

## DINNER/DISCUSSION SUMMARY

The allocation of science and research funding 2011/12 to 2014/15

Held at The Royal Society on 2<sup>nd</sup> February, 2011

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GlaxoSmithKline, the Michael John Trust and the National Physical Laboratory.

**Chair:** **The Earl of Selborne GBE FRS**  
Chairman, The Foundation for Science and Technology

**Speakers:** **Professor Sir Adrian Smith FRS**  
Director General, Knowledge and Innovation, Department for Business, Innovation and Skills  
**Professor Malcolm Grant CBE**  
President and Provost, University College London  
**Dr Patrick Vallance FRCP FMedSci**  
Senior Vice President, Medicines Discovery and Development, GlaxoSmithKline

SIR ADRIAN SMITH believed that the funding plans for UK science set out in the Comprehensive Spending Review (CSR) had, in all the circumstances, been good for the Research Councils (RCs), for Higher Education Institutions (HEIs) and for the Technology Strategy Board (TSB). Admittedly those plans did not maintain the generous provisions of the previous decade and they involved a 40 per cent reduction in capital spending; but they did maintain in cash terms for the next four years the present level of current spending of £4.6 billion and ensured that any efficiency savings would be recycled. This outcome showed that the Government recognised the beneficial economic impact of science, its contribution to the creation of new businesses, to the improvement of existing businesses, to the development of a highly skilled workforce and to ensuring that public policy and services were underpinned by good science. The UK ranked as world leader in the productivity of its research and development (measured by numbers of citations per pound spent on public R & D).

Ministers wished to allow researchers to define their own areas of work and had endorsed the Haldane principles for the distribution of the funds allocated to HEIs and RCs. However Ministers had indicated that priority target areas should be food security, the environment, energy, the digital economy and health. Public funding should focus on excellence. The emphasis should shift from competition to collaboration – collaboration among RCs, among HEIs and between RCs and HEIs. HEIs and RCs needed also to work closely with business, not only because this would facilitate the translation of new knowledge into successful commercial exploitation but also because the public funding would leverage additional funding from private sources. He noted that English HEIs had been able to obtain from private sources some £3 billion additional funds for research. Within the RC area, the allocation to the Medical Research Council would be maintained in real terms and the allocation to the other RCs would be some 97 per cent of present cash levels after making provision for the Science and Technology Facilities Council (STFC) role in subscribing to international programmes and in providing for national research facilities.

Sir Adrian referred to the extensive consultation upon which the CSR decisions had been based and which had helped to ensure that those decisions had been widely welcomed by the science community.

PROFESSOR MALCOLM GRANT acknowledged that the overall settlement at the conclusion of the CSR represented a considerable success at a time of public belt-tightening. However he warned the meeting that major challenges and changes lay ahead. After a decade of growing and generous provision of funds for capital and current programmes there would now be a period of substantially reduced cash provision for capital programmes and of flat provision for current programmes; that flat cash provision really meant a decline in real terms at a time of growing inflationary pressures. In addition HEI and RC budgets would have to cope with the impact of policy changes in other areas such as the increase in VAT and in National Insurance. He estimated that UCL faced a budget cut of between £80m and £100m annually. HEIs would have to adjust to the major and largely unknown challenges created by the Government's decisions on university fees.

These decisions had not followed the economic model upon which the recommendations of Lord Browne's report had been based and could well result in unexpected and undesirable disincentives to investment in teaching and research. A particularly unwelcome development had been the new policy on immigration which was having a seriously adverse effect on the ability of HEIs to obtain staff of the required quality. He was also concerned about possible sharp reductions on the funds available to charitable foundations which were an important source of income to HEIs. He feared that Social Sciences and the Art and Humanities could suffer as the financial pressures and implicit utilitarianism of the new fees regime began to make themselves felt. He foresaw the possibility that funding for post-graduate taught programmes would dry up. Such courses were valuable in their own right as well as being an important means of attracting foreign students. He reminded the meeting that many HEIs were in effect running major international businesses, deriving more income from foreign students than was received

from domestic sources. He shared Sir Adrian's emphasis on the need for more collaboration and less competition. But his main message for HEIs was that they were heading for a fundamentally different system; business would "not be as usual".

DR PATRICK VALLANCE said that major changes were now taking place in his industry which would result in it looking very different from the model of the past. These changes were the consequence of the interaction between the ever-growing size of the investment of time and money required to produce a new medicine (on average \$1.6 bn over 12 years), the pressures on health budgets, the huge advances in medical knowledge and a change in the nature of what is considered a medicine. These changes would impact particularly strongly on the UK which had a very strong presence in big pharma R & D in the traditional model. Companies such as GSK were increasingly carrying out their drug discovery activities externally rather than internally, looking to collaboration with academia and biotech companies anywhere in the world with the required skills and expertise. Although the UK had considerable strengths in biomedical academia, it was weak in biotech and needed specific measures to encourage biotech start up, growth and sustainability. He would like to see in the UK much greater freedom of movement between academia and industry in both directions. This would not only help to produce a highly skilled workforce but would also facilitate the translation of new knowledge into practical outcomes. The UK needed to preserve and build on its comparative advantage in the quality of its science base. This would mean greater concentration on the centres of excellence in HEIs. In addition he believed that closer links between the NHS and research could yield great benefits, especially in the area of experimental medicine and in early clinical testing which could prove valuable in attracting inward investment.

In the subsequent discussion periods many speakers echoed the concerns expressed in the presentations about the adverse effect of current immigration caps on the ability of HEIs to ensure that they had access to the quality of staff necessary for the maintenance of the quality of their science and research. If the caps could be set aside for the benefit of industry, similar relaxations should be swiftly introduced for academia.

Speakers also endorsed the emphasis given by the three main speakers to the importance of collaboration between the different components of the scientific community for ensuring that the maximum benefit could be derived from the public investment in the science base not just by eliminating wasteful competition and by concentrating on centres of excellence but also by attracting additional funds from private sources in the UK and other countries. However there were many who pointed out that effective collaboration was difficult to achieve. A number of speakers wondered whether the Research Excellence Framework (REF) process contained adequate incentives to foster the desired focus on collaboration. It was noted that the predecessor Research Assessment Exercise (RAE) had not contained such incentives.

Although speakers generally welcomed the outcome of the CSR, a number of voices expressed concern about the cut in capital funding and the impact on that for UK competitiveness. However others pointed to the

substantial levels of investment made in the past decade and argued that the balance between capital and current which had been determined was probably the best that could have been achieved.

There was some discussion about ways of facilitating greater successful exploitation of scientific advances in the form of both new products and also of manufacturing processes and systems. Although the TSB could do much in this area, it was important not to think that the TSB was the only player. The public sector research establishments could also help.

Some speakers urged those alumni who had benefited from the years when high education was free to do all they could by alumni giving to ease the burdens falling on their less fortunate successors.

Several speakers lamented the fact that science failed to capture the public imagination in the way that football did. Science was the engine of growth and at a time when growth was much needed not only was it vital not to deprive that engine of the necessary resources but also the scientific community might be able to help the Government construct a strategy for growth. Not many speakers felt that this was a proper role for the scientific community but some speakers pointed to the untapped potential of GM and the agro-industry.

Sir John Caines KCB

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