

November 14<sup>th</sup> 2002

### **Joint funding bodies review of research assessment**

The Biochemical Society will be making a detailed submission to the review in the next couple of weeks through the UK Life Sciences Committee. But in the meantime we thought that your review team would find it constructive to learn the outcome of a membership consultation on the future of research funding and assessment that the Society conducted over the summer. The great majority of respondents were academic researchers who will be directly affected by your review. I have enclosed a report of the consultation, but would like to highlight the following points:

#### ***The RAE process has dramatically lost support***

- 82% of respondents considered strongly or very strongly that the credibility of the RAE has been seriously undermined by the inability of funding councils to reward improved performance following RAE 2001.
- Only 21% considered that the RAE is the fairest and most rigorous system available for assessing research quality. In previous consultations there had been a strong measure of grudging support for the RAE despite its burden on time and resources precisely because it was deemed the fairest system.

#### ***All capable of performing quality research should have the opportunity to do so***

- 92% considered that the guiding principle should be that quality research is funded wherever it is to be found.
- Only 34% considered that the sector should move towards a core of internationally competitive universities funded to carry out high cost research and a larger number performing research to support local industry and regional development.
- Only 29% considered that the funding councils should provide sufficient money in other funding streams to encourage more universities to diversity away from research.

#### ***Little consensus on what should replace the RAE***

- Only 13% supported the concept that groups graded 5\* in RAE 2001 should not have to enter the next assessment round.
- 41% supported the idea that departments presently funded should be responsible for maintaining the quality of their research, with periodic external audit. This would be a combination of what your review consultation describes as 'self-assessment' and 'historical ratings'.
- Opinions were evenly split on the acceptability of different forms of algorithms:
  - Overall, 38% supported the idea of funding council money being related to an output parameter such as impact factor of published work.
  - Similarly, 33% supported funding council money being related to research grant income.The reasons for the differences in opinion have been explained in previous submissions to HEFCE.
- There was lesser support, 26%, for funding council money being related to the reputation of a department among peers, which your review consultation also refers to as an 'algorithm' approach.

Notwithstanding the unpopularity of the RAE, the Biochemical Society's Policy Committee considers that the future assessment of research must continue to be based on expert view. It is essential that the process commands the respect of the research community as being thorough, fair and transparent and it seems to us that this is best achieved by some system of expert review. In order to be fair the system must account clearly for the contributions to research and teaching of all academics. Furthermore, it is vital that the level of funding for leading research departments is sufficient to provide the "well found laboratory" envisaged in the dual support system. This funding must come from two streams: the QR element of Funding Council support to universities and enhanced overheads from the Research Council funding stream.

Yours sincerely,

Professor J R Coggins  
Chair of Policy Committee

Enclosure: Biochemical Society report "The future of Research Funding and Assessment"

The Future of Research Funding and Assessment

***A report from the Policy Committee of the Biochemical Society.***

**Summary**

231 Members of the Biochemical Society responded to this consultation, principally academics working in universities. Respondents considered strongly that the inability of funding councils to fund the outcome of Research Assessment Exercise (RAE) 2001 adequately has seriously undermined the credibility of the RAE process. They felt that the benefits no longer justify the costs and, surprisingly, that the RAE is not the fairest and most rigorous system available. The outcome of RAE 2001 should be funded at the same grade weightings relative to 5\* as used in RAE 1996.

It was emphasised that the fundamental principle in research funding should be that quality research is funded wherever it is found. There was little support for money to be provided in additional funding streams to persuade departments to move away from research, nor for the selective funding of a research 'elite'. Respondents believed that research is required to inform high quality teaching but the level of support depended on how the question was presented. If it is essential to reduce the cost of funding research infrastructure about half the respondents would support the idea of such funding being allocated to one site to serve a collaborating cluster of departments in neighbouring universities.

There was strong opposition to the suggestion that high-performing departments in RAE 2001 should not have to submit to the next assessment round. Non of the alternative simpler processes suggested to replace the RAE received strong support. These based funding on total research grant income, an output parameter such as impact factor of published work, or reputation of a department among peers. It was not clear whether respondents preferred a 5-or a 7- year assessment cycle.

**Introduction**

This report summarises the out come of an on-line consultation of Biochemical Society members carried out during June and July, 2002. The consultation sought views on the outcome of RAE 2001, the general principles of research funding, and possible future ways of assessing and funding research that have been suggested by government bodies, the funding councils, or senior academics.

**Characteristics of respondents**

231 Members completed the consultation questionnaire. Not surprisingly in view of the subject of the consultation the great majority of these (90%) worked in the UK or Republic of Ireland and most (88%) worked in academic institutions (Table 1). There was a fairly even distribution of respondents among the three age bands. The most frequently stated job types were research (40%) and teaching and research (39%). Of those working in an academic institution the majority (75%) had tenured positions, with 30% having fixed-term contracts. Senior academics were thus particularly strongly represented.

***Results of the survey***

Members were asked to score a series of 20 statements on a scale of 1-5, corresponding to strong disagreement to strong agreement. Statements 1-9 were about general principles of research assessment and funding, statements 10-20 more specifically about possible future approaches to research assessment.

Although many statements elicited a clear bias towards one side of the response scale some elicited a bimodal distribution indicating considerable difference of opinion within the survey. Some statements also elicited relatively large numbers of 'neutral or no opinion' response, suggesting that the opinion of the biochemical Higher Education community is not clear cut on a number of issues.

### ***General principles of research assessment and funding***

The very clear feedback from this section of the questionnaire was that the guiding principle of research funding should be that quality research is funded wherever it is to be found (92%) agreed or strongly agreed statement 4, with the great majority of these (74%) strongly agreeing (Table 2). The way that money was distributed by the Higher Education Funding Council for England (HEFCE) after RAE 2001 caused a further increase in funding selectivity and severe financial problems for a large number of departments whose research performance had improved but money did not follow. More than two thirds of respondents considered that the funding councils should fund the outcome of RAE 2001 at the same grade weightings relative to 5\* as used in RAE 1996 (statement 1) Six times as many agreed or strongly agreed as disagreed or strongly disagreed, but a relatively large proportion (21%) had no definite opinion. The overview report of the biological sciences RAE panel noted that little applied work was submitted. It was speculated that this might be because researchers perceived that such work would be regarded less favourable than basic research by panel reviewers, and so this question was probed in the present survey. Little could be concluded from the responses (statement 3). 33% agreed that there is this perception, but the majority (52%) had no definite opinion.

The funding councils have argued that it is not possible to fund adequately the present volume of research, and several proposals have been made to reduce the volume. The majority of respondents (52%) did not support the concept of only funding a core of internationally competitive universities to carry out high cost research, with a larger number of institutions performing research to support local industry and regional development (statement 2). More than half the respondents in this grouping strongly disagreed with the idea. However, the bimodality of respondents (34% agreed) may show support for this strategy in a minority of institutions. There was also little support overall (29%) for funding councils to provide sufficient money in other funding streams to encourage more departments to diversify away from research, although a relatively large proportion of respondents (29%) was undecided (statement 5). There was more support (49%) for some form of collaboration between departments at neighbouring universities so that funding to support research infrastructure could be allocated to one site to serve the cluster (statement 6), but again a bimodal distribution of views was apparent (34% disagreed). An issue that impinges on the way that research funding is distributed is whether high quality teaching can be carried out in an institution that performs little research. When the question was presented directly 80% of respondents considered that research practice is essential (statement 7). However when asked whether scholarship can be a substitute for research practice in informing teaching 34% also agreed this statement (number 8), which appear contradictory. Another 20% had no firm opinion, whilst 46% disagreed.

The dual support system of funding research is considered to provide flexibility to universities, and some opportunity to develop speculative work for which it may be difficult to obtain grant income and for new research groupings to emerge. In the present survey a large majority of respondents that expressed an opinion favoured dual support being retained (53% overall, 9 times as many as disagreed), but a large proportion had no definite opinion (41%). This response suggests a slackening of support for the dual support system.

### ***Future Method of Research Assessment***

The RAE consumes time and resources, but researchers have been prepared to accept it because it is widely regarded as being the fairest and most rigorous system available.

However, in the present consultation only 21% supported this proposition while 47% disagreed. A large proportion (32%) had no definite opinion (statement 10). Consistent with this finding, 82% of respondents considered that the credibility of the RAE has been seriously undermined by the inability of the funding

councils to fully reward improved performance following RAE 2001 (statement 12). 57% thought that after 3 rounds of the RAE the benefits no longer justify the cost of the process (statement 11). Of those with a definite view 4 times as many respondents agreed as disagreed, but many had no firm opinion (30%). There was little support (28%) for the idea floated by the Minister of Higher Education that there should be some differentiation in funding within the top performance grades to reward research considered likely to benefit the British economy (statement 20).

Several alternatives to the RAE have been suggested. None commanded universal support in the present consultation. Views were very evenly divided (41% for, 42% against) on the concept that there is no longer need for an RAE type process and that departments presently funded should be responsible for maintaining the quality of their work, subject to periodic external audit (statement 13). A large majority (79%) opposed the idea that departments receiving the highest grade in RAE 2001 should not have to enter the next round of assessment (statement 14). Views were evenly divided with relatively large numbers of undecided, on proposals to replace the RAE with simpler processes in which funding would be related to research grant income (statement 15) or to an outcome parameter such as impact factor of published work (statement 16). 55% opposed the proposal that funding should be related to the reputation of a department among peers in the UK and abroad, and only 26% supported it (statement 17).

Half the respondents considered that a 5-year cycle is appropriate for assessing research performance, with a further 21% having no definite opinion (statement 18). Since only 29% considered a 5-year period inappropriate it might have been expected that no greater a proportion than this would support a longer cycle such as 7-years. In fact, 52% did so, with 26% against (statement 19). More than twice as many respondents expressed 'strong agreement' for a 7-year cycle as for a 5-year cycle. It may be that some respondents completed question 18 before reading question 19; or that they did not have particularly strong views either way and considered a 5-year cycle to be fair, but a 7-year cycle to have definite advantages. One respondent made the comment regarding the suggested justification for a 7-year cycle "but how does one obtain funding for speculative research and risk-taking?".

### ***Views of 'academics' alone***

Since the issues addressed in this consultation were of particular relevance to those working in academic institutions it was interesting to compare the views on key questions of tenured and fixed-term contract staff ('academic') in such institutions with respondents overall (Table 3). This grouping constituted 77% of the respondents, so no very startling results were expected. Opinions on some issues were sharper, and there tended to be a smaller proportion of undecided. In particular, academics considered more strongly that:

- The outcome of RAE 2001 should be funded at the same grade weighing relative to 5\* as used in RAE 1996 (76 compared to 68%);
- The credibility of the RAE has been seriously undermined by under-funding the outcome of RAE 2001 (88 compared to 82%);
- After 3 rounds of the RAE the benefits no longer justify the costs (62 compared to 57%);
- That the dual support system should be retained (59 compared to 53%).

### ***Additional comments of respondents***

Many respondents accepted the invitation to make additional comments, and these covered a wide range of issues related to research assessment. The most frequently mentioned subjects are listed below:

- Re statement 3, universities should focus on basic research not research directed to industry;
- All researchers in a unit who have produced assessable work should be included in the RAE;
- The next assessment process should require departments to demonstrate that they implement the Research Concordat and have established systems for managing the careers of contract research staff;
- The RAE does not take into account value for money. Large, expensive groups are viewed as being better than smaller, cheaper groups that may be producing similar high impact papers;

- The gap between 'rich and poor' has increased in England compared to Wales and Scotland because of the different ways that grade 3a is funded after RAE 2001;
- Under RAE it is difficult to compare the quality and standards of publications across different disciplines;
- Re questions 7 and 8, scholarship may be sufficient to inform general university teaching but specialist final year Honours teaching benefits from an active research environment.

## **Conclusion**

The biological sciences community was essentially content with the outcome of RAE 1996 and in consultation made by HEFCE and other agencies after that round the Biochemical Society commented that the resultant funding selectivity was about right. The responses to questions about the RAE in the present survey were clearly coloured by the fact that the distribution of funding after RAE 2001 resulted in an increase in funding selectivity and, in many cases, a lack of reward for improved performance. There was strong agreement that this has seriously undermined the credibility of the RAE, and it probably accounts for the feeling that the benefits no longer justify the costs and that the RAE is not the fairest and most rigorous system available. The latter finding was surprising, since the majority of feedback to the Society when responding to external consultations prior to RAE 2001 was that the RAE should be retained for precisely those reasons. At the announcement of the outcome of Spending Review 2002 the government said that the money to be made available for science could not be used retrospectively to meet the shortfall in research funding for 2002/3. Respondents made clear that they would want the funding in subsequent years to be restored to the same grade weightings relative to 5\* as used in RAE 1996.

The government wants universities to diversify their missions and focus on what they do best. The funding council support this objective, in part because they are unable to fund fully the current volume of research. In the present survey biochemists emphasised that the guiding principle, which HEFCE has also espoused, should be that quality research is funded wherever it is to be found. Biochemists showed little enthusiasm for money to be provided in other funding streams to persuade departments away from research. Nor was there support for the sector to move towards a small, well-funded, university research 'elite' and a larger number of institutions performing less expensive research to support regional needs. This may be the model that the government favours. The Education Secretary spoke recently of all universities being encouraged to 'play to their strengths' but that all should get basic support for the full spectrum of university activities (*Times Higher Education Supplement, 12 July 2002*). The statement that provide teaching also need to engage in research is often made, and indeed, was repeated in the Commons Science and Technology Committee report of its inquiry into the outcome of RAE 2001. Respondents to the present survey believed this, but the strength of belief depended to some extent on the way the question was presented. The argument over the linkage between research and teaching may not be as secure as it appears. If it is essential to cut the cost of underpinning research a mechanism that appeared to have more support from the biochemistry community was the concept of departments at neighbouring universities organising into collaborating clusters and funding for research infrastructure being allocated to just one site. This was proposed by Sir Martin Harris (Manchester University) earlier this year (*Times Higher Education Supplement, 4 January 2002*).

HEFCE is carrying out a fundamental review of the RAE led by Sir Gareth Roberts. While respondents to the present survey expressed their disillusionment with the RAE they did not like a number of alternatives that have been suggested either. There was no consensus that a formal assessment process is not required, and strong opposition to the proposal that high-performing departments in RAE 2001 should not have to take part in the next assessment round. In other recent consultations on this issue the two alternatives to the RAE mentioned most frequently by the biological sciences community have based funding council support on the total amount of research grant income, or on a research output parameter such as impact factor of published work. However, each of these attracted as much opposition as support at the time. The former could be seen to follow research that is in vogue and for which it may be easier to command grant income, the latter is questioned because output parameters of the type proposed are unreliable indicators of comparative quality. The same outcome was observed in the present survey. The opposition to the concept that funding council support should be related to the reputation of a department

among peers is presumably because it is not considered a sufficiently open, transparent, and robust process.

**Table 1 Characterisation of respondents to the survey**

	%		%
<b>Gender</b>		<b>Age range</b>	
Male	71	20-35	29
Female	29	36-39	36
		50+	30
		Not stated	5
<b>Country of work</b>		<b>Place of employment</b>	
UK or Republic of Ireland	90	Industry	5
Abroad	8	Academic Institutions	88
Not stated	2	Hospital	1
		Public Authority	2
		Other	4
<b>Job type</b>		<b>Position if in acad. Institution</b>	
Higher Education teaching	7	Student	12
Teaching & Research	39	Fixed contract	30
Research	40	Tenured	57
Teaching & management	1	Not stated	1
Teaching, res & management	8		
Management & admin (industry)	3		
Other	1		
Not stated	1		

**Table 2 Overall views of respondents to the survey**

1=strongly disagree, 2=disagree, 3=neutral or no opinion, 4=agree, 5=strongly agree							
	Statement	1	2	3	4	5	% Agree/ strongly agree
1	The Funding Councils should fund the outcome of RAE 2001 at the same grade weighting relative to 5* as used in RAE 1996.	6	19	48	55	103	68
2	The sector should move towards a core of internationally competitive universities funded to carry out high cost research, and a larger number performing research to support local industry and regional development.	62	58	32	47	32	34
3	The perception is that the RAE still attaches less weighting to applied research in individual submissions than to basic research.	5	28	121	50	27	33
4	The guiding principles should be that quality research is funded wherever it is to be found.	3	8	8	36	176	92
5	Funding Councils should provide sufficient money in other funding streams to encourage more departments to diversity away from research.	28	65	67	41	25	29
6	Departments at separate, neighbouring universities should organise into collaborating clusters and funding to support research infrastructure allocated to one site to serve the cluster.	17	61	39	82	30	49
7	Research practice is essential for high quality teaching in universities.	7	26	12	65	120	80
8	Scholarship can be a substitute for research practice in informing up to date high quality teaching.	22	82	47	68	10	34
9	Whatever method of research assessment is used in future, the dual support system should be retained.	5	8	94	61	61	53
10	The RAE is the fairest and most rigorous system available for assessing research quality.	39	68	75	39	8	21
11	After 3 rounds of the RAE the benefits no longer justify the cost of the process.	8	23	69	69	61	57
12	The credibility of the RAE has been seriously undermined by the inability of Funding Councils to reward improved performances following RAE 2001.	5	6	31	71	117	82
13	There is no longer need for a RAE process. Departments presently funded should be responsible for maintaining the quality of their research, with periodic external audit.	24	72	40	54	39	41
14	Departments graded 5* in the present round should not have to enter the next assessment round.	88	94	18	15	16	13
15	A simpler process should be introduced, with Funding Council support directly related to research grant income from agreed sources.	28	55	68	58	17	33

1 6	A simpler process should be introduced, with Funding Council support related to a research outcome parameter such as impact factor of published work.	26	68	47	71	17	38
1 7	A simpler process should be introduced, with Funding Council supported related to the reputation of a department among peers in the UK and abroad.	47	78	45	51	9	26
1 8	A 5-year cycle is appropriate for assessing research performance.	10	54	48	90	23	50
1 9	A longer cycle (e.g. 7 years) should be introduced to encourage more speculative research and risk-taking.	11	47	51	64	53	52
2 0	There should be some differentiation in funding within the top performance grades to reward research considered likely to benefit the British economy, as suggested by the Department for Education and Skills.	44	63	57	54	10	28

**Table 3 Comparison of the views on certain issues of tenured and fixed-term contract staff at academic institutions (“academics”) with respondents overall**

	Statement	% Agree/Strongly agree	
		Academics	Respondents overall
1	The Funding Councils should fund the outcome of RAE 2001 at the same grade weightings relative to 5* as used in RAE 1996.	76	68
2	The sector should move towards a core of internationally competitive universities funded to carry out high cost research, and a larger number performing research to support local industry and regional.	32	34
5	Funding Councils should provide sufficient money in other funding streams to encourage more departments to diversify away from research.	30	29
6	Departments at separate, neighbouring universities should organise into collaborating clusters and funding to support research infrastructure allocated to one site to serve the cluster.	47	49
9	Whatever method of research assessment is used in future, the dual support system should be retained.	59	53
10	The RAE is the fairest and most rigorous system available for assessing research quality.	23	21
11	After 3 rounds of the RAE the benefits no longer justify the cost of the process.	62	57
12	The credibility of the RAE has been seriously undermined by the inability of Funding Councils to reward improved performance following RAE 2001.	88	82
15	A simpler process should be introduced, with Funding Council support directly related to research grant income from agreed sources.	37	33
16	A simpler process should be introduced, with Funding Council support related to a research outcome parameter such as impact factor of published work.	40	38
17	A simpler process should be introduced, with Funding Council support related to the reputation of a department among peers in the UK and abroad.	27	26
18	A 5-year cycle is appropriate for assessing research performance	48	50
19	A longer cycle (e.g. 7 years) should be introduced to encourage more speculative research and risk-taking.	54	52