immunology.org/#sthash.G1DYcIlc.dpuf makes several recommendations that will enable immunology to continue to flourish. We have been urging ministers, policy makers and funders to look at these proposals and consider how they can best work with us to build on our proud heritage in immunology in this new environment.

Those of us who work in the discipline will be aware that the best labs are staffed with a rich mix of talented researchers from around the world \*\*see photo from Cardiff) and that our students and staff benefit from mobility programmes such as Erasmus as Marie Curie Fellowships. The BSI is proud to represent members from every corner of the globe, from Europe to the Americas, the Middle East to Asia, Africa to Australasia, and we recognise the extraordinary contribution these researchers make to science in this country. In turn, UK scientists have the opportunity to work in, and learn from, the best labs overseas. We must do all we can to ensure that these collaborations remain and grow; all these gifted colleagues must continue to feel welcome in our laboratories, and UK scientists must be free to go wherever they need in order to broaden their horizons, learn new skills, and follow great science. International mobility is vitally important. Our community will be working hard to ensure immunologists can continue to feely participate in global teams, many of which have taken years to build, and contribute to vitally important research collaborations that will positively impact millions of lives.

Answers to these questions will unfold in the coming months and years but for now two things are certain. The first is that nothing has yet changed in legal terms and we remain a full EU member (with all the rights and obligations that affords) up to and during the 2-year renegotiation process that has not yet been triggered. Negotiation will inevitably be complex, drawn out and bureaucratic. The scientific community, through learned societies such as the BSI and federations like EFIS, must have a strong voice to shape negotiations at the national and EU level. We now have a chance to press for a positive vision for science and one that best ameliorates any impact risks and allows us to fully seize upon any new opportunities.

Some view Brexit as a seismic event and our departure from the EU akin to a bereavement. The truth is less dramatic. There is legitimate anxiety about the future and researchers are right to ask questions, but we must be careful to ensure that these concerns do not become self-fulfilling prophesies. Science is a global pursuit. Immunological knowledge, like the grand challenges many of us are working to resolve – infectious disease, cancer, allergy, autoimmunity – do not respect political borders.

We have always accomplished more by working together than in isolation and there is no doubt this spirit of cooperation and collaboration will continue within our new political framework. At best, Brexit may mean little in terms of our open borders with European science. It may actually facilitate collaboration with areas of the world that many of us feel have been unfairly excluded by the EU-biased rules under which we have worked. For example, working openly and without restriction with colleagues in the USA, Canada, Australia, New Zealand and with the many developing nations with thriving scientific communities could bring enormous benefits to the UK.

Whatever lies ahead, we are as keen as ever to work with EFIS and our European colleagues to build on our proud heritage at the forefront of international research. Immunology will always be a global discipline. The structures may change but it is our fervent hope that UK scientists will be no less outward-looking, and our research no less innovative, than before the vote.

Britain welcomes you, and we hope you still welcome us.