

Mr Andrew Miller MP  
Chair, Science and Technology Committee  
6th Floor  
14 Tothill Street  
House of Commons  
London  
SW1H 9NB

12 May 2014  
Our ref: PN/BH

Dear Chair,

It is very welcome that you have chosen to look at Pfizer's bid for AstraZeneca and I want to share some thoughts with you about this complex issue.

The pharmaceutical industry is an important part of the UK economy. In 2012 it was estimated to account for 25% of all expenditure on R&D in UK businesses (albeit 15% down on 2011) and AstraZeneca is a significant contributor to that percentage.

There are a number of reasons for the UK's strength in this area. The first is the strength of our science base. The UK has 3.2% of the world's R&D expenditure but accounts for 11.6% of citations and 15.9% of the world's highest quality scientific papers. The second, and these two factors are inextricably linked, is that the UK makes many of the scientific advances that are turned into life changing treatments for patients. Beta blockers and monoclonal antibodies are just two past examples that continue to change lives. UK scientists are responsible for 14% of the top 100 medicines in use today. Such success not only saves lives, it also creates jobs for British workers.

A key element in long term sustainable economic growth must be a healthy drug discovery capability based on partnerships across the public and private sectors. It is important to have effective research activity in the UK in both the public and private sectors to drive this endeavour. Geographical proximity between the sectors encourages opportunities for collaboration, for frequent and easy contact for technology and knowledge transfer, and for promoting contacts with parts of the pharmaceutical companies located elsewhere in the world. The presence of a national health care system, based on social benefit for all, provides great opportunities to translate knowledge into patient benefit if the NHS can fulfil its potential more effectively as a research engine.



President Sir Paul Nurse  
Executive Director Dr Julie Maxton

Founded in 1660, the Royal Society is the independent scientific academy of the UK, dedicated to promoting excellence in science.

Registered Charity No 207043

Against this background any potential threat to the long term strength of our life sciences sector, and thus to our national economic interest, must be taken very seriously.

We cannot predict with any certainty what Pfizer will do if they succeed in their bid but we can look at what they say and at what they have done in the past.

Thus far the main commitments, which as presently stated have limited legal standing, are:

- To complete the construction of the AstraZeneca Cambridge research campus
- To base key scientific leadership in the UK
- To integrate the operations of the combined company so as to employ a minimum of 20% of the combined company's total R&D workforce in the UK going forward.
- To locate manufacturing operations of the combined company in the UK

These commitments are vague, come with caveats and have an inappropriate time scale. For example a five year commitment to the UK is insufficient. A commitment of at least 10 years is required. Science is not a quick win sector – it requires long term investment.

The commitments on jobs could mean that one or two executives could be the 'key scientific leadership' and what actual jobs would account for the 20% of the company's R&D workforce? Will they be good jobs for the high quality bioscience, chemistry and other graduates coming out of our research universities? And 20% is insufficiently ambitious. This commitment should be increased and be more specific.

Pfizer have also said that UK expertise in areas such as oncology, inflammation, and cardiovascular and metabolic disorders, would 'represent a vital component' of the combined company's R&D. This commitment is too vague and unless it is more specific offers little reassurance. There should also be a further commitment to provide more resources to promote collaborations between Pfizer and the UK University sector. A fund of £100m for such a purpose would be a good start. A similar fund for SME collaborations should also be considered.

It is obviously important to see whether the commitments can be made legally binding. If Pfizer is not prepared to co-operate in doing that, their stated commitments need to be treated with caution.

We should recognise that overseas firms do invest in R&D in the UK. In 2012 foreign owned businesses accounted for 51% of total expenditure. Were this deal to go ahead with Pfizer providing genuine long term investment in the UK science base it could provide a bridge between US, UK and European Pharmaceutical R&D.

We also need to recognise that private sector funding for R&D in the UK is woefully low, falling way behind our competitors. Today Business Enterprise R&D accounts for 1.1% of GDP. In Germany that figure is 2% and in the US 1.9%. The improved tax environment should Pfizer relocate to the UK, will provide financial opportunities for the company to invest more in UK research and development, which could help these figures.

It will be important for the Committees to examine how translational activities will be promoted in the UK if the Pfizer deal goes ahead. These could include investment in early access schemes to get innovative medicines to UK patients, partnership in a drug discovery Catapult, and explicit engagement with the NHS.

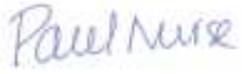
Given the high quality of UK research, any company committed to a long term business strategy of developing a strong pipeline of medicines will recognise the importance of research and will want to invest here. We have an ideal coming together of a strong pharmaceutical sector, an outstanding science base and one of the world's few genuinely national health services. A question that needs to be considered is whether the management at Pfizer are committed to a long term strategy of growth or whether they are simply looking for short term financial gain. It is not encouraging to note that since Pfizer's takeover of Wyeth in 2009, it has been reported that the combined R&D budget has been cut from over \$11 billion to between \$6.5 and \$7 billion.

It has been much discussed whether the traditional model of pharmaceutical companies operating large R&D centres themselves is the only effective way to carry out research. The model that many are looking to adopt is one of greater collaboration with academia and start up biotech businesses. This is the basis for AstraZeneca's development at Cambridge. It would be interesting to look at Pfizer's track record in investing in such collaborations since it much reduced its Sandwich base.

Ultimately for those making decisions on this proposed deal, whether they are shareholders, regulators or legislators, the number one consideration for the UK should be for the long term viability of the companies involved, and that depends on investment in research in the companies and on a healthy and vibrant UK research base. Increasing investment in research and development in Pfizer and AstraZeneca will be good for their shareholders and will lead to new and better treatments for patients. A decision based only on maximising short term profits will not lead to long term health for the companies. It will mean that we have learnt nothing from the economic woes of recent times.

This debate is in need of evidence and rational argument, and I am sure that the two select committees will take this approach in considering this issue.

Yours sincerely

A handwritten signature in blue ink that reads "Paul Nurse". The signature is written in a cursive style with a blue highlight behind it.

Paul Nurse

+44 20 7451 2507

[president@royalsociety.org](mailto:president@royalsociety.org)