

# Heads of University Biological Sciences

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**One Day Autumn Meeting, Wednesday, November 12, 2003  
The Royal Institution, 21 Albemarle Street, London W1S 4BS**

*“Career Pathways for Young Scientists:  
Progress on Implementation of the Roberts Report on the Supply of  
People with Science, Technology, Engineering and Mathematical  
Skills”*

## *Programme*

- 10.30 – 11.00 Registration and Coffee
- 11.00 Chairman’s Introduction, Professor David Coates (University of Leeds)
- 11.05 Dr. Mark Walport (Director of the Wellcome Trust): The Wellcome Trust Perspective
- 11.45 Dr. Anne McFarlane (Assistant Director Infrastructure & Research Careers, Office of Science and Technology: The Roberts Report and the Future of Research Careers - An OST Perspective)
- 12.25 Professor John Coggins (University of Glasgow and Chairman of HUBS): Fixed Term Contracts and Careers for Young Researchers – A view from the Universities
- 13.00 – 14.00 Lunch
- 14.00 Dr. Doug Yarrow (Director of Corporate Science Group, BBSRC): BBSRC Postgraduate Training and Fellowships – Update in the light of the Roberts Report and recent developments
- 14.40 Round Table Discussion chaired by Professor John Coggins including Dr. Brenda Mortimer (BBSRC), Dr Sohaila Rastan (the new Director of Science Funding at the Wellcome Trust), Dr Sally Woodward (Head of Career Schemes and Clinical Initiatives at the Wellcome Trust) and Dr. Candace Hassall (Science Programme Manager Basic Sciences Career Schemes and Clinical Initiatives, Wellcome Trust),
- 15.30 News from the Biosciences Federation and the HUBS Response to the HEFCE Teaching Funding Consultation (Professor John Coggins)
- 16.00 Tea and Departure

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# Heads of University Biological Science

Wednesday 12<sup>th</sup> November 2003

## **The Wellcome Trust Perspective, Mark Walport (MW) (Director of the Wellcome Trust)**

Surely the only way to achieve success is to foster the people that undertake the research and innovation – the scientists. This is an issue that we have taken a keen interest in for a number of years and one which has obviously been heightened by the Roberts recommendations and other related initiatives. Supporting good science is about supporting good scientists, and this is key to the role of the Wellcome Trust in achieving our own mission, which is to foster and promote research with the aim of improving human and animal health.

It is equally important that private endowments such as the Wellcome Trust focus on the success of our funding strategies. I think that the Trust has, like many funders, relied a little too much on setting up good processes which are based around peer review to achieve good outcome. We have tended to use our processes as a surrogate for the success of our funding instead of the careful examination of the outputs and outcomes of the work that we fund, however, we intend to remedy this.

We are currently reorganising our funding activity so that our work is driven by science rather than process. From next October, we will fund research through six intellectually coherent streams of scientific research, including streams such as 'Populations and Public Health' and 'Integrative Physiology'. Each funding stream will contain funding panels and also a new type of non-funding committee with a specific remit to look at strategy, which will be chaired by a scientist external to the Trust.

The job of these strategy committees will be to evaluate the outputs and outcomes of work funded by the Trust, in the context of other related work, to look for opportunities and potential partnerships, and, dare I say it, to advise on areas that the Trust should not fund as well as new areas in which the Trust could make a big difference. It is important for our attention to become more focused on assessing individuals and their achievements. For young researchers, our work will focus on identifying the smartest and most creative and providing the best environment for their development, therefore, ensuring that young scientists are trained at the start of their careers by scientists who are themselves first class. These individuals will inspire their protégées to ask important research questions and provide the tools for them to answer them. As part of their responsibilities they will take on the additional ongoing role as mentor.

The key issue for a funding agency is the identification of the best people and not ideas. It is relatively easy to identify great scientists with a track record behind them - but perhaps the greatest challenge for a funding agency is to spot talent amongst the young and to nurture this. Three core areas to consider: attracting the best people into the research 'pipeline'; providing them with the highest quality training; and offering the most attractive measures to ensure their retention.

The first key funding interventions that we make in the career path of young scientists are therefore linked to schools. This is also where Sir Gareth Roberts began his trail of recommendations. We have commissioned a large amount of research on the best methods for

engaging young people in science, both through the taught science curriculum as well other activities including art and drama.

Excellent teachers are central to inspiring and enthusing young scientists. The Government identified some time ago the possibility that there would be a severe shortfall in well qualified teachers by 2010, as a quarter of the most experienced science teachers of today reach retirement age. There have also been widespread concerns that it is not only the number of young people taking up science at university that is a problem, but the quality and range of skills of those that do come through the pipeline.

To understand the causes of this problem and how and whether the needs of the biology research community are being met by existing A-Level biology provision, we recently commissioned research from the University of Warwick Centre for Education and Industry, the full results of which will be published shortly. The findings show that whilst there are some areas of improvement in students embarking on biology-related degrees – such as oral presentation skills - university tutors have highlighted a number of concerns about weaknesses in numeracy and extended writing skills.

The Wellcome Trust has entered recently into a 51 million pound partnership with the Department for Education and Skills to build a national network of Science Learning Centres. These will promote and provide high quality professional development for teachers and other educators. We hope that these centres will boost the quality of students' experience of science at school, and consequently the numbers and abilities of students moving onto further study in these areas at university. It is very important that the scientific community at large engages with these centres. We need to consider how the enthusiasm and skills that have been garnered are continued in the next stages at university. The Trust's involvement in undergraduate work is currently focused mainly on funding vacation scholarships and a “researchers in residence” scheme.

However, it is at the postgraduate stage that some of our most important work happens. The Trust began to fund four year PhD programmes in 1994, rather than the traditional three year programme, and these are now available in twelve universities. They are highly prized and competitive, with an average of 100 applicants for 5 places each year on each programme and so far, we have committed 90 million pounds to the initiative. The programmes set out to nurture and mentor the brightest students in a number of ways. Firstly, they offer an opportunity for broadening and developing experiences before fixing on a chosen specialism, enabling the most promising candidates to move into an area of science for which they may not have gained the specific expertise from their degree. The first year of study is used to provide taught courses, to develop transferable skills, and to develop students' technical abilities. It also gives them experience of working in different labs through rotations. Crucially, these schemes empower students by giving them an important role in the selection of their supervisor. In such ways, students are equipped with the tools and the time to select their PhD project and to develop it properly over a further three years. Increasingly, and especially since the Roberts report, there has been a broader acknowledgement that PhDs should be allowed to take place over a longer period than the traditional three years. It is encouraging to see that many of the Research Councils are now providing universities with more flexibility in the length of time that they can allow for individual PhDs.

Government has raised Research Council stipends significantly since 1998. It promises to continue to enhance them over the next few years, no doubt spurred on by the emphasis on this

aspect in the Roberts review. The majority of postdoctoral posts are funded by grants to senior scientists to support projects and programmes of research. The post-doc is a make-or-break stage of scientific careers. At a senior postdoctoral level, the Wellcome Trust supports Research Career Development Fellowships. We fund 100 of these and they provide an opportunity for the brightest young researchers to achieve independence. Staff at the Trust are keen to ensure that all of the people that we fund – whether they continue with our schemes or not – are supported and encouraged in their next move. Obviously the diversity of funding sources acts as a safety net for the most promising researchers and we see our schemes complementing those offered by the Research Councils, other funders and universities.

We expect host institutions to display commitment to very bright individuals. Identifying and nurturing the best individuals is rarely the role of one funder alone. That is why for many years the Trust has been running a University Award scheme, intended to support outstanding academics in partnership with universities such as yours, enabling them to attract research staff by providing support for an individual for up to five years, after which time the applicant takes up a guaranteed permanent post in the university. The scheme has some similarities to the model being proposed by the Academic Fellowship Scheme. 200 posts each year for five years, with 125,000 pounds available for the five year period of each award. In contrast, over a recent ten-year period, the Trust made an average of only seven University Awards per year. The average amount of each award was between 400,000 and 500,000 pounds. What this means is that the new scheme will be trying to put in place nearly thirty times as many people each year, with a quarter of the money for each.

The concern from where I am sitting is that the level of funding is not realistic for the biosciences. Nor are we convinced that there will be a sufficient number of tenured academic posts available in higher education institutions to meet the ambitious targets. important scientific questions. A post-doctoral scientist working on an unambitious project stands a significant danger of becoming an unambitious post-doctoral scientist. This is part of the problem of the post-doctoral grade at the moment.

However, we must recognise that not every post-doctoral scientist will eventually turn into an independent star of science. We have not been sensible in managing the careers of these individuals and in developing appropriate career pathways for them. There are three alternative pathways for such individuals: as supporting scientists, as teachers of science and outside science altogether. None of these pathways should be seen as failure – however, it is essential to confront these alternatives early in a post-doctoral scientific career. Good mentorship is essential for this and funding agencies need to be explicit in identifying this as an expected feature of the scientists and their parent employers in receipt of grants. There should be no excuse for the post-doc “going nowhere” after more than 10 years of post-doctoral experience.

Over the past decade the human infrastructure of universities has been lost, driven by the perverse financial incentives following the research assessment exercise to increase the volume of independent scientists at the expense of infrastructure. I believe that this has finally been recognised and the trend is starting to reverse, if for no other reason that difficult and rare technical skills are now essential for the conduct of the well-found laboratory, skills in micro-injection, microarraying, advanced microscopy and so-on.

I have already commented on the need for skilled teachers and it would be no bad thing if more postdoctoral scientists saw science teaching as a valued career option. With good career advice, it would be beneficial also for society at large if more scientists with advanced research training

went into jobs outside science as the torchbearers for the value of science to society. At the moment I fear that we mentor post-docs badly and those that do turn to other occupations do so too late in their careers and disillusioned by their time in scientific research.

I have emphasised the importance of identifying and supporting the best scientists. We have seen already how the academic fellowship scheme and our University award scheme involve a sharing of funding between an outside funder and the universities – however, in truth this is actually a handing over of financial responsibility from the outside funder to the university. We are starting to wonder about another type of funding partnership with universities. What if for its more senior fellowship schemes the Wellcome Trust entered into a funding partnership from the outset with universities, in which we each paid fifty percent of the salary. We would fund the costs of the research; the university would provide the basic infrastructure and would also expect the research worker to contribute to university teaching. This type of funding arrangement could be a rolling arrangement renewed at five-yearly intervals subject to the continuance of a first class research programme. This model is just a twinkle in the eye at the moment but I have been delighted by its positive reception by a number of the universities in which I have trailed the idea.

This is also why the Wellcome Trust, along with other charitable funders, is very concerned about the implications of the current consultations on the dual support system from HEFCE and on research funding from HEFCE. The biomedical charities have been able to fund so successfully in the UK university system because of the partnership that they have had with Government and the universities.

## **Questions**

Q\ Could you elaborate on the new “rolling” arrangements, have they been discussed in universities and can you put a time frame on their implementation?

A\ This type of partnership, with shared salaries, is one that most of the HEIs that I have talked to potentially find attractive as a model, so I predict it will be implemented but cannot yet say when.

Q\ It is encouraging that the trust is looking more closely at the outcome of the science as there is a tendency in universities to plug the funding agencies for more and more grants for small projects.

A\ I agree, the trust fund has always had the philosophy that it is better to fund a small number of grants and support them properly. Which leads back to the question of evaluation; there is discordance between the ability to write a good grant application and the ability to do good science. Our main objective is to fund good scientists.

Q\ What is the significance of the Strategy Committee and how will you assess the work funded?

A\ It is important to measure what we get for our money; we will be asking a number of questions that will provide drivers. We are keen to ask our scientists at the end of their grant what, scientifically, they have achieved. If we also ask what happened to the research staff that were employed on that grant it will help us focus on that issue. We will also ask questions about public engagement and involvement in schools.

Q\ It is very easy to talk about mentoring in an abstract way but how will you move it to the fore?

A\ It should not been seen as a failure to advise young postdocs not to pursue long term independent research careers and to point them to other professions possibly outside science. It is a disgrace when a postdoc has been passed from pillar to post for years.

Q\ The trust is funding ten centres for science teaching and learning, what are your expectations and how will they feed back to improving biology interest at primary and secondary school level? I have not seen any engagement in London, what is in it for the city?

A\ The trust has put in £25M and the Department for Education and Skills has put in £26M for funding of national centres such as the White Rose Consortium (Leeds, Sheffield and York). Regional centres are being developed throughout the country. These are physical centres with a strong emphasis on teaching and learning for science educators. Their purpose is to stimulate these individuals to provide the best possible teaching as well as continuing development, so they, in turn, can excite and enthuse the children they teach. It is too early at this stage to comment on how they will work. They have generated worldwide interest and it is worth noting that the difficulties we face with science teaching are not unique to the UK.

**The Roberts Report and the Future of Research Careers – An OST Perspective, Anne McFarlane (Assistant Director Infrastructure and Research Careers, Office of Science and Technology) [anne.mcfarlane@dti.gsi.gov.uk](mailto:anne.mcfarlane@dti.gsi.gov.uk)**

The government recognised that science is important to economic growth but also that it could not undertake science unless there were the scientists to do it. As a result the Roberts' Review "SET for Success" was commissioned in 2001. The review found that careers in SET are not attractive as they are perceived as difficult. Further, science has a bad image (GM crops, MMR vaccine and foot and mouth), low financial award, unclear career paths and weak development opportunities.

The review found particular difficulties in the recruitment and retention of scientists in engineering, physical sciences and IT. Biology was found not to have such troubles though this bias may reflect Roberts' own background. However, it does appreciate that biology also has problems (biotechnology in particular). It is also understood that the aforementioned disciplines play an increasingly important role in the biological sciences.

The government response to the Review was unprecedented. All the recommendations were taken on board and the OST was to be provided with £100M by 2005/06 for implementation of the Review. At the doctoral stage the funds will be used to increase the PhD stipend to a minimum of £12k pa by 2005/06 equalling graduate starting salary. An additional increase to 13k pa has been recommended in areas of particular recruitment and retention difficulties. Action is to be undertaken on training and education: funds will be put aside for two weeks training in transferable skills (as much as 50% do not stay in academia). Little progress was made in the flexibility of the length and the nature of programs (e.g. funds are currently not available to support a fourth year) and the extension of eligibility to EU students. The OST has come to the point where EU eligibility will not be extended for the near future.

At the postdoctoral stage the implementations are to provide funding for two weeks training in transferable skills and to increase salaries by £4k pa by 2005/06

For a review of the Academic Fellowships Scheme see:

[http://www.ost.gov.uk/research/academic\\_fellowship\\_cons.htm](http://www.ost.gov.uk/research/academic_fellowship_cons.htm)

Other ongoing initiatives involve reviews of dual support, RAE, best practice for doctoral training, HR policy, development and EU resolution on researcher careers.

OST has created a new Science and Society Directorate which brings together a number of tasks, previously carried out in different departments, to help increase public awareness and understanding of science and also to ensure increasing engagement of women and minority groups into science.

Supply of Scientists, (Anne McFarlane's vision for next five years)

Reduction in proportion of contract researchers

Reduction in recruitment & retention problems

Recognition of multiple career paths

Provision of development opportunities

Development and use of good practice guidance nationally and across Europe

More job satisfaction!

Better use of metrics, we collect data but is it right and are we using it properly?

### **Questions**

Q\ Are the funds for the academic fellowships being targeted to earmarked subjects and what percentage will go to biology?

A\ At this stage there is no targeting to earmarked subjects although this has been recommended. Lord Sainsbury and John Taylor would be upset if a high number went to the arts and humanities.

Response\ (MW) Universities will find it difficult as they keep linking these academic fellowship schemes to their future funding and, therefore, are dependent on HEFCE assessment. It is worth pointing out that HEFCE, in their re-banding of subject areas, have knocked 8% off biology teaching funds.

Response\ (JC) Our understanding is that the decisions by HEFCE on teaching and funding have not been made. HEFCE do not understand that science must be looked at as a whole, if it continues to be viewed at as separate entities, there is a danger of biology being viewed as a social science.

Response\ (JC) I am very scared about the prospect of delivering the practical side of biology if funding is cut.

### **Fixed Term Contracts and Careers for Young Researchers. A View from the Universities by Professor John Coggins**

Universities need a constant supply of new talent to fill new academic positions, to provide research-informed teachers, to provide the senior research assistants and research technologists to staff specialised research facilities and the major long-term research teams and to provide research assistants and technicians for short-term research projects and contracts

What do the Universities want?

To be able to recruit excellent research scientists and teachers to academic positions

To staff their research projects and research facilities with excellent people



To move away from short-term contracts and particularly serial short-term contracts for research assistants, research technologists and research technicians

What does Government want?

An excellent science base to drive the knowledge economy

A supply of good young scientists and technologists to support the science base and industries dependent on science and emerging from the science base

Attractive career structures for scientists

A scientifically aware and informed public

Short term contract tensions: to staff their short-term research projects the Universities need far more staff than can be accommodated on a long-term basis. Universities have not been good at mentoring young research staff, managing their career expectations or providing training to broaden their skill base

Funders of research have been reluctant to pay for more senior researchers on grants even when highly suitable candidates are available and to pay for training that would, for example, facilitate redeployment. They are sometimes reluctant to contribute to the long-term support of the major university-based research facilities essential to deliver world leading research

Further tensions include, implementation of the EU legislation on fixed term employees, Universities have to reconcile good employment practice with what they can afford, Funders, Universities and Trade Unions have had different agendas which now need to be brought together and perpetual redundancy situation must be avoided.

A Biochemical Society Survey on the 'impact of the fixed-term employees' regulations on the employment of post-docs in UK Universities' (available through the HUBS web site) was carried out in 2003 across 16 Universities of different types. The results showed that half the respondents anticipated objectively justifying extension of short-term contracts because of uncertainty of grant renewal and that Universities looked to "government" to help underwrite salaries between grants. Research-intensive Universities expected the new regulations to increase their financial burden because they would need to implement rigorous performance review and establish redeployment and redundancy procedures as well as meeting redundancy payments.

Results also revealed that most thought that the main effect of the regulations would be to make Universities introduce more effective management of career expectations.

Those offered open-ended contracts would have greater career security, but there would be a decrease in the number of post-docs in the system.

The Way Forward: We need parallel career paths, new group leaders (emerging research stars), research-informed teachers, flexible teams of high quality research assistants and technicians with well-defined career paths and specialised research technologists and technicians to support research facilities also with well defined career paths

The new Academic Fellowship scheme will help for the new group leaders and universities are beginning to develop proper pathways for university teachers. However the main area to resolve is the provision of proper career pathways for the high quality research assistants, who do not aspire to be group leaders, but have the vital skills needed to deliver international quality

research. We also need to find the means to support experienced, high quality research technicians

Means to achieve these goals: the Universities and the funders of research need to work together to find the resources to deliver the better career pathways for research staff. There are crucial roles for OST and Treasury in finding the resources and for the Research Councils and the Funding Councils in delivering the resources and the major charities also need to be involved. There is also a major role for the Regional Development Agencies.

To conclude both Universities and Government wish to strengthen the science base, which is dependent on the quality of the work force. We must not lose the opportunity to make science a more attractive career option by delivering better career pathways and better pay for research scientists.

## Questions

Q\ I refer back to the point made by MW and am extremely frightened about what would happen to laboratory teaching, at the undergraduate level, if HEFCE decreased teaching funds by 8%. With high and increasing student-staff ratios and lack of skilled technicians there needs to be a re-think of what HEFCE is suggesting, what the OST is suggesting and what may happen in the future.

A\ Yes, indeed, the prospect of carrying out laboratory teaching with a reduction in funds is extremely daunting. I also agree with the second point made about high student to staff ratios, I think there has to be a re-balancing of human infrastructure. This has come back to how the universities responded to incentives provided by the RAE. Unless HEFCE change the funding rules and the incentives within it, then these issues will be difficult to address.

Q\ I am struck by the 'what the government want?' question. I listened to Anne this morning who emphasised the need to increase postdoc salaries by £4k by 2005/06. There are at least two government departments that I work with that are adamant that no money will be allocated for this. It will have to come from existing resources which means less can be achieved.

A\ There is a contradiction in terms between what different branches of the government are asking us to achieve.

Q\ I am concerned about the teaching and funding available for research staff. There is no incentive to re-train. It would be much more effective if we had the time or the money to re-train our highly skilled technologists whose skills have become redundant due to advances in technology.

A\ (MW) We had a research technologists funding scheme along the lines of University Awards. In the time that it was running one award was taken up. Universities haven't had the confidence to take it on because at the end of 5 years they are expected to continue the funding.

Response\ Universities do not take this on as they have to make up costs and they are in the mode of satisfying RAE and university subject reviews.

## **BBSRC Postgraduate Training and Fellowships: An update in the light of the Robert Report and other recent developments By Doug Yarrow**

BBSRC currently have 114 master studentships (49 MSc and 65 MRes) and 653 PhD studentships (Quota 277), 27 doctoral training accounts, 213 committee, 75 industrial CASE partnership and 16 industrial CASE.

Our short-term plans for developing masters level training, arose from an internal review. This review highlighted the need to provide continuing support at the same level, merge existing MSc and MRes allocations, concentrate on BBSRC strategic science objectives and support major industrial sectors. These plans will be considered by CSF in December 2003. The extensive range of MScs that we support are costly and need bringing into some sort framework, they will either fit into one of BBSRC scientific objectives or of success to key industrial sectors.

Issues concerning PhD training that directly relate to the Robert's review include the future of Committee studentships, progress of the Doctoral Training Account (DTA) pilot, encouraging CASE and Industrial CASE and wider skills training. BBSRC is considering the future development of our Committee Studentships, as they are dissatisfied with existing arrangements. They have low success rates (the academic community view it as a lottery) and BBSRC wish to align studentships more closely with research. We propose having studentships linked to grants; researchers applying for studentship in parallel to grant and believe that funding should include research costs. Further, we propose setting up a committee to assess applications and hope to ensure a good training environment.

BBSRC set up a Doctoral Training Account (DTA) Pilot in October 2002 across seven departments to evaluate the benefits of the four-year duration of PhD and the flexible approach to funding delivery. Early indications are positive, the scheme has attracted good quality students of which 75% have taking the four-year option and departments are using flexibility in funding. The pilot is to be extended in the same departments for a further two years and the option is kept open to convert next quotas to DTAs.

CASE and Industrial CASE: there is evidence that it is becoming increasingly difficult to find industrial partners on the other hand the Industrial CASE Partnership schemes are generally successfully although annual Industrial CASE scheme are more difficult. Further, it is hard to attract suitable companies (especially SMEs). We need to better "sell" the benefits of participation in CASE?

Research Councils 'Joint Statement of Skills Training Requirements' replaced the BBSRC's 'Training Template' in October 2001. It was developed in response to pressure from HEIs for consistency in requirements and appears to be supported by the academic community. It covers research skills and techniques, research environment, research management, personal effectiveness, communication, team working, career management and Funding Councils consultation on threshold standards. It should provide a good framework for development of additional training. The Funding Councils consultation concerning threshold standards for research degree programmes (RDPs), which supports a good practice framework, proposes to fund only those RDPs that meet the threshold standards. The Research Councils support these proposals as their own requirements are similar or more stringent

## **Issue on PhD Training Post Robert's Review:**

### PhD Stipend and Differential Stipends

BBSRC will increase stipend (to £12k by 2005/06) and will provide even higher stipend increases for areas of shortage and recruitment difficulty. These enhanced stipends will begin from October 2004 for projects in life sciences/physical sciences interface, infectious diseases of animals, whole organism physiology and stem cells. The key objective of enhancement, which is likely to be a least £1,5k, is to facilitate recruitment of students; however allocation mechanism remains to be determined.

### Transferable Skills

Roberts recommended at least 2 weeks pa dedicated to transferable skills training and particularly encouraged improved training in research management, personal effectiveness, communication, networking, team working and career management (also numeracy?) SR2002 has provided additional funds of £300k, £820k and £1430k to be distributed to universities on per capita basis for new students from October 2003 (£460 per student in 03/04 and rising).

### Funding of PhD research training costs

RTSG's £1k estimation is universally agreed to be inadequate. Funding Council support for PhD training is estimated to amount to ~£4k pa for a RAE 5\* department. HEFCE has proposed to revise the research funding method, they propose a single funding line for all PhD training, funding to be linked to the real cost of training PhDs and to remove PhD students from the QR formula. All these plans are to come into effect from 2005/06. BBSRC strongly supports the transparent approach to PhD funding and avoiding incentives for expansion at the cost of quality.

### Extending doctoral training accounts

The DTA scheme is being extended as due to the success of the pilot. Roberts recommended an average duration of 3½ years however, no additional funding yet made available for this. BBSRC could fund multidisciplinary training with other RCs also using DTAs. If no additional funding is allocated BBSRC will face with the decision of whether or not to fund DTAs and recognise the move to four year PhDs. This move could see reduction in numbers of student places. The key issue here are lack the of flexibility for small awards, how to consider DTAs at an institution level, the loss of discrimination between "good" and "bad" training departments and possible solution accreditation of departments.

### Awards for EU students

EU nationals currently get "fees-only" awards, however there is widespread pressure for full maintenance awards. As mentioned above there will be no advancements in this area until the current legal case is resolved; the UK government has been challenged on their refusal to give student loans to EU nationals. The case is expected to be concluded by Autumn 2004.

## **Beyond the PhD**

Current BBSRC fellowships portfolio include David Phillips Fellowships (10 pa, salary costs + £200k over 5 years), Research Development Fellowships (6 pa, £30k pa to institution; HEIs only) and Professorial Fellowships (1-2 pa, £55k pa to institution + £200k over 5 years; HEIs only)

## Evolution of BBSRC fellowship schemes

Do current schemes adequately serve the needs of the biological sciences community, is the balance (numbers, funding) between existing schemes reasonable and are there gaps in provision, (e.g. immediate postdoctoral fellowships)? BBSRC has been considering whether it could make Research Development Fellowships more versatile. We could introduce “conversion” fellowships to enable holders to strike out in new directions or “enterprise” fellowships to stimulate knowledge transfer.

## Selective increases in postdoctoral salaries

Increases in postdoctoral salaries (from October 2003) are intended for areas of recruitment and retention difficulty however problems affect most areas within the BBSRC remit.

Small funding has been made available for the next financial year 2003/04 but there is more scope for increases in the following financial year 2005/06 (mechanism for allocation to be determined).

## Research careers issues

Fixed Term Regulations is going to have an impact on short-term contracts, there is a need to provide provisions for costs of redundancy. The Research Careers Concordat has compiled their final report ‘Research Careers Initiative’.

## Career pathways (Roberts’ three trajectories)

BBSRC favours parallel career tracks leading to PI and support researcher and also appreciates the importance of exit routes to industry and other careers.

BBSRC postgraduate training and research development strategy was developed by the Council Working Group with the objective to develop an integrated training and research career development framework. The consultation document is available on BBSRC website, the deadline for responses is 31 December 2003 with the aim is to finalise strategy by early 2004. The key issues are numbers and balance, multidisciplinary, duration (DTA’s), career development and involvement of industry.

Q\ BBSRC hasn’t mentioned gender groupings, where does your organisation stand on these issues?

A\ We do collect some data on the gender and ethnicity of the research students we support although I believe it is patchy and it is an issue we should look more closely at.

Q\ In terms of differential stipend, is it the applicant that applies for an increase in stipend or is it the BBSRC that suggest it?

A\ BBSRC is currently discussing this issue, it will be interesting to see what comes out of the consultation.

Response\ In ‘hot spot’ areas of biological science, where attracting students is a major problem, an increase in stipend would almost certainly ease the situation. We are often losing the best PhD students to more attractive positions outside research.

## **Round Table**

- One thing I find encouraging is that the Academic fellowship Scheme committee had representatives from the RCs and they were clearly sharing their knowledge. It seems to me, however, that there are still a number of issues that need to be resolved.
- One issue that did arise several times today, was that of support of relatively senior research assistants. This is clearly a problem across all subjects and equally a problem for funding councils. All these areas of funding are up for review at the moment. If the dual support system worked better I would have the money to pay research staff and postdocs. How are we going to link these issues and resolve them?
- It is a double edged sword, in one way consultations would mean that issues are being thought through and that resolutions may be generated but on the other hand there has been so many that people will not put up with any more. However it must be ensured that all parties are in communication for it is certain that they all have the common goal of improving sustainability within the system.
- To bring in a point made by MW, due to the drop in funding from our funding councils, especially HEFCE, they have used mechanisms for computing our funding which rewards us for approaching more and more academic staff whether or not we have the infrastructure in place to support them.
- HEFCE is a quango but its policy is out of line with other departments or funding agencies.
- HEFCE are spending government money and the cynical view is that they are working towards government targets of 50% participation.
- It seems that the drivers that have been applied are operating in different directions. In some cases they are driving us away from the objectives they want us to achieve.
- As mentioned earlier I am worried about whether HEFCE are keen to deliver the objectives of 50% participation in HEIs. Of course the cheap way to do this is not in science.
- Recruitment is a major problem and we have touched on many of the issues today. Further adding to the difficulty is the vast number of scientifically able students going into medicine. This was not the case 50 years ago, when all the brightest students went into the sciences.
- This goes back to the society's view on science.
- One of the trends in the speeches was that there is a need to have a threshold unit size of research groups for funding purposes. If HEFCE's appalling suggestion to cut teaching funds goes ahead, departments will be forced to shut.
- Really need to stop reduction in teaching funding as it will seriously detriment research and technology.

- At the end of their degree we ask students what they enjoyed the most and with out fail they will say their research projects, however, theses students will not progress onto a PhD due to their debts.
- Increasing the PhD stipends will ease this situation.
- The undergraduate research project is the only opportunity for students to carry out independent research but departments are finding it increasingly difficult to sustain. If funding is dropped we could be in danger of loosing them all together.
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