

RAE 2001, UoA 5 – 8 Final Report

The Panel for UoA 5 – 8 applied the criteria, and used the working methods, published in its *Criteria Statement*. It sampled over 25% of the outputs in all submissions, and in some cases much more. The Panel was impressed by the generally high quality of submissions, and by the care that had clearly been taken in their preparation. It noted, however, some variability in the responses to information requested, and particularly in the case of RA6 the Panel would have welcomed more detail in some submissions. Where Overseas Advisors had been consulted, their assessments confirmed the ratings made by the Panel.

In some submissions, there was evidence of changes in research organisation due to institutional restructuring since 1996. This was the case in many submissions to UoA5 and UoA6, some to UoA7 and a few to UoA8. In many cases this had facilitated the development of interdisciplinary research. While noting that submissions from several institutions had retained or enhanced their competitiveness without restructuring, the Panel gained the impression that, where restructuring had occurred, it had been generally beneficial in developing critical mass and facilitating the emergence of coherent research structures.

The Panel received cross-referrals of research activity (including some quite large groupings) that came within the subject area of UoA5-8 and had been submitted by institutions to other UoAs. The Panel assessed the outputs in these cases in the same way as those in submissions made directly to it. The standard of research activity in the cross-referrals received was considered to be broadly comparable in range to that in submissions made directly to UoA5-8.

The recruitment of new staff at all levels was a feature in many submissions. In some cases a substantial proportion of the individuals submitted had been recruited since 1996. The Panel was impressed by the quality of the research experience of many such staff, and considered that there were likely to be substantial research benefits from these appointments in the future.

The Panel noted some variation between UoA 5, 6, 7 and 8 in indicators of the vitality of the research environment, including mean levels of external grant income, and mean numbers of research students. Overall, the Panel considered that the mean level of performance suggested by these indicators was high, and generally accorded with the scientific standards suggested by other indicators, for example research outputs. In addition, the Panel found that in most submissions there was clear evidence of a research environment capable of delivering high quality training for graduate students.

Scientific areas common to many submissions, and providing many examples of international excellence, included neuroscience and developmental biology, cell

and molecular biology including cell signalling, and molecular pharmacology. The Panel considered that the quality of research in these areas within the UK was generally high, and this view was confirmed by the reports from the overseas advisors. In addition, there were many specific areas represented in individual submissions where there was also high quality work being done; examples include toxicology, and systems physiology, pharmacology and morphology. The Panel was pleased to note clear evidence in some submissions of the integration of cellular and molecular approaches with systems biology in whole organisms, including man. The Panel wished to emphasise the importance of maintaining the research base particularly in these small or specialised areas. It considered that in general the base in this subject area is capable of providing the foundation for future developments in the UK appropriate to the post-genomic era.

Taking all the evidence together, the Panel was impressed by the progress made in the subject area since 1996. Many of the enabling technologies on which future progress will depend are common to the four UoAs covered by this Panel. Even so, there are distinctive features in each UoA which the Panel would wish to see maintained. The evidence available from statements of research strategies for the future gave the Panel optimism that the present momentum of research in the areas covered by UoA 5 - 8 will be maintained.