

“The impact of COVID-19 on researchers” Phase 2 survey

Introduction

Earlier this year the Biochemical Society prepared a survey, with input from its Policy Advisory Panel (PAP), to assess the impact of the COVID-19 pandemic on researchers in the molecular biosciences. This report summarises the results of the second phase of this survey. A further piece, framing these results within the remit of the Society and its support of the molecular bioscience community, will be separately published in *The Biochemist*. All information related to the Society’s response to the Covid-19 pandemic can be found on our [‘Covid-19 Hub’ site](#).

Summary of findings from the April 2020 “Impact of COVID-19 on researchers” survey

As a result of the various lockdowns and restrictions implemented both within the UK nations, and globally, researchers have had disrupted access to labs with adverse impacts to their experimental work. In the medium-long term, it was anticipated that this would result in a decrease in research output, with a disproportionate impact on those at the early stages in their careers who are more reliant on new experimental data collection for career progression. At the time of this survey, respondents were, on average, able to complete 47% of their usual work. There was a concern amongst researchers for the future funding landscape both generally and challenges faced in relation to their specific grants. There was also an expectation that social distancing measures would change both laboratory and teaching settings and that there would be an increase in the use of virtual technologies for teaching and meetings in future.

Who responded to this survey:

- A total of 469 people responded to the survey
- 60% of respondents were based in the UK, with 40 % being outside the UK
- 55% established researchers; 25% Early Career Researchers (ECR); 15% postgraduate students; 5% other
- 54% of respondents were members of the Biochemical Society
- 21 respondents (either ECRs or established scientists) were based in industry

Key findings of this survey included:

Short-term impacts of COVID-19 on research: During immediate lockdowns placed in regions of many countries, 76% of researchers had no access to their laboratories. Some laboratories were granted access for research related to the COVID-19 pandemic or essential maintenance of equipment or animal colonies. Most of the subsequent impacts on research and researchers, certainly in the short- and medium-term, could be linked to the almost total shut-down of laboratory facilities or lack of data collection of non-laboratory based projects (e.g. clinical studies).

Medium-long term impacts of COVID-19 on research: The effects of regional or national lockdowns were anticipated to lead to a delay or decrease in research output or slow progress in the medium-long term (53% respondents). The lack of data collection and experimental work in the short-term was expected to be exacerbated by a delay to restarting efficient research (for example due to the time necessary to rebuild cell cultures or animal colonies). Delays or difficulties in sourcing reagents and the implementation of social distancing measures in returning to laboratory-based research were also referenced as factors slowing progress. Social distancing measures being enforced in laboratory

settings were referenced by a higher proportion of researchers in industry compared to those in academia (33% vs 15%). Several other medium-long term impacts were anticipated by the researchers, many of which are likely to be explained by the anticipated decrease in research output.

Permanent changes on research due to the impacts of COVID-19: Many researchers foresaw changes to working practices and particularly around travel. This included 36% of respondents planning to continue some aspect of remote working on a permanent basis, an increase in online meetings (15%), teaching (8%), conferences (6%) and generally travelling less for work (9%). Some 15% of respondents believed there would be no permanent changes, with research eventually returning to how it was before. ECRs were again the most concerned for career progression (12%) with 9% of ECRs considering moving away from research. Other changes referenced included long-term concerns for science funding and education practices and a view that social distancing measures will be in place for a long time.

A more detailed summary of the published results from the April 2020 “Impact of COVID-19 on researchers” survey can be found [here](#).

Summary of findings from the “Impact of COVID-19 on researchers” Phase 2 survey (October 2020)

Following on from the above, the Society was interested in assessing the continued impact of the Covid-19 pandemic six months after the phase 1 survey, complementing that phase 1 analysis with updated information on the main areas of concern that were raised in April/May 2020 (e.g., short- and medium-/long-term impacts of COVID-19 on research). For the phase 2 survey, an extended questionnaire was designed based upon input from Policy Advisory Panel and the Early Career Advisory Panel. This follow-up survey carried 16 to 24 mostly multiple-choice questions, taking respondents approximately 5-10 minutes to complete. Responses were analysed anonymously, and respondents did not have to reply to every question. As with the Phase 1 survey, the Society was keen to seek views from the global molecular bioscience community so that we can try to identify solutions and share learning from different approaches.

Who responded to this survey:

- A total of 615 responses were received
- Only 50% of respondents had participated in the Phase 1 survey
- 60% of respondents were based in the UK, with 40 % being outside of the UK
- 50% established researchers; 25% Early Career Researchers; 15% postgraduate students; 5% other
- 70% of respondents were members of the Biochemical Society
- 30 respondents (either ECRs or established scientists) were based in industry

Key findings of this survey include:

Short-term impacts of COVID-19 on research (Figure 1):

- 73% of respondents replied “I am / have been unable to produce new data, or have produced substantially less data, with significant impact on my research” (this value went up to 77% for ECRs);
- 44% of respondents replied “I am experiencing/have experienced an impact on collaboration with colleagues” (this value went up to 46% for ECRs);

- 62% of respondents replied “I am experiencing / have experienced difficulties in effectively working in or accessing lab spaces, necessary reagents / experimental equipment and/or animal research facilities (including reductions in animal colony numbers if applicable)” (this value went down to 58% for ECRs);
- 43% of respondents replied “I am experiencing / have experienced an impact on my mental health or that of my staff” (this value went up to 51% for ECRs).

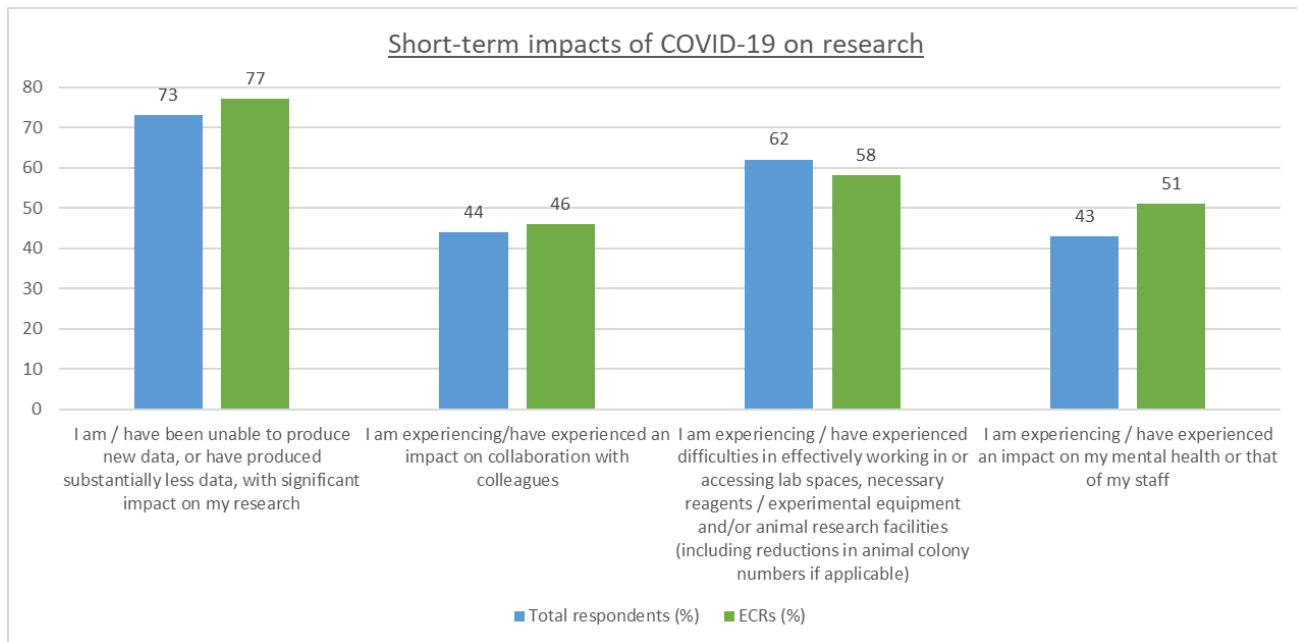


Figure 1: Short-term impacts of COVID-19 on research across all respondents (blue columns) and specifically for ECRs (green columns).

Medium-long term impacts of COVID-19 on research (Figure 2):

- 60% of respondents replied “I haven’t been able to collect enough new experimental data, am anticipating an impact on my career progression and might require a time extension for a specific project” (this value went up to 75% for ECRs);
- 55% of respondents replied “I am experiencing / have experienced difficulties in effectively working in or accessing lab spaces, necessary reagents / experimental equipment and/or animal research facilities (including reductions in animal colony numbers if applicable)” (this value was similar for ECRs);
- 41% of respondents replied “I am experiencing / have experienced an impact on my mental health or that of my staff” (this value went up to 46% for ECRs);
- 53% of respondents replied “I am concerned about the funding landscape, am experiencing challenges with my current grant(s) and /or anticipate challenges with upcoming grant applications” (this value was similar for ECRs);
- 17% of respondents replied “I am considering moving away from research” (this value went up to 26% for ECRs).

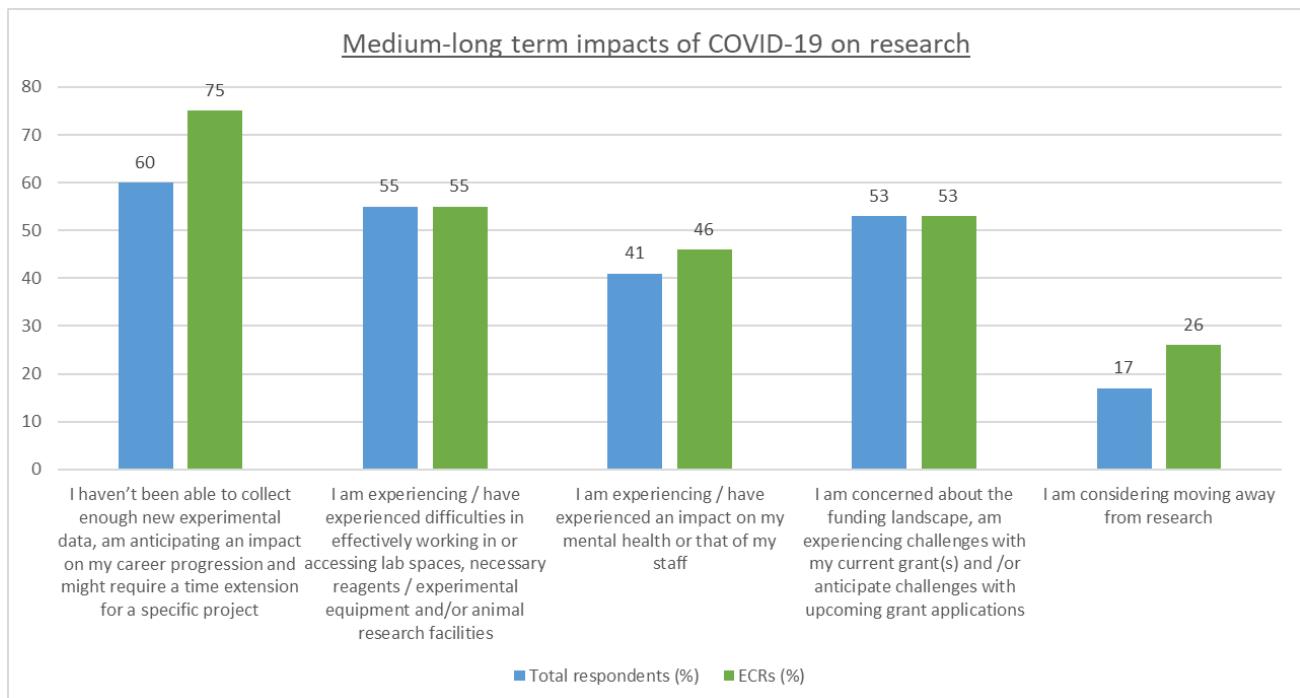


Figure 2: Medium-long term impacts of COVID-19 on research across all respondents (blue columns) and specifically for ECRs (green columns).

Most significant changes to working life due to the effects of Covid-19 (Figure 3):

- 65% of respondents replied they were “Continuing some aspect of remote working on a permanent basis” (this value went down to 63% for ECRs);
- 66% of respondents replied they were experiencing “Limitations due to social distancing measures” (this value was similar for ECRs);
- 84% of respondents replied they were experiencing “An increase in online meetings and/or conferences” (this value went down to 80% for ECRs);
- 68% of respondents replied they were “Travelling less for work and/or conferences” (this value went down to 64% for ECRs).

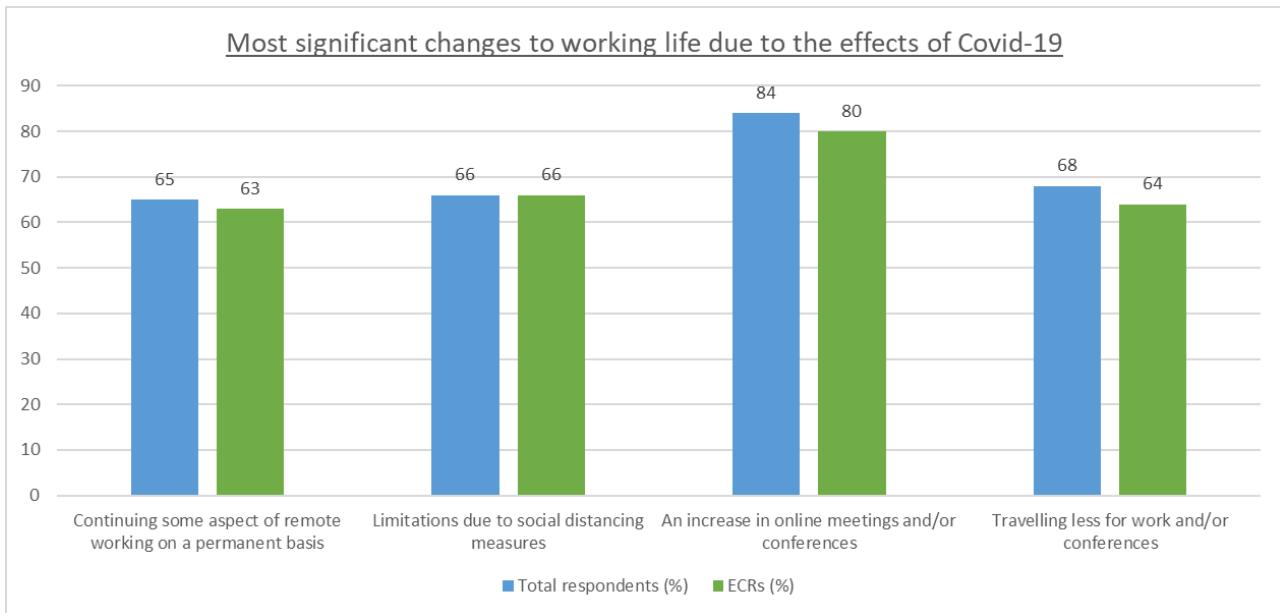


Figure 3: Most significant changes to working life due to the effects of Covid-19 across all respondents (blue columns) and specifically for ECRs (green columns).

The top 3 underlying factors causing concern regarding funding (Figure 4) were:

- **In the short-term:**

1. 57% of respondents replied they were experiencing “Difficulty in gathering sufficient data to support application(s)/ renewal(s)” (this value went down to 56% for ECRs);
2. 44% of respondents replied they considered “Funding deadlines not achievable under the current circumstances” (this value went down to 36% for ECRs);
3. 24% of respondents replied they had concerns with funding due to “The terms of short/fixed term contracts (e.g. not enough time to complete planned work, fixed-term visas that are tied to these contracts” (this value went up to 29% for ECRs).

- **In the medium- to long-term:**

1. 66% of respondents replied they were experiencing “Difficulty in gathering sufficient data to support application(s)/ renewal(s)” (this value went down to 65% for ECRs);
2. 43% of respondents replied they considered “Funding deadlines not achievable under the current circumstances” (this value went down to 41% for ECRs);
3. 38% of respondents replied they had concerns with funding due to “The terms of short/fixed term contracts (e.g. not enough time to complete planned work, fixed-term visas that are tied to these contracts” (this value went up to 44% for ECRS).

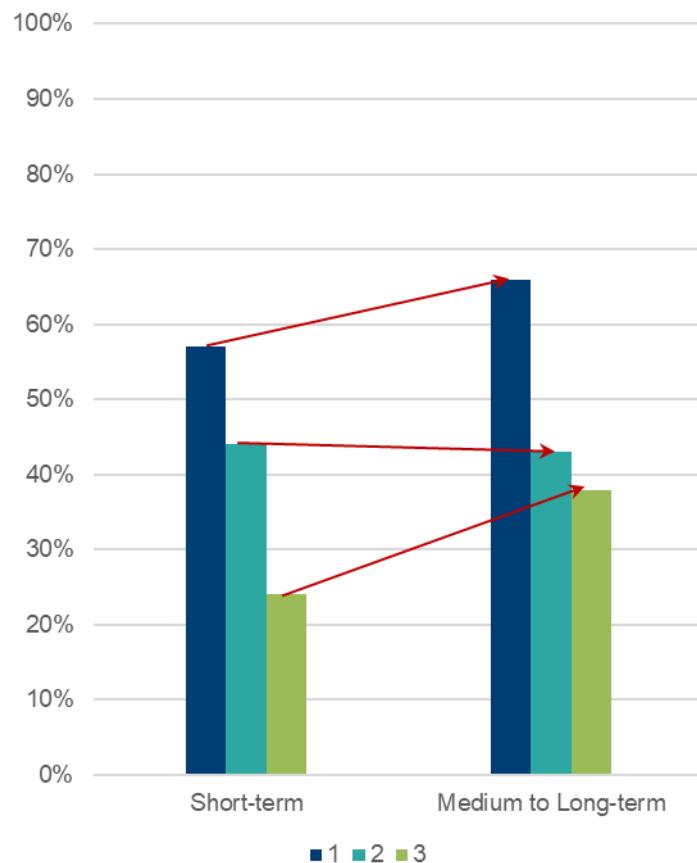


Figure 4: The top 3 underlying factors causing concern regarding funding, in the short-term (left plot) and medium- to long-term (right plot). Numbers in the key correspond to numbered concerns in the text above.

In addition, the average percentage of work estimated to having been completed between April and October 2020 was reported as 48% by all respondents (with this value going down to 42% for ECRs; Figure 5).

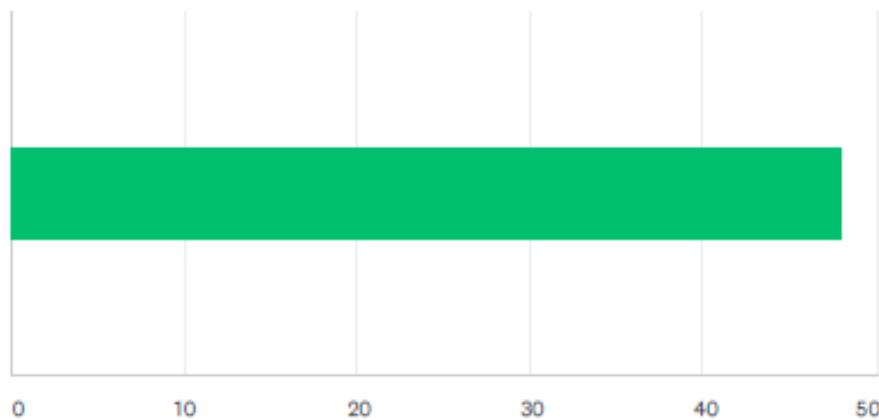


Figure 5: Average percentage of work estimated to having been completed between April and October 2020 across all respondents.

For those who responded they were considering moving away from research, the most popular fields/activities that respondents reported they were considering moving to were (Figure 6):

- 22% of respondents indicated they were considering scientific roles in Industry (with this value going up to 30% for ECRs);
- 19% of respondents indicated they were unsure what fields or activities they would move to (with this value going up to 30% for ECRs);
- 13% of respondents indicated they were considering teaching roles (with this value going down to 3% for ECRs);
- 13% of respondents indicated they were considering changing to a non-bioscience subject (with this value going down to 10% for ECRs).

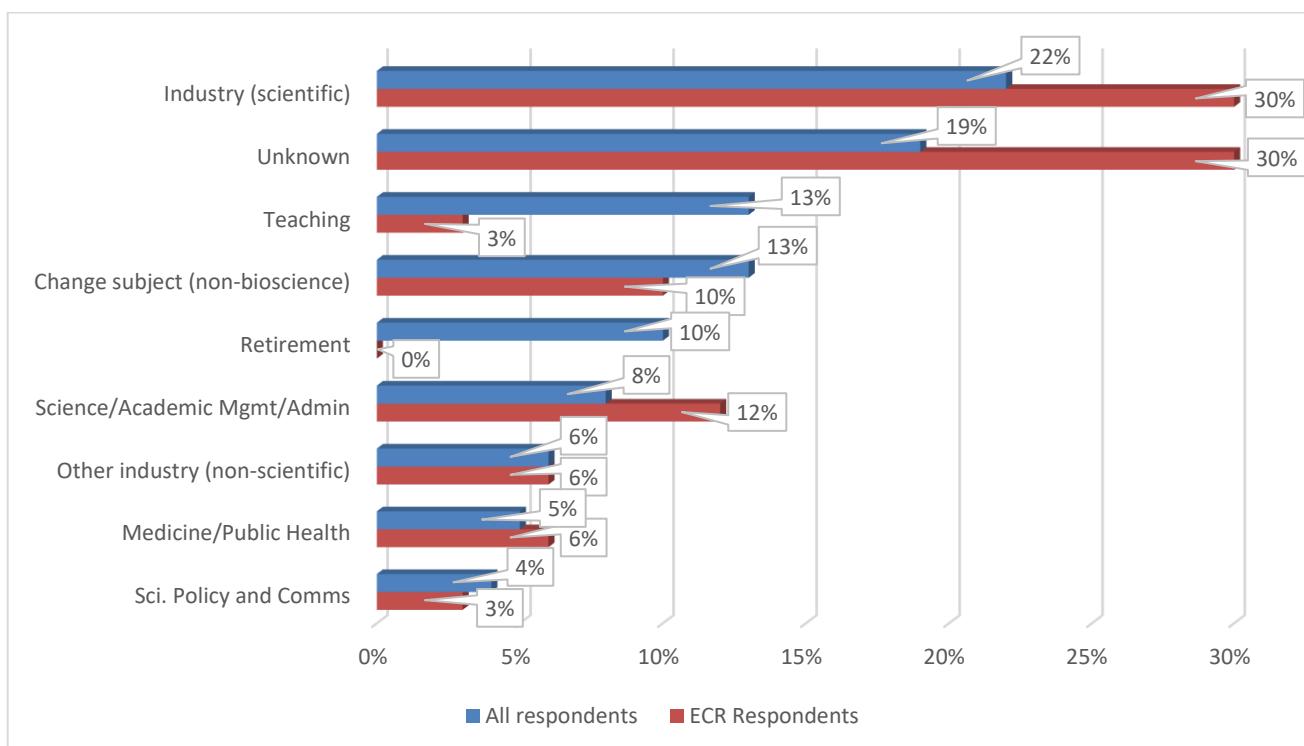


Figure 6: Fields/activities selected by respondents who indicated they were considering moving away from research (for all respondents in blue; for ECRs in red).