

DINNER/DISCUSSION SUMMARY

Can the career path for young researchers be improved?

Held at The Royal Society on 7th February 2007

We are grateful to
The Council for Science and Technology, DTI
for supporting this meeting

Chair: **The Rt Hon the Lord Jenkin of Roding**
President, The Foundation for Science and Technology

Speakers: **Professor Wendy Hall CBE FREng**
Professor of Computer Science, University of Southampton and Chair,
Sub-group on 'research endeavour', Council for Science and Technology, DTI
Sir Graeme Davies FRSE FREng
Vice-Chancellor, University of London
Dr John Bothwell
National Research Staff Association and Marine Biological Association

PROFESSOR HALL outlined the functions of the Council for Science and Technology, which reports to the Prime Minister. The sub group on "research endeavour" focuses on who does research, and how it is organized and funded. Its aim is to consider research over a 20/30 year timescale to ensure that there will be sufficient researchers entering research, and continuing in it, to maintain the UK's scientific and technical position. Academic research careers needed to be a positive choice - not entered into by default. Research into major issues - health, global warming - had to be conducted on an interdisciplinary, inter-institutional and international scale. This implies that researchers must be mobile and research funding portable, to go where the researcher goes. Inevitably, this would make it difficult to tie funding to specific outcomes. We needed a national framework for research careers, incorporating flexible career paths, giving researchers appropriate but early, degrees of responsibility and recognition, helping them to widen their interests, and advising on an exit strategy

SIR GRAEME DAVIES said that if the government's science and innovation agenda was to be delivered there must be successful career paths for researchers in both industry and academia. A researcher needed to be able to develop his talents and interests in a structure which gave him flexibility, some security and progression. The "sequential post doc" pattern - three or more three year terms was no longer right. Employment legislation had given those who had been employed on contracts for two years rights which were virtually identical to those of employees; there was no reason, therefore, why universities should not offer open ended contracts. Reports by UUK (the Concordat), the RCUK, and HEFCE

had all provided valuable material; they had explained how research careers could be managed so as to sustain the best researchers in academia, how to develop career guidance, in service training, promote diversity, and attract international students. The Good Management Practice project (GMP64) for HEFCE had outlined in detail a framework for the good management of researchers, from induction processes in the first three months, consistent staff review and finally, advice on career options and opportunities. But the advice had not been embedded in Universities; there was still much poor practice. This might well be that the advice had not got down to the Principal Investigators (PIs) who were basically responsible for implementing the advice but might have neither the skills or motivation to do so.

DR BOTHWELL said that the 36,000 research staff comprised one third of the total number of those engaged in research. Their status and problems were therefore, central to maintain the research endeavour. He outlined his own research career, as typical of an average researcher's career. He had had three research contracts in different areas of bioscience, with a year out, published ten papers, but had had no success in applications for more permanent posts. The problem was that there were six and half times the number of research staff to the number of permanent research posts in academia. It was inevitable that many able researchers who wished to stay in academia would leave. Researchers were expected to do many things beside their research - visits to schools, talks and teaching - although nothing which could not be done by PhD students. The PI, the university and the funding bodies had different priorities for the researcher and none of them saw helping the researcher in his/her ca-

reer as essential. It would be for the benefit of all if researchers were able to work at what they were good at but there needed to be structures that enabled them to pursue careers that recognized that stability had to be balanced against mobility. A researcher needed more control over his/her career, more information about what opportunities were available in his own institution and elsewhere; in short, information, opportunity, responsibility and recognition.

A principal theme in the following discussion was the role of PIs. They were clearly the essential element in motivating and managing researchers. But they had other responsibilities as well - notably securing the funding for their research teams and accepting responsibility for its use. They were also subject to pressures from their institution, who, often failed to give them the support and training which would enable them to be successful managers and appraisers of their staff. In particular, they would not necessarily have the knowledge of industry, and the opportunities available to researchers in it, to be good advisers. There was also, the cultural bias; anything, other than an academic post, was second best, and the researcher who had to accept a non-academic career was branded as a failure. Indeed, the term "exit strategy" carried the connotation that the researcher was being thrown out of Eden and had to seek his bread in the outer darkness (the term "escape route" was even worse).

Perhaps the close link between the PI and the researcher should be modified, so that the researcher would be less dependent on the PIs interest and ability in managing him. But this could be disadvantageous in diluting the responsibility of the PI for management and in some cases, weakening the team working which was the essence of much progress. A real problem was the diverse nature of the PIs - some were experienced Professors managing large teams, others were newly appointed lecturers, no more experienced than their researchers. But, grant giving bodies and HEFCE and the Research Councils should require evidence of good management of research staff as a condition of their grants. The proper framework for researchers' careers was already there, in the documents cited by Sir Graeme Davies and institutions which did not insist on its implementation should feel themselves at risk in applying for future funding. Research is a professional business and must be managed professionally. There should be no excuse for PIs to say they were too preoccupied with other matters to give the time to manage their staff professionally; a senior post, in any field or sector carried with it management as well as professional responsibilities: they must proceed in tandem.

A recurring theme in the discussion was the feeling that researchers were not listened to; that their views on the implementation of the careers' framework were not heeded and above all, that they were not recognized as being an essential part of the research process and given the status and security they needed. On the other hand, did they not themselves sometimes expect too much? It was impressive that a young participant in the discussion said that his passion for physics and his wish to pursue it in research outweighed his family's view that he ought to go into the City. But, pursuing passions carried risks and a clear assessment of the risk

inherent in pursuing an academic career was the responsibility of the researcher himself. But, he needed help and advice to do this and the best help he could get would be knowledge of other opportunities and the risks associated with them. Teaching and industry can also administer to passions and in no way should they be seen to be second class. Nor should they be considered as one way routes; mobility between the sectors was important and increasing.

There was a danger that research careers were seen as a generic whole; they were not. Research projects were specific and funders would look for results from each project. They should also look to universities to manage their research teams and establishments effectively, which meant learning about best practice and ensuring it is embedded in the institution itself. It was felt that universities did not themselves accept sufficient responsibility for research management, or work hard at discovering what best practice was and how to install it. Because the number of academic researchers was stable and not increasing, it was impossible to expect that more than a small percentage of the 30,000 post doc researchers would find posts in academia. Those who do must be the outstanding and committed researchers, without whom the UK's position in leading science would be undermined but it was equally important for the economy that those who did not stay in academia found posts where their talents would be used and recognized. It was part of the career management of researchers to ensure that they knew of these posts and the opportunities to which they gave rise.

Sir Geoffrey Chipperfield KCB

The presentations are on the Foundation website at www.foundation.org.uk.

Useful web links:

GMP64 Project on the Management of Researchers:

www.gmp.ac.uk/projects/GMP64 ; www.gmpcrs.group.shef.ac.uk

The Council for Science and Technology:

www2.cst.gov.uk

Department for Trade and Industry:

www.dti.gov.uk

University of London:

www.lon.ac.uk

The Marine Biological Association:

www.mba.ac.uk

Research Councils UK (RCUK):

www.rcuk.ac.uk/rescareer/rcdu/

University of Southampton, Professor Hall:

www.ecs.soton.ac.uk/~wh/