



EPSRC's response to the panel recommendations in the EPSRC Chemical Biology and Biological Chemistry Theme Day report

The EPSRC Theme Day on chemical biology and biological chemistry took place in London on 3 December 2013. The Theme Day was an important opportunity for EPSRC to gain a better understanding of the EPSRC research portfolio in this area and to scope the future focus and shaping of the portfolio. An expert panel chaired by Professor Herbert Waldmann (Max Planck Institute Dortmund and Technische Universität Dortmund) reviewed the portfolio of research. EPSRC would like to thank the panel for their hard work and the attendees for their valuable contributions on the day. EPSRC was pleased with the favourable review of the area given by the panel; particularly that research in the area is in the top tier internationally. The panel made a number of observations and recommendations and EPSRC's responses to the panel recommendations are given below.

1. Given the quality of science and the societal impact funding for chemical biology needs to be sustained or increased.

Response

EPSRC recognises that chemical biology is an important area of research and as such the rationale for the [research area](#) is to maintain funding. The Physical Sciences theme plans to maintain the current funding level for research in this area, relative to the rest of the portfolio, at least until the end of the current delivery plan period.

2. The size of individual research grants should be increased. To raise research groups to an internationally leading level, individual funding on an expanded scale is required to run the big, interdisciplinary groups needed to address the research challenges in chemical biology. Currently this may be possible for a very few UK groups, but for true international leadership this number should be increased. Further, younger, starting researchers in chemical biology in the UK require internationally competitive start-up packages and the EPSRC should devise a means to contribute substantially to such packages. The community also should raise their ambition and ask for more when writing their proposals if they need larger grants.

Response

EPSRC agrees that applicants should request the amount of funding that they require for their proposed research. EPSRC also recognises that multi-disciplinary projects may require more funds. There is flexibility for how much money can be requested for standard grants; these can range from small travel grants to much larger and longer proposals. It is the responsibility of the applicant to request the funds they need and to justify the costs in their proposal to satisfy peer review.

EPSRC has flexible funding schemes available to underpin research in key groups (Platform Grants) and for the best researchers to explore major research challenges (Programme Grants). Additionally, there are strategic package funds available from EPSRC to help universities to recruit the very best international researchers to work in the UK. Researchers interested in these mechanisms of funding are encouraged to discuss their plans with EPSRC. In the context of maintaining funding for chemical biology relative to other research areas, a number of larger grants being funded may result in fewer grants overall. However, there is opportunity for researchers to be co-funded by other Research Councils if they articulate novel research relevant to that council's remit.

It is the responsibility of universities to ensure that their new researchers are adequately supported at the start of their career. However, there are a number of funding schemes available to support early career researchers at the Research Councils: EPSRC offers First Grants, Early Career Fellowships and Standard Mode as opportunities for young researchers; MRC has the New Investigator Research Grant (NIRG) and the Career Development Award, amongst others; and BBSRC offers the New Investigator Scheme, David Phillips Fellowships and currently the FSA joint call: Early career research fellowships.

3. To better orchestrate funding on such a scale, EPSRC, BBSRC and other funding bodies should review their joint funding arrangements. Many delegates suggested to the panel that a EPSRC/ BBSRC joint panel would assess their applications more reliably. Another possibility could be to encourage joint funding between funding bodies for Fellowships to foster interdisciplinary work from the start of a project.

Response

There is no joint panel between Research Councils to fund cross-disciplinary research because the councils have a [cross-council funding agreement \(CCFA\)](#) in place to ensure that there are no gaps between councils' remits and that interdisciplinary and multidisciplinary research is effectively supported by the councils, either independently or in partnership. The CCFA also ensures that the peer review process is fair for interdisciplinary proposals and means proposals will only go through the peer review process once.

Applicants are encouraged to make use of the [remit query services](#); all the Research Councils provide this service. Applicants who submit an outline are guaranteed that a home will be found for their full proposal, with co-funding if necessary, and appropriate peer reviewers will be found. The chemical biology community also need to play their part by reviewing cross-disciplinary proposals as they would wish their proposals to be reviewed.

4. Research Councils should consider mediating the transition of projects as the remit progresses from one council to another.

Response

EPSRC portfolio manager contact details are provided on the EPSRC website and applicants are encouraged to speak to staff about their proposal prior to submitting; this also applies to other Research Councils. There are a number of Challenge Themes within EPSRC, some of which are cross-council, and chemical biology research has the potential to address a number of these. These include Energy, Manufacturing the Future and Healthcare Technologies Themes in particular. These themes actively encourage basic sciences to engage with problem-oriented research challenges. The panel noted that researchers in the area should give greater consideration to the biological problems their work will address. This is the case even if the work is not directed at a challenge theme.

Researchers may also want to consider requesting funds for impact activities under the pathways to Impact to facilitate the transition of their work to other Research Councils' remit, for example funds could be requested for workshops to engage biologists or clinicians in the research. Further information on eligible resources for Pathways to Impact can be found [here](#).

5. The panel strongly recommends that the Research Councils should truly collaborate and not compete in funding the best projects of chemical biology research. The councils need to assure that all projects will receive an expert review, and that no areas should be prejudged to be out of scope for funding.

Response

All Research Councils have a mission to fund high quality research. EPSRC works collaboratively with their Research Council colleagues and, as such, the Research Councils do not compete to fund projects because they have different remits and processes in place to allow proposals to be co-funded between councils. The Research Councils have the CCFA in place to ensure that no areas are pre-judged to be out of scope for funding and the remit query service so that we can provide advice on the most appropriate council for the proposed research prior to submission. The current EPSRC portfolio is 21.75% multidisciplinary (defined as grants where named investigators are from more than one department).

The Research Councils assure that all projects receive expert review and part of the CCFA is that, where appropriate, a council that is co-funding a proposal can recommend reviewers to the lead council. Expert review is a key part of our peer review process. EPSRC guarantees that its decision-making process relies on independent, expert comment. A proposal will be sent to at least three reviewers chosen for their expertise; these reviewers will include members of the EPSRC college (a body of credible reviewers, nominated and renewed by the research community itself) and at least one of those nominated by the applicant.

EPSRC suggests that researchers engage in dialogue with them early in the planning process to ensure that their proposal is submitted to the correct council and aligns with the appropriate priorities. It is also recommended to speak to colleagues who regularly submit to or review for the council to which you will be submitting, particularly if you are unfamiliar with the process. This will allow applicants to get an additional perspective on how their proposal

will be viewed by the audience for which it is intended. Applicants can further help the review process by nominating reviewers who can cover the breadth of their proposal.

6. Assure that doctoral students receive efficient and high-quality research training among the diverse and large community of groups. Ph.D. students with a multi-year research horizon are the core group of researchers in chemical biology. However, post-doctoral researchers are critical as well, and means are needed to extend their projects too.

Response

EPSRC agrees that EPSRC-funded students should receive high quality training regardless of the mode of support. The Research Councils have produced a [statement of expectations](#) for universities on the environment and training that should be provided. Post-doctoral researchers are supported through research grants and researchers are encouraged to request grants for the length of time needed to complete the project. Key groups with significant research funding from EPSRC can also apply for Platform Grants, which provide flexible funding to underpin research in these groups and allow them to retain their key researchers between grants.

7. The EPSRC should ascertain that CDTs will not restrict research in chemical biology at the graduate level to a very limited number of institutions. In this regard, the amount of DTP funding, the way it is distributed and whether any is expected to support chemical biology should be clarified. EPSRC should raise awareness of the EPSRC Doctoral Prize mechanism for extra funding of up to two years for the best EPSRC-funded students once they have completed their PhD. (Further information on the prize can be found [here](#)).

Response

EPSRC is a major funder of students (over 9,300 students were funded by EPSRC as of March 2012). Some students in chemical biology are funded through CDTs but universities also have other resources, including the EPSRC-funded DTP, available to them to fund students in whichever area is important to them. Currently how the DTP funds (linked to research grant income) are allocated is decided by the university.

All universities that receive a DTP allocation are entitled to use some of the funds to support the Doctoral Prize, enabling them to retain the best students in research careers and for the students to get more impact from their PhD projects. Institutions may use up to 10% of their DTP allocation to support the Doctoral Prize. The selection of the awardees and the exact nature of the support provided is at the discretion of the institution, the flexible support should target the top ~10-15% of EPSRC-funded students at a meaningful level. Research grants should request the appropriate support for the proposed projects; in some cases it may be appropriate to recruit graduate-level staff, rather than post-doctoral level, to carry out the work on the project.

Conclusion

The recommendations and observations made by the panel suggest that there is a key role for EPSRC to communicate with the chemical biology community to raise awareness of schemes for funding, remit and the peer review process. There is also an important role for the chemical biology community to enter into a dialogue with the Research Councils prior to submitting their proposal to get advice on the size and where the remit of their proposal lies. Researchers can speak to portfolio manager contacts for their area of research or use the remit query service.

Researchers also need to think about aligning their projects more with biological problems, a point raised by the panel. The area of chemical biology is also in a good position to address a number of societal challenges with the breadth of funding available and researchers should take advantage of this.