26 March 2013

Society for General Microbiology Consultation Response

Higher Education Funding Council for England – Open Access and Submissions to the Research Excellence Framework post-2014

Introduction

The Society for General Microbiology (SGM) is a membership organisation for scientists who work in all areas of microbiology. It is the largest learned microbiological society in Europe with a worldwide membership based in universities, industry, hospitals, research institutes and schools. The SGM publishes key academic journals in microbiology and virology, organises international scientific conferences and provides an international forum for communication among microbiologists and supports their professional development. The Society promotes the understanding of microbiology to a diverse range of stakeholders, including policy-makers, students, teachers, journalists and the wider public, through a comprehensive framework of communication activities and resources. Further information about SGM is provided in Appendix 1.

The Society for General Microbiology's academic publishing activities

SGM is a learned society with a membership of about 4,500 microbiologists at all stages of their careers from undergraduate to senior figures in industry and academia.

The SGM publishes four widely-respected academic journals: *Microbiology*, *Journal of Medical Microbiology*, *Journal of General Virology* and *International Journal of Systematic and Evolutionary Microbiology.*

The importance of journal income to the society's work

The surplus the society generates from the sale of its journals to libraries is the primary source of income for the society. In 2011, the latest year for which data are available, journal income less costs (operating surplus) amounted to £1,921k.

As an independent charitable institution we use this surplus exclusively to support our charity remit, as follows:

1. Working with schools to support their microbiology teaching with training and resources
2. Part-funding the training of undergraduate and post-graduate students
3. Advising parliamentarians and government agencies on microbiological issues of public concern

4. Hosting policy forums that bring together practitioners and scientists from government, NGOs, private sector and universities to formulate solutions to pressing problems, such as infectious disease
5. Organising scientific conferences that foster international knowledge exchange, thus accelerating scientific discovery
6. Funding researchers so that they can develop their careers in fruitful directions, including funding them to travel overseas to learn new skills
7. Organising and supporting events that contribute to the public understanding of science

We therefore believe our journal income to be an important and essential counterpart to government and private-sector funding for a key area of UK science concerned with the control of infectious disease, improvements in agricultural production and food safety, and developments in biotechnology and the bio-economy.

Key points

Overseas authors

Given HEFCE's remit, the policy takes no account of the impact of overseas authors. SGM's journals have over 90% of authors coming from outside the UK. We cannot look at the UK in isolation through an exclusively national policy. We would therefore like HEFCE to consider in detail the ways in which its Open Access (OA) policy will impact journals published by learned societies.

Concerns with a mixed Gold/Green economy

The mixed Gold/Green economy (75% and 25% of total publications, respectively) currently proposed, and the considerable degree of flexibility apparently accorded to grant-receiving institutions, means that a highly complex thicket of different contracts may develop. Learned society publishers, unlike the major commercial firms, do not have the capacity to run large marketing/operations departments to cope with this complexity. We would like to gain a clearer picture of how individual institutions will interact with us.

Gold may turn out to be a more sustainable model because it offers the possibility of a sustainable income for learned society publishers, with Article Processing Charges (APCs) replacing subscriptions in a straightforward manner, and the avoidance of complex contractual arrangements. Many do, however, believe that a major opportunity may be being missed, namely, to develop institutional, national, or supranational electronic archives.

We believe there is a need to consider most carefully the publishing models on offer, the complex effects of these models on academics publishing science, and on learned society publishers such as SGM seeking to disseminate that science. The issue is important if we are to design a system that is workable, sustainable over the long-term, and, vitally, ensures that excellent science continues to be published.

Clarification of the ways in which universities will distribute OA funds

We would like to see clarifications on the following questions:

- If publication funds are primarily in the hands of faculties, and the funds are limited, then it is not clear what criteria will be used to select which manuscripts will be funded.
- How much money will each university receive to fund APCs?
- How will the money be distributed?
- What happens for multi-author works from multiple institutions in multiple countries funded by multiple organisations?
- Will a 'denial of funding' mean that articles will not get published in high impact journals, or not at all, unless authors pay the APCs out of their own pockets?

Risks to career development for scientists with new ideas

Funds will be channelled to universities to pay OA publication charges rather than through individual research grants. There is a risk that this approach:

- increases academic inequality both across and within institutions, by linking prestige in research and publishing to the capacity to pay APCs, rather than to academic qualities. This has particularly severe implications for postgraduate students, postdocs, and early-career researchers;
- threatens academic freedom through pressures on institutions to distribute scarce APC resources using standards and criteria other than peer review, with patronage being a potentially significant factor; this means we will not have the resources to publish all of our work and that the gatekeeper will move from the principal investigator to individuals or groups of individuals higher up the management chain.

We need to ensure that any changes do not impact negatively on academic freedom – i.e., the ability of scientists with new and potentially disruptive ideas of the highest scientific quality to publish these ideas, and build a career. We should be seeking to retain and nurture our lively, inventive, and productive post-doc community. This community is central to future scientific advance in Britain.

Funding burden

The burden of APC payment will fall largely on the top 30 UK universities, which publish most of the research in journals of record.

Effect on applied research

Not all of the microbiological research work in universities, particularly that concerned with the current government's applied/industrial research agenda, will be high-impact discovery journal compatible (even though it may actually have more impact in terms of healthcare, economic growth, etc.). OA funding policies need to be designed so as not to jeopardise the publication of such work. In the absence of adequate funds, will universities end up rationing which work gets published? Clearly, they will want to use these funds for publishing in journals with the highest impact. The OA system has major implications for career development.

Effect on the integrity of peer review

A significant number of journals have been established recently to 'cash-in' on the OA business model. This is putting a significant strain on the expert academic community of referees who provide their services free of charge. The combination of the use of less expert referees and the income from the author-pays models is likely to result in lower-quality refereeing and the increased appearance of sub-standard papers. There could be downstream impacts on the reliability of scientific data with detrimental consequences across a range of areas including patient safety, environmental protection, and industrial innovation.

Open data

We believe the delay in examining open data is appropriate, as this issue is different from questions around OA for published material.

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Appendix 1

Vision

A world in which the science of microbiology provides maximum benefit to society.

Mission

To promote high-quality microbiological science, both nationally and internationally, to a diverse range of stakeholders.

Rationale

The potential socio-economic benefits arising from microbiology are substantial. They include:

- A healthier future (for humans, animals and plants) and a better quality of life, within the context of a sustainable natural environment.
- The development of biotechnology products (such as food, drinks, biopesticides, biofuels and medicines), which generate wealth and employment, and so support growth and innovation.
- The advancement of scientific knowledge, as a benefit in its own right, and to allow us to plan for the future and contribute to international solutions for global challenges, such as climate change, the burden of disease and food security.

Strategic priorities

To achieve its Vision and Mission, the Society will work towards the strategic priorities below.

- Publishing: to contribute to the science of microbiology through high-quality publications.
- Scientific conferences: to hold international scientific conferences to disseminate research knowledge and provide a forum for communication between microbiologists and to grow and support communities among them.
- Raising awareness: to inspire and educate people about microbiology, and allow them to make informed decisions which recognize the importance of microbiology and its advances.
- Influencing policy: to ensure that appropriate scientific information and expert opinion are made available to policy- and decision-makers and that the improvement of resources and infrastructure for microbiology is supported.
- Professional development: to promote microbiology as a career from school level onwards and support career and professional development of microbiologists.

The Society is a Charity registered in England and Wales (No. 264017) and in Scotland (No. SC039250) and a Company Limited by Guarantee, registered in England and Wales (No. 1039582).

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