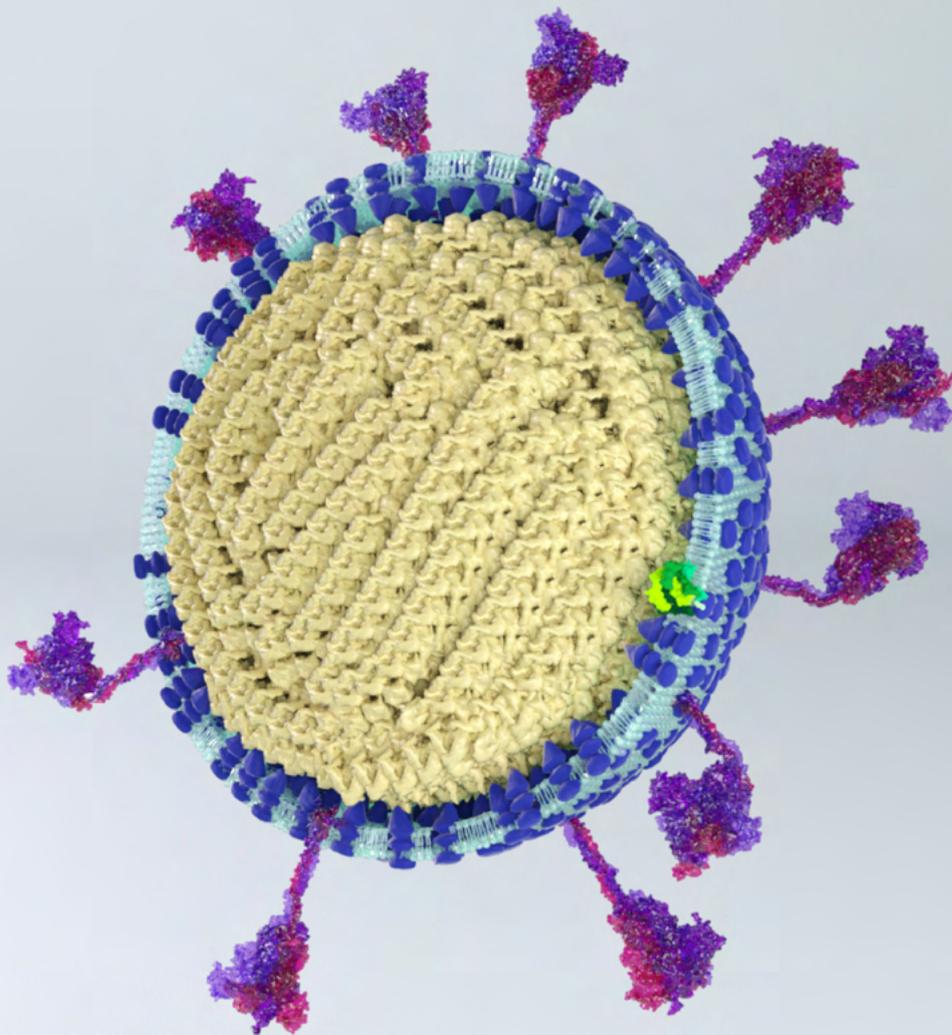


Annual Report 2021



MICROBIOLOGY
SOCIETY

Microbiology Society (Limited by guarantee) Report and financial statements 31 December 2021

Members of Council

Directors of the limited company and
Trustees of the registered charity

Professor Judith Armitage*

Professor Gurdyal Besra†

Professor Robin May

Professor Mark Harris

Professor Jose Bengoechea

Professor Laura Bowater

Dr Sharon Brookes

Professor Deirdre Devine*

Dr Andrew Edwards

Professor Paul Hoskisson

Dr Chloe James

Professor Paul Kellam*

Dr John Morrissey*

Mr Colman O’Cathail

Dr Tadhg Ó Cróinín*

Dr Stephen Smith*

Dr Sarah Maddocks†

Dr David Clarke†

Professor Gill Elliott†

Dr Tina Joshi†

Professor Nigel Brown†

Professor Kim Hardie†

*outgoing 31 December 2021

†incoming 1 January 2022

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Our purpose and strategy

Our principal goal is to develop, expand and strengthen networks available to our members so that they can generate new knowledge about microbes and ensure that it is shared with other communities.



Our strategic objectives:

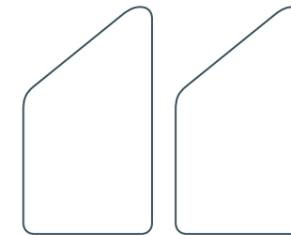
We will enable our members to strengthen their existing relationships and gain access to new communities, unlocking the potential for knowledge exchange.

I am a biomedical scientist specialising in bacteriology and microbial biotechnology. By the end of my Master's degree, I fell in love with marine bacteria and their biotechnological applications. Part of my PhD work was carried out during my 14-month stay at University College Cork in Ireland, where I met the incredible work of the Microbiology Society. After finishing my PhD at the end of November 2020, I became a postdoc in the same research group I performed my PhD in. Now I am improving my bioinformatic skills in bacterial genomics, to unveil relevant traits in these sponge symbiotic bacteria from both ecophysiological and biotechnological perspectives. Marine bacteria are just the best!

I joined the Society in November 2019, when I submitted an abstract to the Microbiology Society's Annual Conference 2020, which was unfortunately cancelled due to the pandemic. It was the first society I joined and I was amazed by the plethora of funding and networking opportunities available to Society members. Since I became a Champion, I've been involved with several Society activities, and it has been an amazing experience to develop my outreach skills. I was lucky enough that one of the first Society Champions, Marilia de Assis, is Brazilian and together we created an Instagram profile, in order to promote the Microbiology Society in our country. I hope to continue to promote the work of LGBTQ+ microbiologists. We need these initiatives to change and set the scene for a more diverse and respectful scientific world.

If you are considering joining the Society, just go for it! It's rewarding because of all the funding opportunities, including grants for participation in scientific events and travel for short stays in European research institutions, to name a few. The networking potential is extremely valuable. I'd never imagined that I'd be co-chairing a session at Annual Conference Online 2021 with the star researchers I've been dreaming to meet since the start of my academic career. I'm proud to say that I belong to such a committed and engaged scientific Society.

Microbiology Society Champion Bruno Francesco Rodrigues de Oliveira, a marine microbiologist who works in Brazil as an Adjunct Professor at the Fluminense Federal University



Our strategic objectives:

We will advance understanding of microbiology and champion the contribution made by microbiology, our members and their work in addressing global challenges.

The best things about societies are their ability to bring together and support their research community, and positively promote the members they represent. Scientific societies are of huge value and provide so many services, such as conferences, education, advocating for their members, grants and so on. I think many people don't realise that a good portion of the financial support for these activities is provided by the society journal portfolio, and that these activities would be severely impacted without them.

The transformation of *Access Microbiology* (ACMI) into an open peer review platform is an exciting project, at the forefront of publishing strategy. Society publishers have become a testing bed for new publishing opportunities and the creation of our open research platform allows us to test novel processes and technologies without a lot of the risks. Open research and open scholarship are the future of publishing, and we have already demonstrated through our editorial board at ACMI that we are very much at the forefront of publishing development.

The best thing about being a member of the Microbiology Society is the network of colleagues and good friends it has given me. Some of my biggest supporters and mentors have been those that I have met through the Microbiology Society. Also knowing that every year there will be a well organised and wonderfully diverse conference to divulge in all things microbiology.

I think if COVID-19 has taught us anything, it's that microbiology really does matter! I do believe that the future of microbiology is exciting and hopefully has inspired another generation of dedicated young microbiologists.

Dr Helina Marshall, co-Editor-in-Chief for the Access Microbiology open research platform, along with co-Editor-in-Chief Dr Georgios Efthimiou



Our strategic objectives:

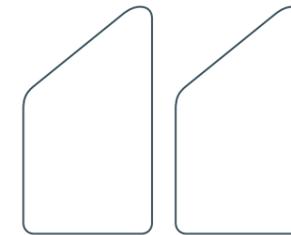
We will reinforce the Society's long-term sustainability and resilience by diversifying income streams, increasing efficiency and ensuring robust governance.

It has been a fantastic opportunity to be awarded this Harry Smith Vacation Studentship to coordinate the running of a summer research project. I am currently a postdoctoral research associate (PDRA), just starting the fourth year of a five-year postdoc. This experience has provided me with skills in research project management, as well as enhancing my ability to supervise and mentor students. It has been a wonderful opportunity to provide training to an undergraduate student and see them progress and produce reliable and thorough results throughout this project.

I am at the point in my career where I am putting together fellowship applications and this opportunity has aided in my transition to an independent research career. Being awarded this grant has provided me with the necessary skills in my professional development, to fully manage and plan a research project. Receiving this grant has also confirmed for me that a career in academia is the route I want to follow and has given me a very positive experience of student supervision. This has given me the confidence that I will one day be able to run my own research group.

It is brilliant that the Microbiology Society provides the opportunity for early career researchers to fully manage a research project and to supervise an undergraduate student. This experience has been vital in enhancing my skills as a researcher and has helped to kick-start my independent academic career.

Dr Angharad Green, awarded a Harry Smith Vacation Studentship. Angharad supervised undergraduate student Thomas Barton during his summer project



Introduction from the President and Chief Executive

In 2021 we built on the experience and learning of 2020 with an exceptional year of digital activities to engage and connect members across the community, irrespective of career stage or location. Professor Judith Armitage FRS stepped down after three successful years as President, during which time she laid the foundations of our popular Roadshows programme, bringing the Society to local areas to foster networking and collaboration between microbiologists. She also led our approach as we navigated the pandemic and transitioned all our activities and events online in support of our members.

This year we continued to build on the innovative and inclusive ways we have found to involve all our members, to enable knowledge exchange and to meet the changing needs of our community as SARS-CoV-2 causing COVID-19, continued to cause global disruption. We held our first ever virtual Annual Conference, bringing together 1,680 microbiologists from 47 countries across four days of science. We made our popular Focused Meeting programme fully virtual and introduced a new online scientific seminar series, designed at the request of our members to disseminate information and allow for the sharing of expertise in a single area of microbiology. Under this banner, we held seven meetings in the first year of the series. The seminars have proved so successful that they will be an ongoing part of our events programme in 2022. Elsewhere we continued our early career microbiologists Forum events online and the President hosted virtual Roadshows to support local networking across our community.

Representing the needs and concerns of our community remains at the heart of what we do. In March we opposed planned government cuts to Official Development Assistance funding, allocated through UK Research and Innovation (UKRI), which will impact the vital work of researchers involved in global challenge projects with international partners. In November we issued a position statement, *Safeguarding the Future of the Microbiology Research and Innovation Workforce*, calling for employers, funders and governments to prioritise and better support early career microbiologists (ECMs) during and post-pandemic.

The pandemic has changed the way we undertake, share and communicate research. In 2022 we will launch a new open research platform, incorporating many of the elements of a preprint server with our current sound science journal, *Access Microbiology*, in an effort to improve the rigor, reproducibility and transparency of the academic record. As

we continue our journey towards open access, we marked one year of our innovative Publish and Read model, allowing a fee-free way for authors to publish open access articles in all of the Society's journals. We now have 250 participants in Publish and Read – serving a range of institutions in 18 countries and five continental regions. Our founding journal, *Microbiology*, celebrates 75 years of publishing in 2022. It has published over 20,000 articles from authors across the world and as we look to the future, publishing high-quality, rigorously reviewed articles will remain at the core of the journal.

Our new President Professor Gurdyal Besra FRS joins us as we plan a return to in-person activities for and on behalf of our growing membership. We are also looking to the future with the development of a new strategy from 2023, amid wide-ranging changes to our journals portfolio as we look to an open access future.

Professor Gurdyal Besra FRS, President and Dr Peter Cotgreave, Chief Executive



A handwritten signature in black ink, appearing to read 'Gurdyal Besra'.

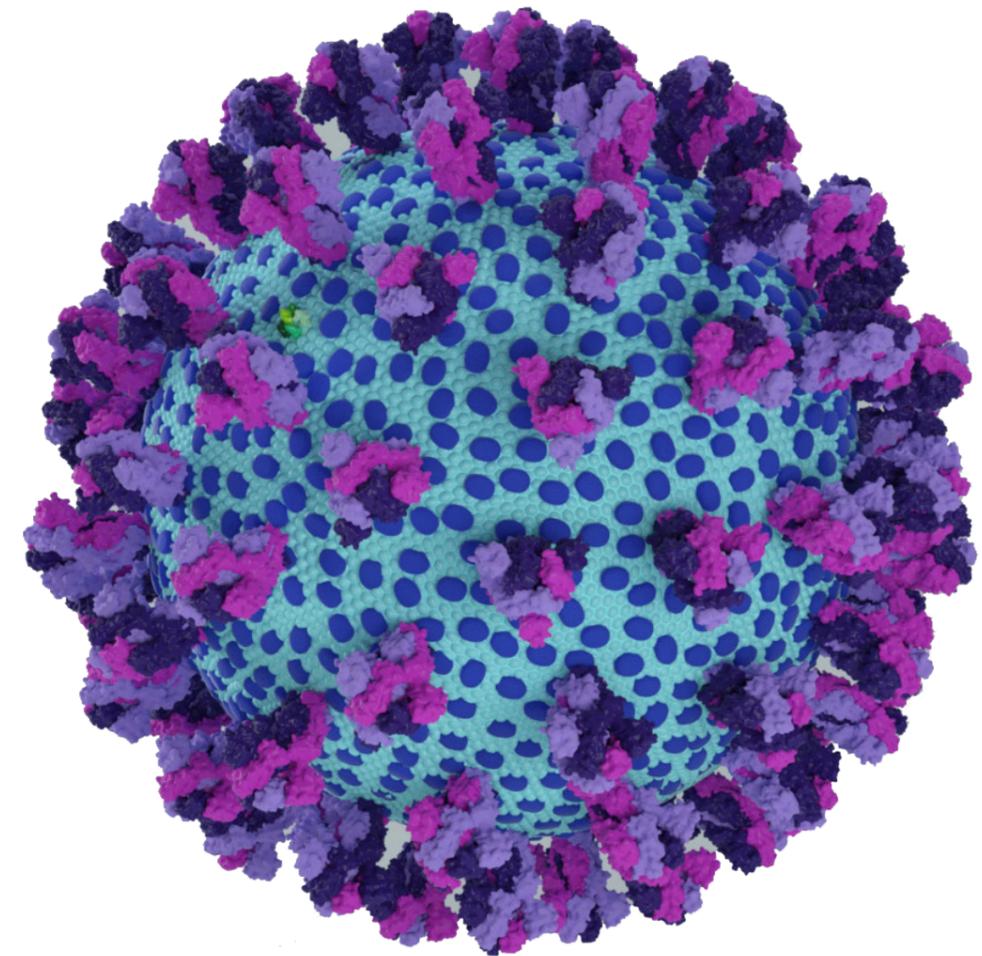


A handwritten signature in black ink, appearing to read 'P. Cotgreave'.

Strategic Plan 2018–2022

Our vision: a world in which the science of microbiology provides maximum benefit to society.

We continued to support our members working with the media to disseminate their expertise on the trajectory of the pandemic and mitigations against SARS-CoV-2, causing COVID-19. Research to combat the virus was shared across Annual Conference Online 2021, including 'Risk assessing variants of SARS-CoV-2' hosted by Professor Wendy Barclay. In April 2021 we published 'SARS-CoV-2 one year on: evidence for ongoing viral adaptation' in our *Journal of General Virology* and we press released information on the virus and the development of the pandemic published within our journals throughout the year to encourage wider public and academic understanding. Our members continued to help populate COVID-19 testing facilities and published their experiences via our blog, *Microbe Post*, which is also home to our popular series, *Coronastream*, authored by a group of medical microbiologists led by Dr Tim Inglis, who summarise research that is essential to inform COVID-19 countermeasures. In November we issued a call to our members for case studies on their response to and research on SARS-CoV-2. Through these case studies we will showcase the magnitude of responses that have come from our community, with members detailing their contribution and experience throughout the pandemic. In October our membership magazine, *Microbiology Today* was dedicated to SARS-CoV-2 and COVID-19, featuring the latest research developments from our members working in this area. Further information about members involvement in the response to the pandemic and content available across our channels is captured in our SARS-CoV-2 and COVID-19 digital hub.



Strategic Plan 2018–2022

Our mission: advancing the understanding and impact of microbiology by connecting and empowering communities worldwide.

Our members are at the heart of everything we do and in 2021 we adapted our activities to meet the needs of our community as we continued to work through the pandemic and as microbiologists continued to find solutions to the biggest scientific challenge of recent times.

We recognised the particular pressures on early career microbiologists, and early career researchers (ECRs) generally, as a result of the pandemic. In November we issued a position statement, *Safeguarding the Future of the Microbiology Research and Innovation Workforce*, calling for employers, funders and governments to prioritise and better support early career microbiologists (ECMs) during and post-pandemic. These recommendations are based on views gathered from ECMs and other ECRs through a survey and a series of focus groups carried out from April to June 2021. In 2022 we will focus on engagement and outreach activities to extend the reach of this work with other organisations and partners.

The pandemic has accelerated a shift in the way research is carried out and communicated and at the same time, ECRs have repeatedly expressed a preference for more open, transparent publishing avenues. Work on our innovative open research platform continued throughout 2021 to ensure that in 2022 we can launch our open access journal *Access Microbiology* in this unique new format, to improve the rigour, reproducibility and transparency of the academic record.

Our members have a unique depth and breadth of knowledge about microbiology. Our role is to help unlock and harness the potential of that knowledge. We know that our members can face barriers to career progression for a variety of reasons. To help, in 2021 we began fundraising for a new grant, known as Unlocking Potential, to give our members access to specialist, bespoke support. Fundraising will allow us to open this important new grant stream, so we can help not only to sustain microbiology but also to develop future leaders, who might in turn one day provide solutions to global challenges.

Strategic Plan 2018–2022

Why microbiology matters

Microbes are everywhere and affect almost all aspects of our lives. We cannot see them, but our world would not function without them. Bacteria, viruses, fungi, protists, archaea, algae and other microscopic life forms are on us and in us, in the air, soil and water, and in our food. They are in and on the surfaces of everything in our homes, workplaces, and other environments. Most do not harm us, and many are essential for the good health of humans, animals and the planet. Microbes help keep the planet healthy by recycling waste and supplying nutrients. Agricultural systems would not function without some while others are harmful pests. Industry uses microbial processes to produce foodstuffs and drugs, benefiting society and creating wealth. Microbes are very diverse; they are fascinating and modern imaging techniques show that they can be very beautiful.

The huge variety of microbes and the range of ways in which they affect us mean that microbiology is an enormously varied and constantly changing subject.

Reflecting this diversity, microbiology intersects with many other disciplines in the natural and social sciences and is a vital element of studies in a large range of different fields. Basic research in microbiology has led to the development of most of the important molecular techniques that are now used to study organisms from microbes to humans. Biotechnology, synthetic biology, the production of therapeutic proteins and many medical diagnoses are all dependent on these molecular tools.

The study of microbes helps us to understand our world and our place within it. It gives us insights into the complexity of nature and society, which in turn provide many different health, environmental, social, cultural, industrial and economic benefits. Microbiology answers big questions by giving us knowledge of very small things. Microbiologists are involved in addressing challenges that vary from urgent problems demanding immediate solutions, such as new and emerging diseases, through to long-term issues, like antimicrobial drug resistance, food security and environmental sustainability.

When the discipline of microbiology is strong and intellectually vibrant, we have a better chance of finding solutions to these problems and building a healthier, more sustainable and more prosperous future.

Strategic Plan 2018–2022

The Microbiology Society

The Microbiology Society is a membership charity for scientists interested in microbes, their effects and their practical uses. It is one of the largest microbiology societies in Europe with a worldwide membership based in universities, industry, hospitals, research institutes and schools.

Our members have a unique depth and breadth of knowledge about the discipline. The Society's role is to help unlock and harness the potential of that knowledge. We do this by bringing together and empowering communities that shape the future of microbiology. We generate public benefit by fostering communication both among communities of microbiologists and between microbiologists and other communities who can translate that knowledge in useful ways.

Because of the diverse range of challenges and opportunities our members encounter, the Society works in a variety of modes. In some circumstances, it is a leader, in others it works in partnership with like-minded scientific organisations and in others by convening different communities.

Strategic Plan 2018–2022

Our core values

We are welcoming to anyone interested in microbes, their effects, and their uses. Our reputation as a friendly, nurturing, and approachable community, driven by the experience of a diverse set of members, is extremely important to us.

We are transparent and professional in everything we do. We believe that decisions should be informed by evidence and expertise, and that scientific methods form a robust and dependable way of developing reliable evidence.

We are dedicated to our charitable aims. We are not for profit and strive to ensure that all our resources are applied optimally to furthering the science of microbiology and its application.

Progress towards our strategic objectives

Objective 1

We will enable our members to strengthen their existing relationships and gain access to new communities, unlocking the potential for knowledge exchange.

The Society will **maximise** national and international **networking** opportunities for our **members** among existing and **new communities**.

The Society will **increase** the involvement of groups of **microbiologists** who are **not** currently well **represented** in our activities.

The Society will **increase** engagement and **collaboration** between our **members** and other societies, industry, funders, educators, regulators, and decision makers.

Objective 1

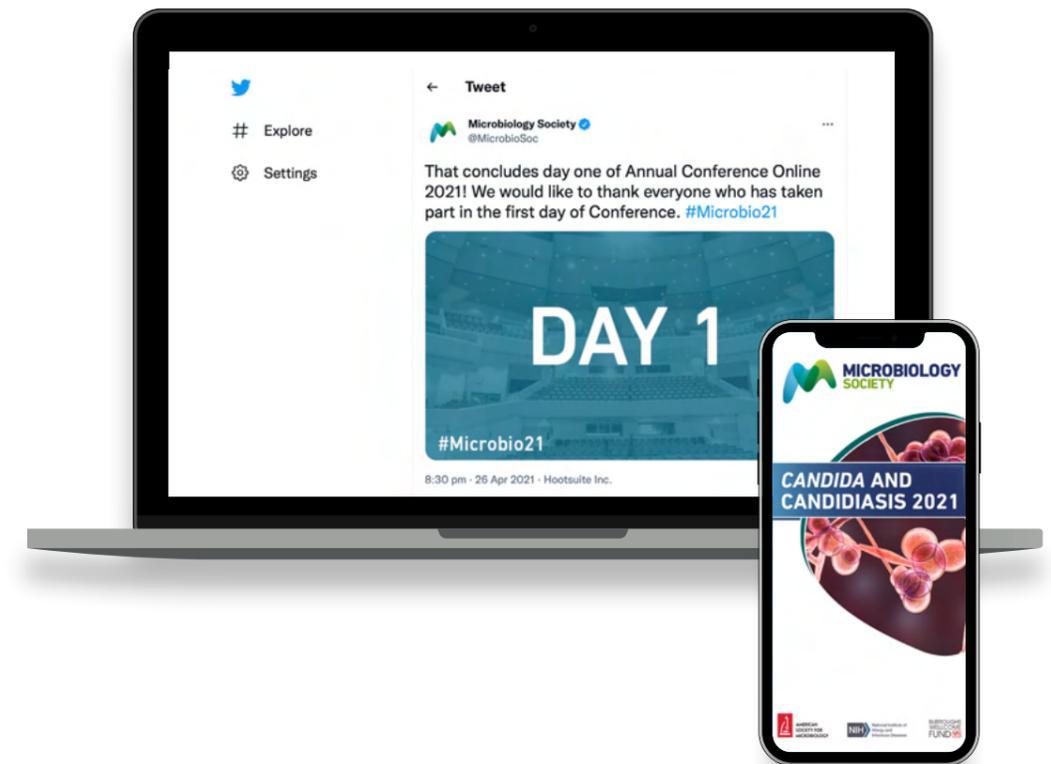
Building and strengthening our community

In 2021 we supported our members to aid collaboration and knowledge exchange as the impacts of the pandemic continued to be felt. An important aspect of this work was our events programme, which aims to bring together scientists to shape the future of microbiology, strengthen membership networks and enable knowledge exchange. The programme helps us achieve our principal goal to develop, expand and strengthen the networks available to our members so that they can generate new knowledge about microbes and ensure that it is shared with other communities.

We used our learning from the experience gained from running a number of smaller digital events in the second half of 2020 to transition many of our events to take place in digital format in 2021.

Annual Conference Online launched in April – a complicated event to convert digitally due to its size – with 1,680 attendees from 47 countries over the course of the event and over 1,000 attendees confirmed for every day. On-demand recordings were made available after the event and the essential skills sessions covering entrepreneurship and how to secure fellowships were particularly popular. This highlighted the appetite of the microbiology community not only for online events but also for this specific type of content.

Candida and Candidiasis was the first Focused Meeting of the year with almost 600 registered attendees and high levels of engagement. This was also the first time that the Society had run posters through a digital platform. We held three further Focused Meetings – Anaerobe, Avian infectious Diseases and British Yeast Group – on a digital platform. These meetings were well received by their respective communities, which had an increase in international participation compared to the in-person events.



Objective 1

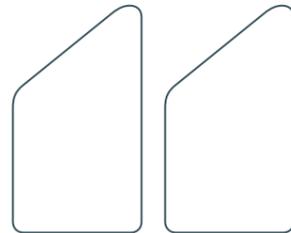
Building and strengthening our community

The overall content suits my interest. The best part of the event is the active interactions between presenters, chairpersons, and participants. I have been to other online conferences; it was quite a challenge to trigger such interaction.

Survey respondent, Avian Infectious Diseases

As a retired yeast molecular biologist it gave me the chance to hear about what is currently exciting the yeast community in the UK... and more globally via the keynotes.

Survey respondent, British Yeast Group



Throughout the year, our President Professor Judith Armitage FRS, continued to use the Roadshow series to provide insight into her career in microbiology and some of the challenges she has faced. Attendees had an opportunity to join a discussion with the President, find out more about publishing, grant and professional development opportunities at the Society, as well as network with their peers. The first two Roadshows – Norwich and Liverpool – were held online, with the final one of the year being held in-person in Birmingham. The virtual Roadshow events received positive feedback, highlighting the great opportunity that they provided for attendees to network with microbiologists in their local area, and how inspiring it was to hear about the President's career. It was great to see members from around the world – including locations such as Ghana and the Czech Republic – drop into the calls and learn about opportunities to be more involved with the Society and to talk about the issues they were currently facing in their own careers.

Objective 1

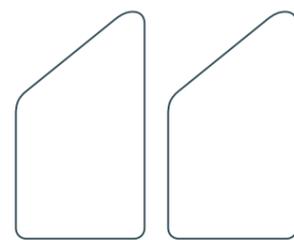
Building and strengthening our community

The stories of Professor Armitage FRS were very interesting and a perfect example of persistence in science. It is an example of how to have a great career. I enjoyed the question and answer session, as I like the spontaneity of the speaker's ideas. The format and timing was great.

Dr Teagan Brown Postdoctoral Researcher, Quadram Institute Bioscience, UK

It was a great forum, and the talk was excellent.

Dr Melissa Lawson, University of Manchester



Our experiences from 2020 enabled us to establish new opportunities for knowledge exchange and networking. In order to support members who would usually attend the Teaching Microbiology in Higher Education symposium traditionally held at the start of Annual Conference – and realising the changes to teaching methods that the pandemic had inevitably brought – the Society held a series of Microbiology Educators' Network meetings online. These meetings covered a diverse range of topics including publishing pedagogy papers – those about how to teach microbiology – in *Access Microbiology*, decolonising and diversifying the microbiology curriculum and online assessments.

In addition, following positive feedback from the attendees of a virtual SARS-CoV-2 and COVID-19 workshop in 2020, we launched a new online scientific seminar series in 2021 at the request of Editors from the *Journal of Medical Microbiology* and *Microbial Genomics*. The series was created with the intention of disseminating information and sharing expertise of focused areas of microbiology research as well as for the provision of skills to support writing for our journals and networking opportunities. The series also provided professional development opportunities for early-career researcher by expanding on the ECM Co-Chairing Scheme.

Objective 1

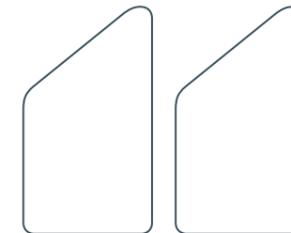
Building and strengthening our community

Through the seminar series, there has been engagement from microbiologists across the world with many of the seminars having over 100 attendees and further people listening to the recordings afterwards. The attendees have been widespread, encompassing approximately 40 countries, and engaging the microbiology community.

Although not a substitute for networking in-person, our meetings programme throughout 2021 allowed our members to continue to benefit from each other's research during the pandemic. Our members have told us that there is a strong desire to return to some in-person meetings, while ensuring that the inclusiveness of online events in terms of provisions for those unable to travel are retained. Subsequently, we are working on ways in which this can be achieved through different event formats and will trial these over 2022.

It was a pleasure to chair this MGen Scientific Seminar Series with Swaine. I believe it was a productive webinar and an amazing networking opportunity, for sure.

Bruno Francesco Rodrigues de Oliveira (ECM co-Chair for the Microbial Genomics Microbe–Niche Interactions seminar)



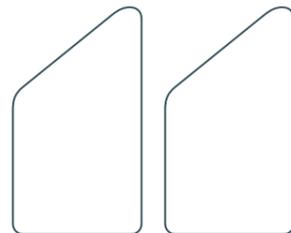
Objective 1

Engaging and better supporting our infection science, industrial and early career communities

FIS represents the infection societies within the UK, bringing combined clinical and academic knowledge of infectious diseases to the fore. In the COVID-19 and antimicrobial-resistance era it is increasingly important to ensure accurate knowledge exchange across the infection sciences.

The role of FIS Chair-Elect has already been rewarding where I have been able to contribute to conference session planning for the FIS conference in November 2021 (hosted by the British Infection Association this year) and helping to run the Infection Science Awards to encourage the early career research community to present their research in an inclusive environment. This is a fantastic role for those within infection sciences to get involved, increase their networks and have a positive impact on the FIS and microbiology community.

Tina Joshi, Federation of Infection Societies (FIS) Chair-Elect



In 2021 we continued to support our early career community and identified new priority groups, including those working in infection science and industry. Our aim is to gain further insight into the needs of these communities and ensure we can offer a range of activities and events that are tailored to provide specific support for them.

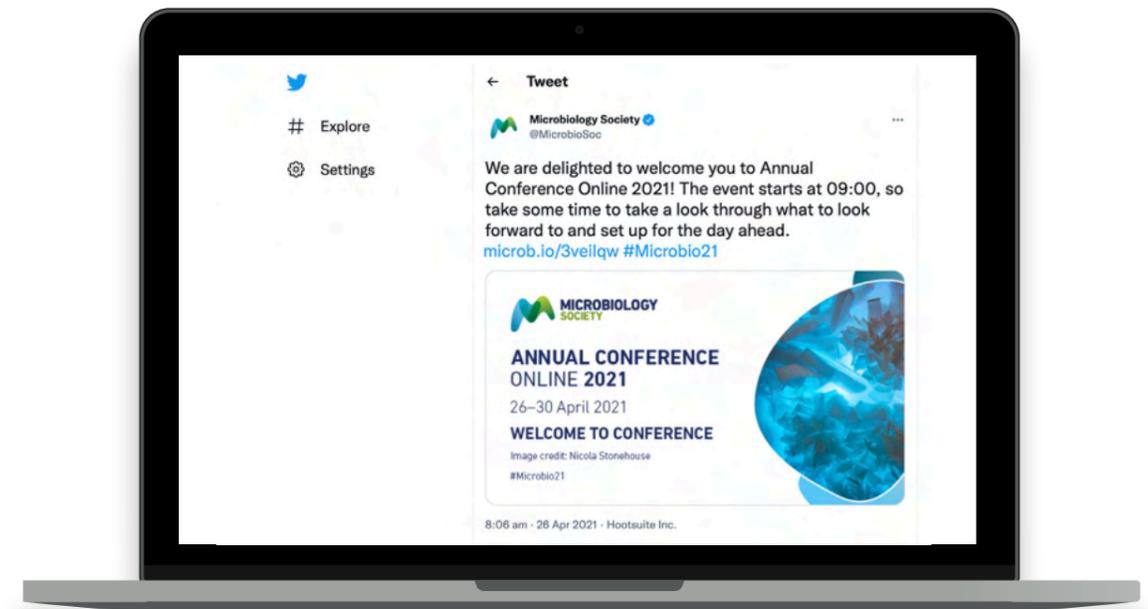
Early career researchers continue to enjoy a wide range of benefits from the Society in the form of grants and opportunities to get involved with the Society's governance and journals. Our early career microbiologist (ECM) Forum co-chairing scheme continued at Annual Conference Online 2021, providing opportunities for ECMs to gain valuable chairing experience and network with other researchers in their field. Our early career research community were particularly affected by the impacts of the pandemic and in keeping with providing additional opportunities for this community, we held the ECM Forum Summer Conference online. Organised by the ECM Forum Executive Committee Division Representatives, the Summer Conference was a unique event designed to bring together undergraduate, masters, PhD and postdoctoral researchers to experience scientific talks and professional development sessions tailored to the needs of early career researchers. Following on from the success of our ECM online events on the ECM Forum LinkedIn platform, attendees had the opportunity to attend a dedicated networking session.

Objective 1

Engaging and better supporting our infection science, industrial and early career communities

During professional development sessions, attendees heard about funding opportunities and gained inspiration and practical advice from grant recipients. As many early career researchers have been looking to explore the breadth of careers available to microbiologists, attendees also learned from the experience of speakers who had taken their career outside of academia.

The Society has been addressing several recommendations made by the infection science community, primarily through capitalising on opportunities through the Society's conferences, events and journal content, and by continuing our pursuit of collaborations with relevant organisations to demonstrate our interest in working together. To support this work, we appointed medical microbiologist and Associate Professor Timothy Inglis as the *Journal of Medical Microbiology's* new Deputy Editor-in-Chief and Dr Tina Joshi as the Society's Chair Elect for the Federation of Infection Societies (FIS). The Society is one of the founding organisers of FIS annual conference, which was held in a hybrid format this year consisting of one face-to-face day and two days online. The event included the collaboration of multiple societies across the UK with interests in different aspects of infectious diseases, clinical microbiology, biomedical science and infection control, and provided a great opportunity for delegates to attend plenary lectures, find out about the latest developments and to connect with key contacts and network. This event was an important event as part of the Society's efforts to gain insights and develop relationships within the infection science community.



Progress towards our strategic objectives

Objective 2

We will advance understanding of microbiology and champion the contribution made by microbiology, our members, and their work in addressing global challenges.

The Society will **promote activities** for communicating microbiological research **across** a range of **disciplines**.

The Society will **increase** capacity and **opportunities** for members **to communicate** microbiology and their work.

The Society will **raise the profile** of microbiology, our members, and **increase the influence** of the Society with the public, policymakers, and other stakeholders.

Objective 2

Expanding our members' influence

In October 2021, in line with our mission to advance the understanding of microbiology, we embarked on an exciting collaboration with the Food Standards Agency (FSA), as part of a £19 million new cross-government programme in Pathogen Surveillance in Agriculture, Food and the Environment (PATH-SAFE). The PATH-SAFE programme aims to pilot a national genomic surveillance infrastructure, harnessing existing data and undertaking new sampling and analysis in order to create a national 'map' of foodborne pathogen and antimicrobial resistant (AMR) microbe populations, allowing for rapid identification and tracking of disease outbreaks.

Key elements of the collaboration were to involve, from the very beginning, the wider microbiology community and to produce outputs that guide early development and priority setting for the project. To that end, we first hosted a webinar, attended by 82 experts, which gave the wider microbiology community the opportunity to find out more about the project from the different stakeholders involved. The event generated high levels of interest from the community, including continued offline conversations with the FSA to collaborate as the project progressed.

To further facilitate engagement between the FSA and the wider microbiology community, the webinar was followed by a series of specialised online focus groups to discuss the challenges and opportunities for data curation, sampling and sequencing, and remote diagnostics of foodborne and AMR pathogens. Throughout the three days of focus groups, we convened over 40 experts across academia, industry and government, which generated insightful conversations that will help to shape the project going forward.

In line with the Society's strategic efforts to support and provide opportunities for our early career research community, early career members (ECMs) were offered the opportunity to co-chair these online focus groups. This provided ECMs with an insightful professional development opportunity, to learn about being a session chair from senior colleagues and to develop new networks. We also raised the profile of the ECM co-chairs through a blog post on the FSA website, which detailed their contributions and showcased their own research.



Objective 2

Expanding our members' influence

The co-chairing scheme was really excellent.

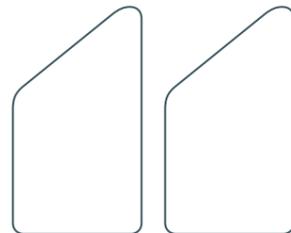
Professor. Sharon Peacock, University of Cambridge

The PATH-SAFE workshop really highlighted the enthusiasm for moving towards enhanced genomic surveillance as a core part of science as an infrastructure. It was so exciting to see the eagerness from a wealth of experts right here in the UK willing to engage with such an important topic. I look forward to seeing the outputs from this exciting project, the value of which cannot be understated.

Dr Colman O'Cathail, EMBL-EBI

A great initiative to integrate databases on pathogen and AMR surveillance in the UK. Really excited to see where this project goes with targeted sequencing and the resulting policy outputs.

Sophie Hedges, PhD student at the Royal Veterinary College, University of London

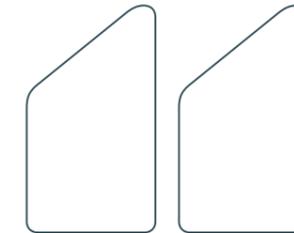


It's been absolutely exceptional – huge thanks to you and the team for the amazing organisation. From our perspective the workshops have been enormously useful.

Professor Robin May, Chief Scientist, FSA

As programme lead for PATH-SAFE, I believe the event has delivered on both of the key aims: firstly, to engage with the wider microbiology community and secondly, to produce outputs that can help steer the direction of the project over the coming years.

Professor Rick Mumford, Head of Science, Evidence and Research, FSA



This new collaboration with the FSA enabled us to develop and implement a model for future collaborations with government departments, with the Society playing a key role in facilitation, engagement and knowledge exchange. It also served to strengthen our members' relationships with policy stakeholders and to build strong links with new communities.

Objective 2

Advocating for our early career members to have a future impact on grand challenges

I believe the pandemic shows deficits in the system of research and sciences. It relies on researchers to focus only on research and punishes those who have a family, care for parents or have other obligations aside from their research. The system relies on complete self-abandonment, but I am convinced that many people who are not able to do that could nevertheless contribute a great deal.
Anonymous survey respondent



Objective 2

Advocating for our early career members to have a future impact on grand challenges



In the spring of 2021, the early career microbiologist' (ECM) Forum Executive Committee asked the Society to help articulate its position on the effect of the pandemic on the career progression of microbiology researchers, specifically ECMs and how to best support them given the circumstances. We continue to provide a voice for this cohort of our membership, understand the needs of ECMs and investigate how to better serve them in a meaningful way, particularly as they face new, extraordinary challenges.

Views gathered from ECMs through a survey and subsequent focus groups informed a position statement entitled *Safeguarding the Future of the Microbiology Research and Innovation Workforce*, which revealed how the pandemic had acted as a magnifying glass on issues that have been present in academia for years.

The position statement highlighted the need for a systemic and fundamental change in the way ECMs are supported in pursuing successful research careers, and called attention to the fact that, without further action, we risk losing an entire generation of researchers that are able to rise to global challenges. Since the release of the statement, early career members of the Society have continued to engage with external stakeholders, including funders and policy makers, in order to maximise outreach and start a culture change. We have also continued to take feedback from ECMs into account when planning our programmes of support for our members.

Objective 2

Advocating for our early career members to have a future impact on grand challenges

Real praise for the Microbiology Society for their consideration and surveying of early career researchers (ECRs) during the pandemic. I thoroughly enjoyed the insightful and helpful discussions with other mid-late-stage PhD students in this morning's focus group.

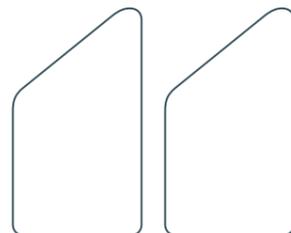
Bhavik Barochia, University of Southampton

Thanks to the Microbiology Society for inviting me to an online focus group to discuss the impact of the pandemic on ECRs, and to other contributors – hearing the experiences of other early PhD students was exceptionally helpful and has made me feel a lot less isolated.

Tanya Horne, University of Liverpool

Thanks to the Microbiology Society for organising an interesting focus group looking at the impact of the pandemic on ECRs. It was a great chance to connect with others and start an important conversation surrounding academia. Certainly thought-provoking!

Emily Watts, University of Edinburgh



Of the **205** survey respondents:

96% reported that the pandemic had affected their research activities.

70% reported that their funding had not been extended.

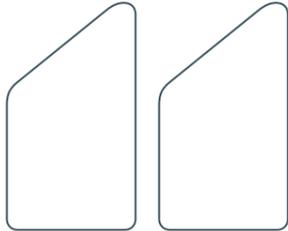
60.5% reported that their mental health and wellbeing had not been supported.

Objective 2

Championing the contribution of microbiology to decision-makers

The Official Development Assistance cuts undermine the credibility of our country to partner with low and middle income countries (LMICs) in research and will undoubtedly have negative impacts on careers of researchers, health and economic development in LMICs. They will also have negative impacts for our country, as they risk setting back progress by many years in the control of major diseases like malaria, and they will impair our ability to detect future pandemics.

Dr Aubrey Cunnington, Imperial College London



Over the past three years, the UK has faced severe financial pressures because of COVID-19 and its impact on the economy. As a result, the UK Government decided to reduce the funds available for ODA for the financial year 2021–2022, which included research projects funded via UK Research and Innovation (UKRI) from the ODA budget.

In addition to being extremely damaging to the research base, the spending reductions directly contradicted the UK Government’s ambition to become a ‘science superpower’ and threatened the nation’s reputation as a credible, reliable and valued research partner. In a year when the UK hosted two global summits, the G7 in June and the United Nations Climate Change Conference (COP26) in November, the announced cuts also left the country out of step with global efforts to tackle grand societal challenges.

By working closely with our members and releasing statements, blogs, consultation responses, journal editorials and open letters urging the UK government to reverse its decision and restore the UKRI ODA budget, we provided a rare, detailed and often scathing insight into the breadth of the funding cuts and the consequences for the health and wellbeing of some of the poorest, most vulnerable members of our global community.

Objective 2

Championing the contribution of microbiology to decision-makers

While much was expected from the latest Spending Review, the overall situation for ODA-funded research remains extremely difficult to this date. Championing the contribution made by microbiology, our members and their work in addressing global challenges is one of the Society's key objectives, as laid out in our strategy. We will keep calling on the UK government to confirm its stated commitment to expand investment in research and development and enable the use of ODA to support partnerships with the rest of the world.



Outputs

17 members impacted by the funding cuts actively engaged in our response

Comprehensive submission to an inquiry by the House of Commons International Development Committee

Publication in *Access Microbiology*

Direct collaboration with the Science Media Centre

Member-led presentation at Climate Exp0 ahead of COP26

Evidence picked up by Devex (a global development news organisation)

Objective 2

Publishing for the community

In 2021 we embarked on a programme of work to strengthen the brand identity of our journals portfolio under the banner of 'Publishing for the community' and to develop new communications to link the journals more closely to other work undertaken by the Society, including our events.

We specifically focused on building a stable of journals rather than having six individual titles and adding value to our publications by developing new content that can increase visibility, such as 'behind the research'-type articles.

During 2021 we gathered insights from Editors and reviewers, as well as members of Council and Committees – to identify the journal 'unique selling points'. Synthesising information from over 650 survey responses, as well as a series of interviews. This work allowed us to develop key messaging for our ongoing 'Publishing for the Community' campaigns. Print version journal articles now have an updated 'Reasons to Publish' section, reflecting the current needs and desires of the research community.

In 2022 we will mark the 75th anniversary of the Society's founding journal *Microbiology* and to celebrate this milestone a range of activities have been planned to take place throughout the year. These include a series of collections which follow on from those launched in 2021.

The collections cover a wide range of topics and have the aims of highlighting important areas of microbiology in line with a theme, to advance the understanding of the field and to encourage further research. For each collection, members are brought together to exchange expertise to curate the collection and define what research they feel is of importance at the time. During 2021, there were 12 guest editors across the collections with half of these being early-career researchers. In total, 197 invitations were sent to encourage submissions in these highlighted areas and raise the profile of the Microbiology Society and *Microbiology*.

These collections have also provided direct professional development opportunities for our early-career members by pairing them with someone more senior in their field, often an Editor, to not only providing networking and collaboration opportunities but also an insight into the editorial processes.

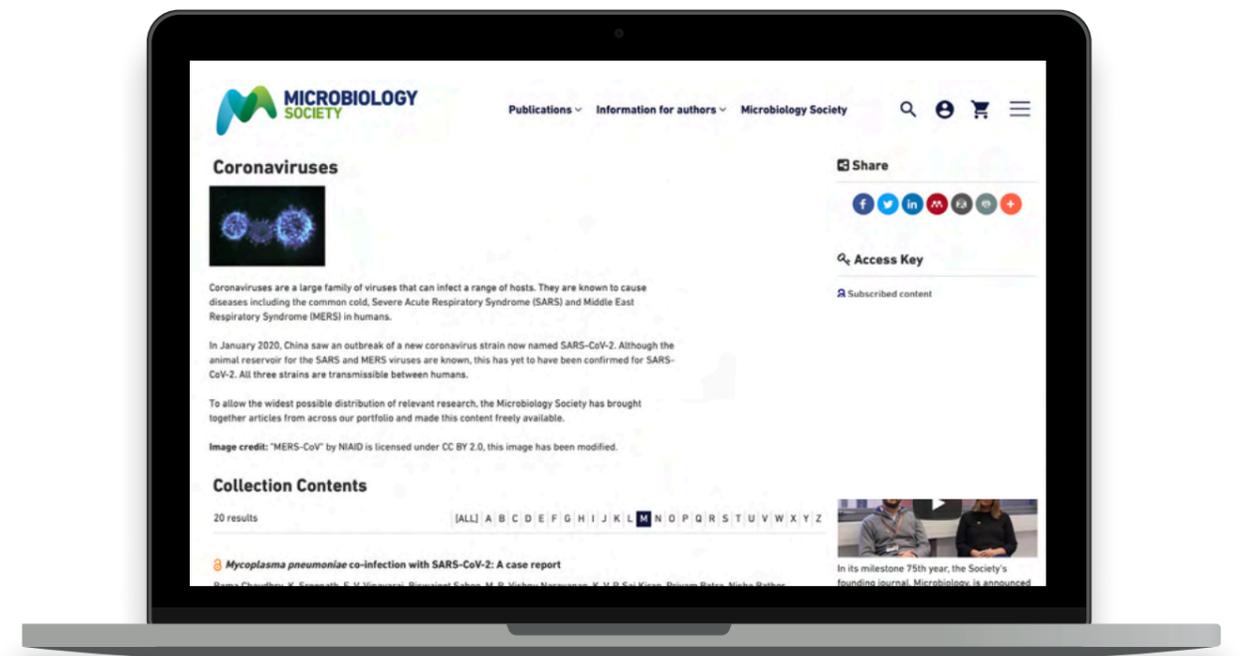
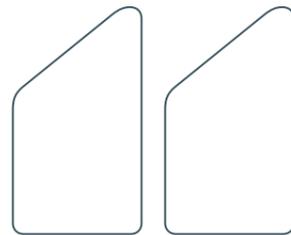
In response to the COVID-19 pandemic, to ensure that necessary research was accessible by any researcher and clinician who needed it, we made our coronavirus content freely available. The Coronavirus Collection was viewed 55,000 times between 2020 and 2021.

Objective 2

Publishing for the community

The scheme is a major professional development opportunity for my next career step as I am better equipped to review and make editorial contributions to journals and it provides evidence of my contribution to the microbiology community.

Yinka Somorin, Early Career Researcher Guest Editor of the Bacterial Cell Envelopes collection



Progress towards our strategic objectives

Objective 3

We will reinforce the Society's long-term sustainability and resilience by diversifying income streams, increasing efficiency and ensuring robust governance.

The Society will **increase** the emphasis on placing **members** at the heart of Society activities and growing **future leaders**.

The Society will **increase opportunities** for **generating income** from a range of commercial and philanthropic sources.

The Society will **maximise cost savings** and **efficiencies**.

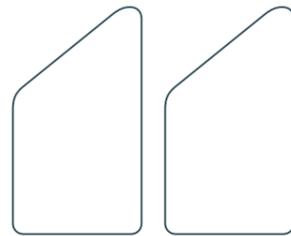
Objective 3

Growing future leaders

Each year, the Sir Howard Dalton Young Microbiologist of the Year Competition recognises the best early career communicators presenting work at our events. In 2021, the competition took place online during our Society Showcase and was won by Emma Banks, University of Nottingham, UK, for her talk 'Creating curvature to kill: an enzyme that shapes predatory *Bdellovibrio* bacteria, optimising invasion and replication within prey'.

It was such an honour to be nominated as a finalist for the Sir Howard Dalton Young Microbiologist of the Year Competition and the standard of talks by the other finalists was so high that I was amazed to have won! Thank you so much to the Microbiology Society for organising such a brilliant Annual Conference and Society Showcase, especially during these bizarre and difficult times.

Emma Banks, first place in the Sir Howard Dalton Young Microbiologist of the Year Competition 2021



Our position statement *Safeguarding the Future of the Microbiology Research and Innovation Workforce* launched at the end of the 2021. It was instigated by the early career microbiologists (ECMs) Forum Executive Committee in response to concerns about (ECR) career prospects, and importantly, enabled ECMs to voice their feelings about the effects of the pandemic on their careers. We know there is a role for all funders, employers and supervisors in reading and responding to the statement and we will continue to do all we can to support ECMs. One theme from the survey was that support was needed to help them to share their science in often-hostile online spaces. As a result, we provided training from award-winning science communicator, Jamie Gallagher, on interacting safely online, which was well received by attendees.

Our Council and Committees Shadowing scheme entered its fifth year in 2021. The scheme gives members an exclusive opportunity to gain insight into the inner working of the Society. By experiencing first-hand the activities and decision-making processes of key governing groups of the organisation, members can add to their CVs, gain a wealth of knowledge and behind-the-scenes information, and network with other microbiologists. In 2021 we hosted a special webinar to promote the scheme to members, and subsequently welcomed two new members – Dr Melissa Lacey, Sheffield Hallam University, UK and Dr Karen Campos-León who started shadowing the Impact and Influence Committee to gain insight into the inner working of the Society.

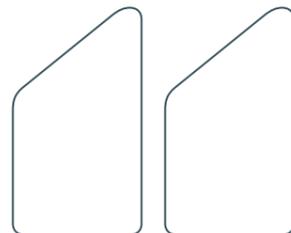
Objective 3

Growing future leaders

The Shadowing Scheme has allowed me to be an observer and gain insight into how other members approach their roles within the Society. This Scheme has been a great opportunity for me to understand in which ways I could contribute towards the Microbiology Society's goals and needs. Likewise, I have been able to identify several ways in which the Society supports the career development of its members, and I acknowledge the importance of making this information available to early career researchers and other microbiologists.

It has been a truly valuable experience for me to observe how the Society functions, and how the meetings from the Impact and Influence Committee serve as a platform to exchange ideas and bring forward actions that are required for the Society to stay current. There are important topics that are raised at such meetings and the input of the Committee members is incredibly valuable and will undoubtedly have a positive impact on the future of the Society as a platform for microbiologists.

Karen Campos-Leon, Shadowing Scheme participant

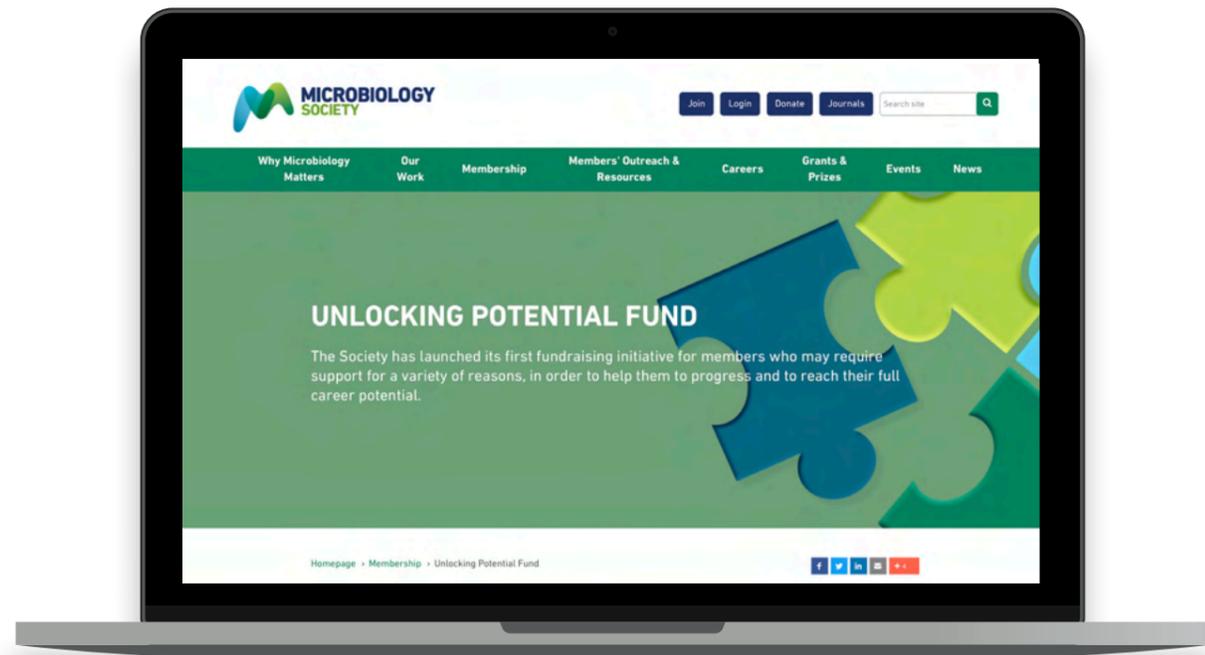


In 2020, we pledged to improve the inclusivity of our policies and practices and seek to actively demonstrate our values of being welcoming, dedicated and transparent so that all members feel that they are able to actively engage with their Society. Over 2021, there was a step change in ambition with regard to implementation of activities to improve equality, diversity and inclusion at the Society. We began planning for LGBTQIA focused networking events in response to feedback on the benefits of bringing members identifying as LGBTQIA together for support and experience sharing. We undertook research into how best to reach our retired members by canvassing their opinions. We implemented an inclusive name-change policy across our journals so that anyone who wanted to change their name would feel welcome while publishing with us. We also compiled an action plan to bring all our activities across the board up to par in terms of accessibility and inclusion. Finally, we established a Members Panel, to bring a wider diversity of voices to the decision making of the Society and Members of the Panel will begin their terms in January 2022.

We also launched the Unlocking Potential Fund in May 2021. Raising funds from donors, we will roll out a grant, the Unlocking Potential Grant to support early- and mid-career microbiologists who might, one day, provide solutions to global challenges. By the end of the year, we raised £7k, thanks to donations from our members who wanted to give back and support members as the Society had supported them in their careers. Our donors have shared their stories to inspire others to donate and we will continue to share their stories as we launch the grant in early 2022.

Objective 3

Growing future leaders

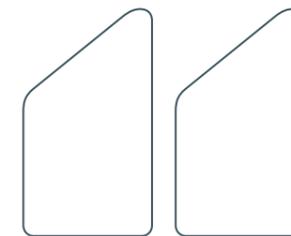


...People at an early stage of their careers have a much more challenging time than I did. The expectation to succeed, publish and win grants is much more intense than I remember. I suspect the dropout rate from research science is even greater than it was and therefore, when the Microbiology Society decided to start this fund, I thought it was a great way to support early career stage microbiologists to help them on their way, by donating the fees I received from being an external examiner for a PhD student.

Craig Watkins, member and donor to the Unlocking Potential Fund

This crowdsourcing idea is something we should be doing more of. These types of initiatives enable researchers to access funding that may not usually be available. This fund is very timely given the huge challenges early career researchers are facing. I love the concept of 'Unlocking Potential' and opening this up to the community.

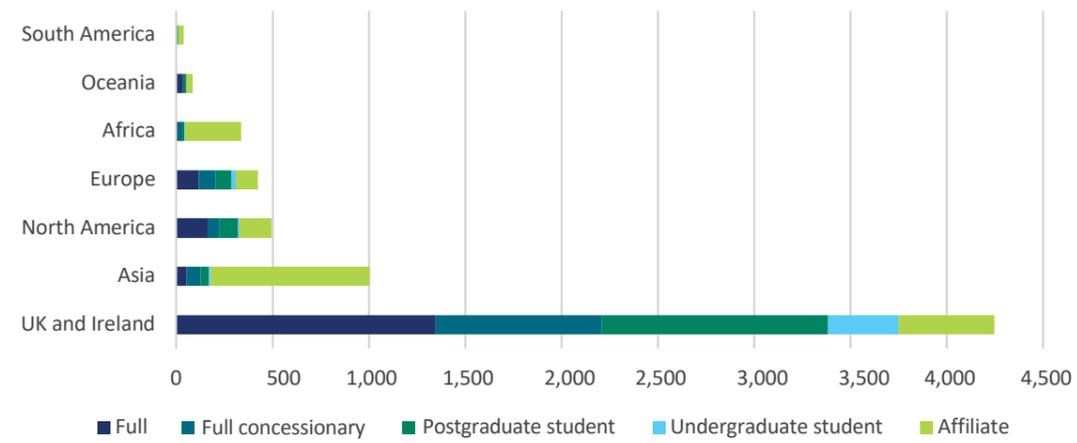
Lindsay Hall, member and donor to the Unlocking Potential Fund



Objective 3

Membership figures

In December 2021, we had 6,709 members across the world.



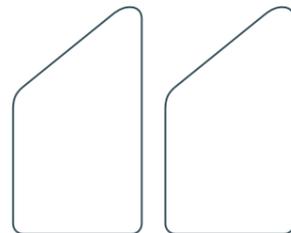
Objective 3

Adapting to meet the needs of our members

The impact of the COVID-19 pandemic continued to be felt in 2021 and members continued to be restricted when it came to travelling to meet collaborators, attend conferences and pick up new skills. We sustained our approach from 2020 to accommodate members as much as possible when postponing international research trips. We continued our flexibility with changes to Harry Smith Vacation Studentships so that undergraduate students were still able to gain their first taste of research despite continuing changes to COVID-19 safety regulations in their institutions.

As an early career researcher aspiring to become an independent researcher, gaining a track record in funding acquisition is essential for me to progress in my career. This award, combined with the experience of grant writing, has helped me develop in this manner. I also hoped to develop my leadership and supervisory experience via the studentship. I was able to do this by acting as the student's primary supervisor; I gained experience in setting and managing workload, training in laboratory techniques, giving feedback on both written and practical work, and troubleshooting results. I found it a rewarding experience to see the student develop from day one through the final weeks of the project, and to hopefully contribute positively to their career development.

Emma Wise, Member, Harry Smith Vacation Studentship awardee 2021



Receiving this studentship enabled me to develop my career in several different ways. Firstly, the financial contribution via the Harry Smith Vacation Studentship attracted a high quality and enthusiastic candidate to carry out a very specific project related to a grant proposal. The consumables budget allowed this preliminary work to be completed in full, with some basic reagents that were required to run the assays, for which I did not currently have funding for as an early career researcher. The opportunity to fully supervise a student and plan a short yet successful placement, has undoubtedly benefited my professional development with respect to managing the associated responsibilities and teaching of an undergraduate student. Finally, the data generated will be included in my upcoming fellowship applications, and forms strong proof-of-concept data for my proposed vaccine development research going forward.

Carly Bliss, Member, Harry Smith Vacation Studentship awardee 2021



Objective 3

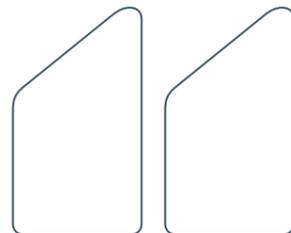
Adapting to meet the needs of our members

This project has impacted me massively. It has allowed me to identify the field of bioinformatics as a path I want to further explore and also given me the ability to do so. I have gone from merely hearing about bioinformatics before my project to now being confident to use many different bioinformatic techniques in future projects.

Samuel Cochrane, Harry Smith Vacation Student 2021

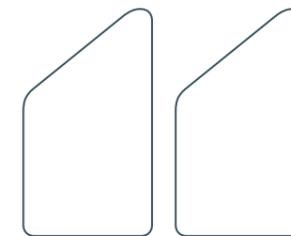
Receiving this studentship has made a great impact on my professional development; not only because I had the privilege of working with a fantastic student, but also because I could formalise my supervision experience. I have previously supervised several undergraduate and postgraduate students, and written and contributed to numerous grants and vacation studentships, however as a postdoc, I was not able to put my name as the principal investigator. This vacation studentship allowed me to demonstrate my experience, and also grow professionally as I was, for the first time, the one responsible for the completion of the project. I am very grateful that the Microbiology Society is taking this important step of being a platform for supporting early career researchers.

Blanca Perez-Sepulveda, Member, Harry Smith Vacation Studentship awardee 2021



This research visit project has contributed immensely to my professional development as I worked with several bacterial species and strains that I have never worked with previously and acquired new techniques that will be useful for my research. I also worked with various lab equipment in my host lab that I have never used before. The research visit has provided me with opportunity to work independently in a new research environment as well as collaboratively with the research team of my host. The data that I have generated will form part of my PhD thesis and contribute towards the successful completion of my PhD program. Furthermore, the experience that I have gained and confidence that I have developed from executing this project successfully will be useful for me as I progress into my early career stage in research and transition into my long-term goal of becoming an academic. More importantly, securing this research visit grant (for which I am very grateful) has provided me with experience and foundation for future grant applications as I advance in my career.

Faith Ukachukwu, Member, Research Visit Grant awardee 2021



Objective 3

Advancing on our sustainable open access journey

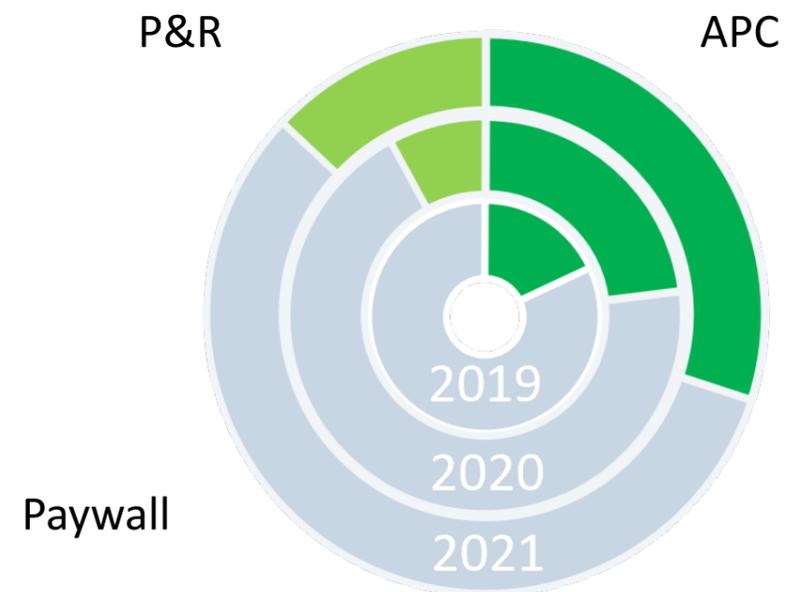
As we prepare for our founding journal, *Microbiology*, to become fully open access (OA) in 2023, we look back on two years of unprecedented progress and look forward to turning points for our publishing programme to shift from subscriptions to become predominantly OA.

In 2021, 43% of all articles published across the portfolio were made immediately OA, either through Article Processing Charges (APC) or under a Publish and Read agreement. We have seen significant year-on-year growth (38% more in 2021 than 2020) in the proportion of OA publishing in our journals, putting us on track to exceed an important benchmark – to publish more OA articles than paywalled in 2022.

Our priority aim is for OA to become the predominant path to publish research in a way that is both sustainable and serves the needs of microbiology researchers worldwide. We intend to develop our OA offerings over the next few years to:

- Improve inclusivity, benefiting more authors in more regions
- Build more OA funding routes to spread publication costs
- Innovate with new open science initiatives such as the open research platform, *Access Microbiology*

The proportion of OA articles in all journals of the Society has reached 43% in 3 years

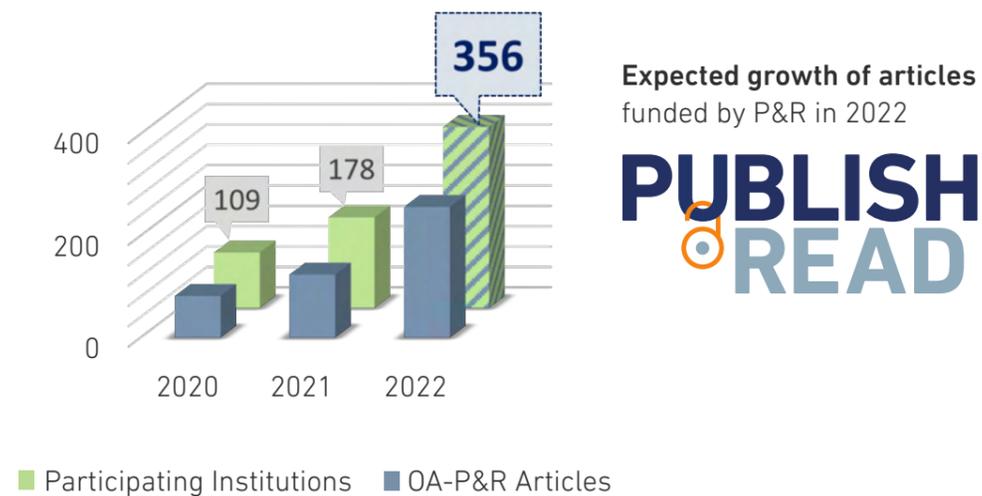


Objective 3

The success of Publish and Read

The expansion of Publish and Read since 2020 has been a driving force of OA growth. In 2021, the Society doubled the number of institutions benefiting from Publish and Read with transformative agreements signed with four academic consortia. As more institutions participate, we can predict a relative increase in the number of OA articles funded through this model and we hope to celebrate the doubling of OA output again in 2022.

While an ever-increasing number of authors benefit from fee-free OA publishing, it also drives OA publishing away from a currently APC-dominated model with the associated barriers it presents to authors who struggle to raise the funds themselves, a burden which disproportionately affects early career researchers.



Objective 3

Developing our open research platform

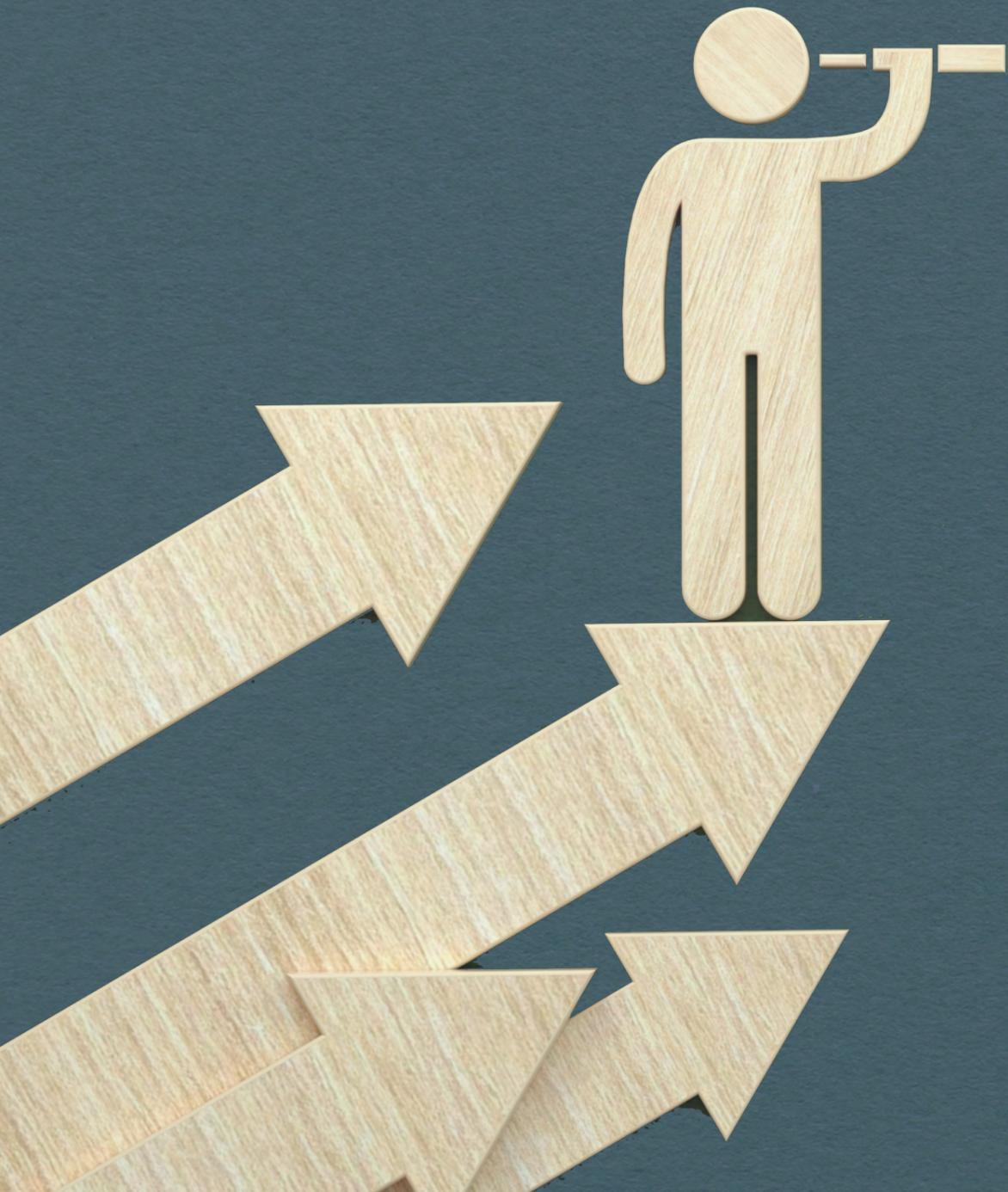
In 2020, the Society was awarded a grant by the Wellcome Trust and the Howard Hughes Medical Institute. The funding was awarded to convert our sound science journal, *Access Microbiology*, into an open research platform. The platform was designed so that it would combine many of the elements of a preprint server with those of a journal to improve the rigour, reproducibility and transparency of the academic record, whilst fast-tracking the communication of valuable research. The microbiology community was kept at the heart of the project by running extensive focus groups and a survey in early 2021 to ensure the new model would meet their needs. Alongside this, the platform was built and underwent full user testing throughout 2021, with the aim of launching in early 2022. Once the platform launches, *Access Microbiology* will continue to innovate and adapt to ensure that we are providing the best opportunities for our community in the move towards a more open landscape, and by doing so, diversifying our income.

ACCESS MICROBIOLOGY

an open research platform

Objective 3

Digital growth and highlights social media



Objective 3

Digital growth summary

Twitter followers increased by **16%** in 2021 to nearly **60,000**

LinkedIn followers increased by **50%** in 2021 to over **50,000**

YouTube subscribers increased by **28%** in 2021 to over **11,000**

Views on *Microbe Post* increased **50%** in 2021 to over **230,000**

Launched the Society on Instagram

Unique web views passed **3.5m** (up from 2.8m in 2020 – increasing **26%** year-on-year)

Forward look

Strategy 2023 -2027

The Society's current five-year strategy expires at the end of 2022, and in order to have a new strategy in place to launch at the end of next year, a full consultation process with staff, Council and Committee members commenced in the Autumn of 2021. This process will ensure that the new strategy for the period of 2023–2027 helps to best realise the Society's vision of "a world in which the science of microbiology provides maximum benefit to Society".

Our current strategy, which has driven our activities and maximised our impact over the past four years, captures the ambition, energy, enthusiasm and expertise of our members, providing an organisation plan that:

- Inspires, enthuses and motivates staff, members and trustees (by clearly expressing the Society's vision, integrity and passion)
- Sets a clear direction for the organisation
- Provides a framework for strategic decision making and the allocation of resources
- Enables the organisation to evaluate progress against objectives.

In order to ensure the Society's next strategy sets out our level of ambition, engages our members and continues to steer the organisation, this consultation process will continue throughout 2022, with ideas drawn from across the membership brought together to identify our strategic objectives for the next five years.

Forward look

Representing our communities

Equality, diversity and inclusion continues to be of utmost importance to the Society as we are welcoming to all interested in microbes. In 2022 we will build on the work we started in 2021 to improve accessibility and inclusion at the Society. As recommended by Council after the committees of the Society reviewed 2020 data, we will extend data collection to all protected characteristics from 2022 onwards, to monitor who is participating in our activities. We will continue to work on our action plan to bring all of our activities up to par, and work with collaborators and through the Royal Society of Biology to improve the wider inclusivity of the biosciences.

In 2021 we called for members of the Society to join our new Members Panel, a way to bring the voice of underrepresented groups to the fore throughout all levels of decision making at the Society. The first Members Panel will take office in January 2022, and includes members across the world, from different career stages and with different interests across the spectrum of microbiology. For the next three years, the Panel will be co-Chaired by Dr Kevin Maringer, Group Leader at The Pirbright Institute, and Dr Edward Cunningham-Oakes, Postdoctoral Research Associate at the University of Liverpool. The co-Chairs will work with the General Secretary's Group to ensure that equality, diversity and inclusion matters continue to be appropriately considered at the highest level of Society governance. In 2022 we will work with the Members Panel to bring the lived experience to inform our practices.

Forward look

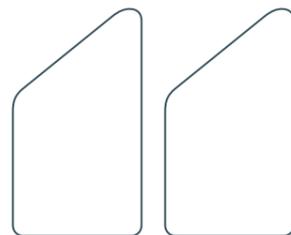
Representing our communities

I'm really excited about the formation of the Members Panel, as it now gives members from underrepresented groups a more direct and visible way to feed into Society governance and activities. My personal hope for my term as co-Chair is that we can encourage more open discussions on how the Society can engage, represent and support LGBTQ+ members and those who identify with other invisible characteristics like lower socioeconomic background and first-in-family to university, because these are discussions that are not yet well developed within academia and the microbiology field.

Dr Kevin Maringer, co-Chair, Members Panel

I am honoured to be working with such talented individuals, all of whom are equally qualified to be chairing this panel. The sheer diversity of this panel, the likes of which has not been seen elsewhere in the society, is beyond exciting! As a chair, I aim to work with the panel to provide transparent, actionable objectives for improving EDI across the society, and beyond. Through this, I hope to show how committed we are to bringing about change at the intersection between career path and personal background, that many of us face daily.

Dr Edward Cunningham-Oakes, co-Chair, Members Panel



Forward look

Representing our communities

Towards the end of 2021, we appointed our new Federation of Infection Societies (FIS) Chair-Elect, Dr Ashley Otter from the UK Health Security Agency. In 2022, he will be supporting the Society's FIS Chair and member of Council, Dr Tina Joshi, from the University of Plymouth for two years, before becoming Chair himself from January 2024 to December 2025.

This will be an important time for the Society, which has been engaging with a range of stakeholders to further discuss how it defines clinical, health-related and medical microbiology – with a view to provide opportunities relevant to clinical and health-related communities. We are also looking at how we can build on opportunities through our conferences, events and journal content so that these activities better reflect the wider microbiology community. Dr Otter and Dr Joshi will be crucial in helping the Society to achieve its aims in this area. They will also oversee – on the Society's behalf – the content that forms the scientific programme for the FIS 2022, which is the largest gathering of the UK infection community and includes societies, groups and individuals who are interested in all aspects of infection, from basic science and clinical infection to infection prevention and control.

Forward look

Impact and Influence

Since the beginning of the COVID-19 pandemic, microbiologists have been working tirelessly to understand SARS-CoV-2, the virus which causes COVID-19, and its implications for public health. To support the microbiology community in their efforts to tackle the pandemic, the Society played an important role as a conduit of knowledge exchange by co-ordinating access to experts for media appearances, building digital communities, openly sharing up-to-date research on SARS-CoV-2 and COVID-19 with the public and engaging with the government.

In 2022, to build an evidence base that champions microbiology and to prepare for any government inquiries, we will be documenting our organisational response to SARS-CoV-2 and compiling case studies showcasing the perspective of scientists during the COVID-19 pandemic. We will highlight the variety of roles adopted by both Society staff and the wider membership to mitigate the global crisis and create a clear record of the Society's activities during the pandemic.

As a long-term archive of events, the information provided in this project will enable the Society to consider whether what is currently in place fulfils our ambition to advance the understanding of microbiology and champion the contribution made by microbiology and our members.

Forward look

Impact and Influence

I am incredibly proud of the work that we have accomplished over the past two years, both as an individual and as part of the wider microbiology community. I think it beautifully demonstrates the enormous importance of our scientific community and of the continued funding of microbiology research.

Dr Maia Kavanagh Williamson, University of Bristol

The Society has been instrumental in a number of ways. The availability of grants, journal access, members' directory, the SARS-CoV-2 and COVID-19 Hub as well as the excellent Microbiology Educator's Network have all contributed towards my response during the pandemic and will surely continue to play an important role in both my teaching and research.

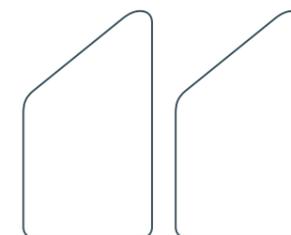
Dr Cheryl Water, University of Hull

The Microbiology Society Annual Conference Online 2021 was a very valuable experience for me. I was able to present to a large group of microbiologists and their questions after my talk helped to give me ideas for future directions of the project. Attending talks by other researchers at the conference was useful as it gave me a broader insight into SARS-CoV-2 work being done and the major knowledge gaps at the time.

Henry Oswin, PhD candidate, University of Bristol

Microbiology reminds us that humans are just one of the life forms on this planet and there are many more life forms we don't know about than we are familiar with. The COVID-19 pandemic reminds us that...

Dr Elisabetta Gropelli, St George's University of London



Forward look

Impact and Influence



Microbiology has become central to the everyday functioning of our society in a way it wasn't before. The pandemic has underscored the importance of microbiology in our understanding of pathogenic threats and the role we can play in addressing those threats.

Dr Andrew Page, Quadram Institute



Forward look

Knocking out antimicrobial resistance: finding solutions to a global health threat

In celebration of our 75th anniversary in 2020, the membership-focused policy project *A Sustainable Future* demonstrated the value and raised the profile of microbiology in achieving the United Nations Sustainable Development Goals. Focusing on several core areas, we gathered evidence from our members and created new partnerships to support knowledge exchange and share our excitement for the profoundly positive effects that microbes can have on our planet.

Since the project's completion, we saw an increased interest in further pursuing our engagement work in the fight against antimicrobial resistance (AMR), one of the areas we explored through *A Sustainable Future*. Members brought the topic to governance meetings, published opinion pieces in our journals and participated in public outreach activities. Concerns have also become more palpable in the wider society, for example when AMR was coined the 'silent pandemic' or when a ground-breaking study indicated that over a million people had died from drug-resistant infections in 2019. The microbiology community is well aware of this, many of our members are involved in pioneering interdisciplinary research and innovation projects (including in low- and middle-income countries), and some have become passionate advocates calling for more action, less talk, on AMR.

The Microbiology Society can help unlock and harness the potential of their knowledge, ideas and networks.

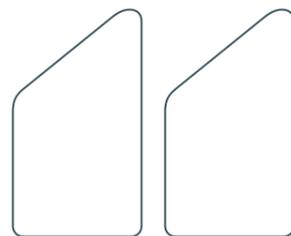
In 2022, we will be embarking on an ambitious, long-term programme of work setting out cross-disciplinary action in a 'one health' context to develop feasible and effective solutions to AMR, which include (but are not limited to) antimicrobial discovery, vaccines, diagnostics, behavioural change, stewardship and infection prevention and control. Awareness and public engagement are the gateway to true, sustained change. We will be doing both, especially with and for under-represented communities, to step up the public mandate for policy action and drive further progress.

Forward look

Knocking out antimicrobial resistance: finding solutions to a global health threat

Prior to the COVID-19 associated lockdown, the main global challenge firmly on the agendas of governments was, and still is, climate change. Infectious diseases and AMR have not had the public reach that climate change has had for varying reasons. Now, with the stark and dramatic societal, economic and cultural impacts of COVID-19, the consequences of not dealing with infectious diseases effectively, are clear to see. Perhaps there will be more impetus from world governments to take infections seriously and invest in appropriate measures to tackle them.

Dr Tina Joshi, University of Plymouth



Forward look

Transformation for longer-term sustainability

Digital transformation

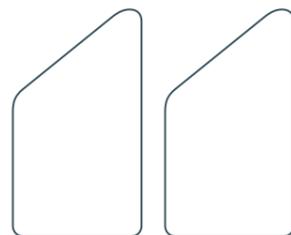
In 2022 we will be working to ensure that our digital offering remains relevant, supports us to deliver our strategic objectives and capitalises on the accelerated pace of the change in this area brought about by the pandemic. We are aiming to rethink the existing way of operating, to become more agile in our ability to respond to our members' needs and to provide a consistent digital experience for all. We plan to also consider specific areas, such as the delivery of hybrid events and meetings, content personalisation and facilitating community interactions.

Celebrating 75 years of *Microbiology*

In 2022, our founding journal *Microbiology* celebrates its 75th anniversary, and to mark this milestone the Microbiology Society has planned a series of activities that will take place throughout the year. This celebration not only explores the history of the journal but looks forward to the journal's open access future – laying the foundation for a successful transition.

The future for *Microbiology* must be a strong journal that people want to publish in and the benefit for that is manifold – both to members of the Society and also the community more generally. That's really what I hope we'll be able to see as we transition to open access and lead as an open access journal.

Gavin Thomas, Editor-in-Chief



As in 2021, *Microbiology* will continue to release themed collections in 2022. These include a cross-journal spotlight on fungal microbiology which brings together research from across our portfolio and aims to increase eukaryotic submissions, a fully open access series of Reviews on bacterial cell envelopes; and collections on cell-to-cell communication, and microbial evolution in line with Focused Meetings. The journal will also have a key presence at Annual Conference, with a dedicated 'Celebrating 75 Years of *Microbiology*' symposium which revisits key themes in the journal's history in the context of recent advances. Alongside this will be a celebratory reception at Belfast City Hall, and a large, physical timeline that will be present at the ICC Belfast – allowing delegates to walk through the journal's history. In 2021, the Microbiology Society commissioned Peter Collins (Emeritus Director of the Royal Society) to investigate the history of *Microbiology* and its role in the Microbiology Society. In 2022, these stories will be shared; the first will explore the origins of the journal, and further articles will speak to how the journal was managed and how it fitted into Society activities, and the evolution of how the journal is published. While these stories tell of the history of the journal, they also show how *Microbiology* has evolved over the past 75 years in response to the community – and how it continues to respond to the community with the transition to open access in 2023.



Risk management

A vital element to ensuring our sustainability is the diligent and prudent management of risk. Council has identified the specific risks that may be faced by the charity and put in place policies to mitigate them.

The Audit, Risk and Evaluation Committee, with an external Chair, has responsibility for the detailed examination of risk. One of its duties is to consider the major risks that Council needs to consider. The Committee developed an improved critical risk register which was launched in 2020, with ten broad categories of risk rather than a long list of more specific challenges.

The principal risks which Council has identified are:

- Failure to manage relationships
- Failure to diversify income
- Inertia or unwillingness to change
- Failure to keep pace with the external environment
- Loss of members, authors and /or readers to competing groups
- Failure to manage reputation
- Failure to nurture existing business
- Failure to communicate or implement strategy
- Failure to manage themes of different groups
- Failure to operate effectively and efficiently

Council is invited to review the Critical Risk Register every six months at its March and September meetings and the Audit, Risk and Evaluation Committee continue to look at risk in detail at its meetings throughout the year. The Committee agreed to review the register at its meetings 2021 and considered the existing list of corporate risks and determined how these might affect the ability of the Society to achieve its strategic objectives. The review also sought to examine the differences between 'embedded risk' and 'risk events' and the development of a risk appetite statement.

Income and expenditure

The Society continues to be highly dependent on its journal subscriptions for its main source of income. In 2020, the Society piloted a new business model called Publish and Read, where in return for a fee, institutions get access to our journal content and authors have unlimited opportunity to publish in our journals. This was in response to an ever changing research landscape, which sees the world entering a new era of open science, challenging the status quo by recognising the value of greater transparency, focus on

reproducibility, data management, collaboration and good scientific citizenship. There was also a push to Open Access by PlanS – an initiative for Open Access publishing that was launched in September 2018 and supported by international consortium of research funding and performing organisations. We worked to mitigate this risk by ensuring our Open Access policies were compliant with even the most stringent funder mandates and further engaging with the Open Access policy community to influence the development of pragmatic guidelines around an open publishing future.

Fundraising

In 2021, the Society launched a fundraising campaign called the Unlocking Potential Fund. The aim of the campaign is to raise funds to launch the Unlocking Potential Grant, helping early and mid-career microbiologists to deal with circumstances that may hold them back from achieving their full potential, with a planned launch date of March 2022. Donations totalling £7,000 were received in 2021 and all fundraising was carried out via direct individual giving appeals to the membership, both digitally and physically. Donations were received electronically via our website or via cheques posted directly to the Society's offices. No fundraising partners were used and no complaints regarding fundraising practices were received in the year. We have not appealed to the general public for donations or sought funds from other sources during the year.

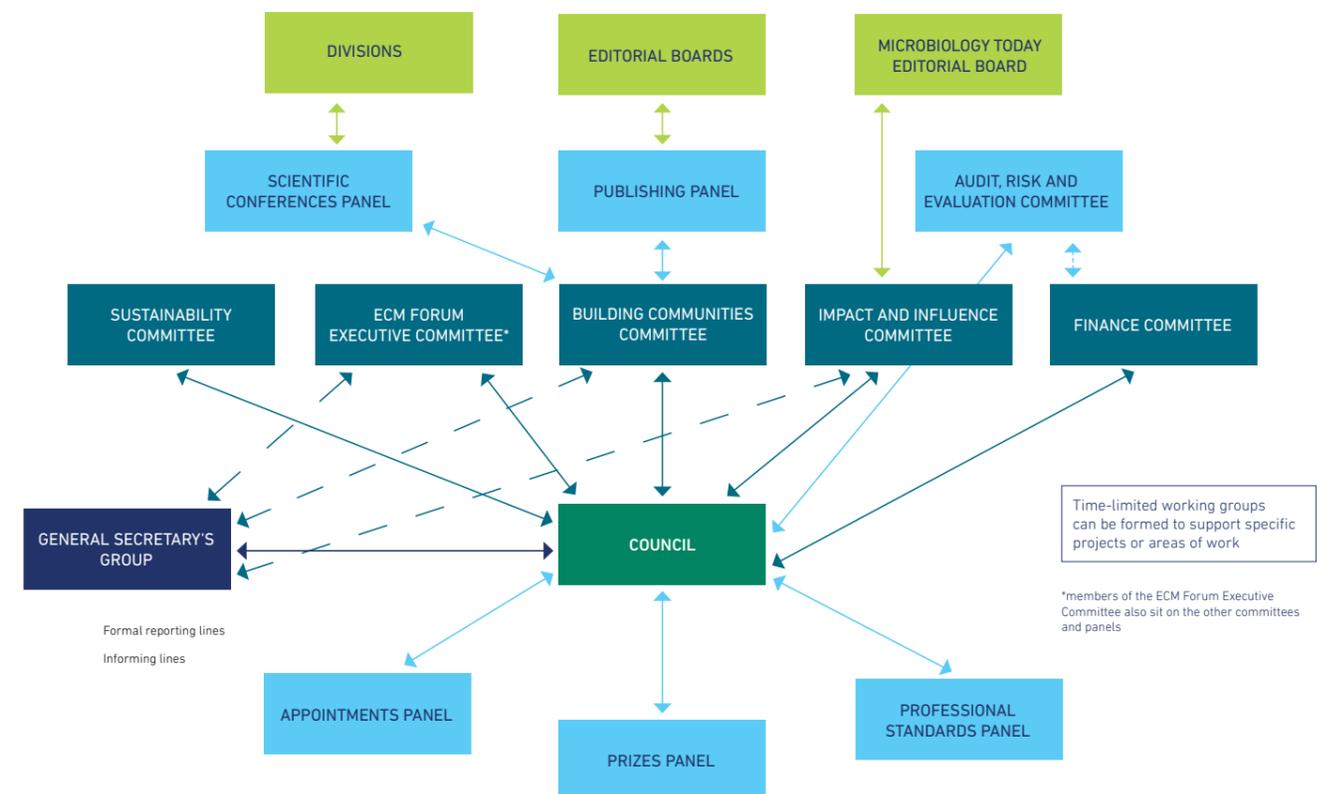
Structure, Governance and Management

The Microbiology Society is a company limited by guarantee, first incorporated in 1972, and a registered charity with the charitable object of advancing the art and science of microbiology. Its governing document comprises the Articles of Association, which incorporates the Memorandum of Association. These documents are all available on the Society's website.

The Trustees have given careful consideration to the Charity Commission's public benefit guidance in defining the Society's Vision and Mission statements and in ensuring that the Society continues to achieve the advancement of the art and science of microbiology. The Society is led by a Council who are the Trustees of the charity and the directors of the company. Council is made up of three Executive Officers (President, Treasurer and General Secretary), five elected members and seven co-Chairs of three strategic committees: Building Communities Committee, Impact and Influence Committee, Sustainability Committee, and the Early Career Microbiologists' Forum Executive Committee. The Treasurer is the Chair of the Finance Committee. There is also an Audit, Risk and Evaluation Committee with an external independent Chair which reports to Council annually.

Professor Judith Armitage FRS stepped down as President on 31 December 2021. Professor Robin May took office as Treasurer on 1 January 2021. The Executive Officers and Chairs of Committees are appointed by Council. The Society continually reviews the process for recruitment for these positions, balancing the need for an open and transparent process, provision for equality, diversity and inclusion and the importance of engaging suitable and motivated individuals. For all Executive Officer posts and Committee Chairs, there is an open call for nominations from the eligible categories of membership. Nominations are then reviewed by an appointments panel, comprising of members of Council, and chaired by the General Secretary.

The panel may also approach and invite nominations from potential candidates. The panel brings recommendations to the full Council for consideration before appointment. In the case of the President, a formal, anonymous vote is undertaken by Council of those candidates considered suitable by the appointments panel. In the case of Elected members of Council, nominations are also sought from the membership and candidates elected via open election. The Chair of the Early Career Microbiologists' Forum is elected by the members of the Forum.



Structure, Governance and Management

All newly appointed or elected members of Council receive induction information and are required to complete a declaration that they are not disqualified from serving as company directors and charity trustees. Members of Council also complete a Register of Interests form and abide by the Society's policy on potential conflicts of interest. The Society provides short training sessions to Council members on their duties and responsibilities as trustees and directors, and governance best practice as well as providing access to external governance training courses and supporting Council members to attend these. Council meets quarterly to transact the business of the Society and in 2021 met in March, July, September, and December.

Committee members provide knowledge and expertise to oversee and inform delivery of relevant projects. The Committees are formed of members of the Society who are elected to positions by the full membership. Each Committee also has provision to co-opt members who can be non-members if the Committee identifies particular skills requirements.

The Early Career Microbiologists' Forum Executive Committee is supported by the wider Early Career Microbiologists' Forum to ensure early-career members can help shape the future of the Society.

The Divisions of the Society feed into the Building Communities Committee via the Scientific Conferences Panel to ensure coverage from a range of microbiological areas in the meetings programme. Three of these are taxonomically defined, dealing with Eukaryotes, Prokaryotes and Viruses. The Society also has an Irish Division to oversee its activities in Ireland.

The Society's journal Editors-in-Chief and Deputy Editors-in-Chief form the Publishing Panel which reports into the Building Communities Committee and is responsible for advising on the publishing strategy and overseeing the delivery of the operational aspects of the journals programme.

Members of Council, Committees and Divisions serve on a voluntary basis with no remuneration but claim reimbursement of expenses incurred whilst on Society business. The day-to-day management of Society business is delegated to the Chief Executive, supported by the Senior Management of the Society. During 2021 there were two directors a Chief Programmes Officer and Director of Strategy and a Chief Operations

Officer. The Society employs over 50 staff; staff names, job titles and key contact details can be found on the Society website. All salaries, including those of key management personnel, are reviewed and benchmarked by reference to external agencies as well as being regularly reviewed by the Finance Committee. It is the aim of the Society to attract highly talented individuals who are motivated to work in the charity and scientific sectors. The Society's remuneration policy is the same for all members of staff, including the Chief Executive. Remuneration for staff is reviewed by the Finance Committee in March each year, and if a percentage change is recommended and approved by the Society's Council then this is implemented from April of each year. In deciding on the percentage change, the Finance Committee and Council consider a whole range of factors including affordability and inflation rates.

Results for the year

The Society's results for the year are set out in detail in the statement of financial activities on page 102, which incorporates the income and expenditure account. Council has reviewed the results for the year and the position at the year end and considers them to be satisfactory.

The principal funding sources have continued to be income from sale of subscriptions and Publish and Read access to the Society's publications, investment income and membership subscriptions. In 2021 all Society's events were converted to digital events and income from event registration fees and exhibitor and sponsorship fees was reduced. The Society has continued expenditure on journal publishing, conferences and events, grants, policy, and membership activities.

It is the objective of the Society over a period of time to utilise each current year's net income after providing for non-recurring items and as planned, ended 2021 with a surplus against the main operating budget of £1,278k. Following a review of the Society's reserves in 2018, a plan was agreed to spend down £1,784k of reserves across the life of the 2018–2022 strategy and expenditure in 2021 included continued investment in the Society's technology (particularly to support to development of online events), fundraising activities, member activities, the Society's 75th anniversary and staffing to support these. The overall outturn for 2021, therefore, is a deficit of £90k before gains on investments and foreign exchange of £1,664k. The overall net movement in funds in 2021 was £1,574k.

Financial Review

Reserves policy

It is the policy of Council to maintain sufficient funds to meet its strategic objectives contained in its 5-year strategic plan 2018–2022. The reserve is intended to provide a source of funds for situations such as a change in circumstances, a sudden increase in expenses, unanticipated loss in funding, or uninsured losses.

The current reserves policy has a target reserves figure of £6,209k. Actual free reserves are £12,949k, and are calculated as the general fund at the year end, less the year end book value of tangible and intangible assets. The target minimum reserves level is equal to 2 years operating costs for publishing operations plus 1-year operating costs for all other activities. The calculation includes all recurring, anticipated expenditure such as salaries and benefits, the programme of current activities and ongoing professional services.

The reserve may also be used for one-time, non-recurring opportunities that will build long-term capacity, such as research and development, investment in infrastructure or collaboration opportunities. We are investing our reserves in the following activities which span the 5 years of the 2018–2022 strategy: 75th anniversary activities; investments in technology to support the publishing process; investment in physical infrastructure such as IT; and investment in people, both our members, through engagement activities, and staff.

Council modelled scenarios and developed and analysed the Society's long-term financial forecast before carrying out a detailed evaluation of the potential risks to its income, of which 85% comes from journal sales. The changing external environment in this area, including moves towards open access, remains a significant risk and the target reserves level was developed to take into consideration the fact that changes to the current publishing model would take time to take effect and would require additional investment. The target amount will be calculated each year after approval of the annual budget, reported to the Finance Committee and Council. The Council of the Microbiology Society will carry out a full review of this policy every 3 years or sooner if income changes significantly.

The reserves will be funded with surplus unrestricted operating funds. The Council of the Microbiology Society may from time to time direct that a specific source of revenue be set aside for reserves. Examples may include one-time gifts or donations, special grants, or special appeals.

Statement of responsibilities of the Trustees

The Council of the Microbiology Society confirm that there are no material uncertainties in relation going concern in the foreseeable future.

Investment policy and objectives

Following the development of an explicit Investment Policy document in 2014 and a review of the Society's investment managers in 2019, the Society's assets are now invested primarily in a portfolio of good-quality funds worldwide that are chosen for both the long-term value of their shares and their profitability and their potential to generate dividend income. The objective is to maximise the long-term total return of the fund, subject to certain limitations and restrictions.

The Society continues to retain Asset Risks Consultants (ARCs) to assist in reviewing the Society's current investment management and support in appointing new managers when appropriate. ARCs attend the quarterly Finance Committee meetings to review the performance of the investments and Evelyn Partners Investment Managers also attend each meeting.

Restrictions on distribution

The Memorandum of Association prohibits the distribution of income and property of the Society to the members. Upon dissolution or winding up of the Society, the assets shall be given or transferred to some similar institution having objectives similar to those of the Society.

Tax status

The Society is entitled to exemption from taxation on income and capital gains to the extent that its funds are applied for charitable purposes.

Statement of responsibilities of the Trustees

The Trustees (who are also directors of Microbiology Society for the purposes of company law) are responsible for preparing the Annual Report and the financial statements in accordance with applicable law and United Kingdom Accounting Standards (United Kingdom Generally Accepted Accounting Practice).

Company law requires the Trustees to prepare financial statements for each financial year which give a true and fair view of the state of affairs of the charitable company and of the incoming resources and application of resources, including the income and expenditure, of the charitable company for that period. In preparing these financial statements, the Trustees are required to:

- Select suitable accounting policies and then apply them consistently
- Observe the methods and principles in the Charities Statement of Recommended Practice
- Make judgements and estimates that are reasonable and prudent
- State whether applicable UK Accounting Standards and statements of recommended practice have been followed, subject to any material departures disclosed and explained in the financial statements
- Prepare the financial statements on the going concern basis unless it is inappropriate to presume that the charity will continue in operation

The Trustees are responsible for keeping adequate accounting records that disclose with reasonable accuracy at any time the financial position of the charitable company and enable them to ensure that the financial statements comply with the Companies Act 2006. They are also responsible for safeguarding the assets of the charitable company and hence for taking reasonable steps for the prevention and detection of fraud and other irregularities.

In so far as the Trustees are aware:

- There is no relevant audit information of which the charitable company's auditor is unaware
- The Trustees have taken all steps that they ought to have taken to make themselves aware of any relevant audit information and to establish that the auditor is aware of that information

The Trustees are responsible for the maintenance and integrity of the corporate and financial information included on the charitable company's website. Legislation in the United Kingdom governing the preparation and dissemination of financial statements may differ from legislation in other jurisdictions.

Independent auditor's report to the members of Microbiology Society

Auditor

Sayer Vincent LLP was re-appointed as the charitable company's auditor during the year and has expressed its willingness to continue in that capacity.

The Trustees' Annual Report has been prepared in accordance with the special provisions applicable to companies subject to the small companies' regime.

The Trustees' Annual Report has been approved by the Trustees on 1 July 2022 and signed on their behalf by:

Professor Gurdyal Besra
President

Professor Robin May
Treasurer

Independent auditor's report to the members of Microbiology Society

Opinion

We have audited the financial statements of Microbiology Society (the 'charitable company') for the year ended 31 December 2021 which comprise the statement of financial activities, balance sheet, statement of cash flows and notes to the financial statements, including significant accounting policies. The financial reporting framework that has been applied in their preparation is applicable law and United Kingdom Accounting Standards, including FRS 102 The Financial Reporting Standard applicable in the UK and Republic of Ireland (United Kingdom Generally Accepted Accounting Practice). In our opinion, the financial statements:

- Give a true and fair view of the state of the charitable company's affairs as at 31 December 2021 and of its incoming resources and application of resources, including its income and expenditure, for the year then ended
- Have been properly prepared in accordance with United Kingdom Generally Accepted Accounting Practice
- Have been prepared in accordance with the requirements of the Companies Act 2006, the Charities and Trustee Investment (Scotland) Act 2005 and regulation 8 of the Charities Accounts (Scotland) Regulations 2006 (as amended)

Basis for opinion

We conducted our audit in accordance with International Standards on Auditing (UK) (ISAs (UK)) and applicable law. Our responsibilities under those standards are further described in the Auditor's responsibilities for the audit of the financial statements section of our report. We are independent of the charitable company in accordance with the ethical requirements that are relevant to our audit of the financial statements in the UK, including the FRC's Ethical Standard and we have fulfilled our other ethical responsibilities in accordance with these requirements. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

Conclusions relating to going concern

In auditing the financial statements, we have concluded that the trustees' use of the going concern basis of accounting in the preparation of the financial statements is appropriate.

Based on the work we have performed, we have not identified any material uncertainties relating to events or conditions that, individually or collectively, may cast significant doubt on Microbiology Society's ability to continue as a going concern for a period of at least

twelve months from when the financial statements are authorised for issue.

Our responsibilities and the responsibilities of the trustees with respect to going concern are described in the relevant sections of this report.

Other Information

The other information comprises the information included in the trustees' annual report, other than the financial statements and our auditor's report thereon. The trustees are responsible for the other information contained within the annual report. Our opinion on the financial statements does not cover the other information and except to the extent otherwise explicitly stated in our report, we do not express any form of assurance conclusion thereon.

Our responsibility is to read the other information and in doing so, consider whether the other information is materially inconsistent with the financial statements or our knowledge obtained in the course of the audit, or otherwise appears to be materially misstated. If we identify such material inconsistencies or apparent material misstatements, we are required to determine whether this gives rise to a material misstatement in the financial statements themselves. If, based on the work we have performed, we conclude that there is a material misstatement of this other information, we are required to report that fact.

We have nothing to report in this regard.

Opinions on other matters prescribed by the Companies Act 2006

In our opinion, based on the work undertaken in the course of the audit:

- The information given in the trustees' annual report for the financial year for which the financial statements are prepared is consistent with the financial statements; and
- The trustees' annual report has been prepared in accordance with applicable legal requirements

Independent auditor's report to the members of Microbiology Society

Matters on which we are required to report by exception

In the light of the knowledge and understanding of the charitable company and its environment obtained in the course of the audit, we have not identified material misstatements in the Trustees' annual report.

We have nothing to report in respect of the following matters in relation to which the Companies Act 2006 and the Charities Accounts (Scotland) Regulations 2006 (as amended) require us to report to you if, in our opinion:

- Adequate accounting records have not been kept, or returns adequate for our audit have not been received from branches not visited by us; or
- The financial statements are not in agreement with the accounting records and returns; or
- Certain disclosures of trustees' remuneration specified by law are not made; or
- We have not received all the information and explanations we require for our audit; or
- The trustees were not entitled to prepare the financial statements in accordance with the small companies regime and take advantage of the small companies' exemptions in preparing the trustees' annual report and from the requirement to prepare a strategic report.

Responsibilities of trustees

As explained more fully in the statement of trustees' responsibilities set out in the trustees' annual report, the trustees (who are also the directors of the charitable company for the purposes of company law) are responsible for the preparation of the financial statements and for being satisfied that they give a true and fair view, and for such internal control as the trustees determine is necessary to enable the preparation of financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the financial statements, the trustees are responsible for assessing the charitable company's ability to continue as a going concern, disclosing, as applicable, matters related to going concern and using the going concern basis of accounting unless the trustees either intend to liquidate the charitable company or to cease operations, or have no realistic alternative but to do so.

Auditor's responsibilities for the audit of the financial statements

We have been appointed as auditor under section 44(1)(c) of the Charities and Trustee Investment (Scotland) Act 2005 and under the Companies Act 2006 and report in accordance with regulations made under those Acts.

Our objectives are to obtain reasonable assurance about whether the financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes our opinion. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with ISAs (UK) will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these financial statements.

Irregularities, including fraud, are instances of non-compliance with laws and regulations. We design procedures in line with our responsibilities, outlined above, to detect material misstatements in respect of irregularities, including fraud. The extent to which our procedures are capable of detecting irregularities, including fraud are set out below.

Capability of the audit in detecting irregularities

In identifying and assessing risks of material misstatement in respect of irregularities, including fraud and non-compliance with laws and regulations, our procedures included the following:

- We enquired of management and the audit, risk and evaluation committee, which included obtaining and reviewing supporting documentation, concerning the charity's policies and procedures relating to:
 - Identifying, evaluating, and complying with laws and regulations and whether they were aware of any instances of non-compliance;
 - Detecting and responding to the risks of fraud and whether they have knowledge of any actual, suspected, or alleged fraud;
 - The internal controls established to mitigate risks related to fraud or non-compliance with laws and regulations.
- We inspected the minutes of meetings of those charged with governance.

Independent auditor's report to the members of Microbiology Society

- We obtained an understanding of the legal and regulatory framework that the charity operates in, focusing on those laws and regulations that had a material effect on the financial statements or that had a fundamental effect on the operations of the charity from our professional and sector experience.
- We communicated applicable laws and regulations throughout the audit team and remained alert to any indications of non-compliance throughout the audit.
- We reviewed any reports made to regulators.
- We reviewed the financial statement disclosures and tested these to supporting documentation to assess compliance with applicable laws and regulations.
- We performed analytical procedures to identify any unusual or unexpected relationships that may indicate risks of material misstatement due to fraud.
- In addressing the risk of fraud through management override of controls, we tested the appropriateness of journal entries and other adjustments, assessed whether the judgements made in making accounting estimates are indicative of a potential bias and tested significant transactions that are unusual or those outside the normal course of business.

Because of the inherent limitations of an audit, there is a risk that we will not detect all irregularities, including those leading to a material misstatement in the financial statements or non-compliance with regulation. This risk increases the more that compliance with a law or regulation is removed from the events and transactions reflected in the financial statements, as we will be less likely to become aware of instances of non-compliance. The risk is also greater regarding irregularities occurring due to fraud rather than error, as fraud involves intentional concealment, forgery, collusion, omission or misrepresentation.

A further description of our responsibilities is available on the Financial Reporting Council's website at: www.frc.org.uk/auditorsresponsibilities. This description forms part of our auditor's report.

Use of our report

This report is made solely to the charitable company's members as a body, in accordance with Chapter 3 of Part 16 of the Companies Act 2006 and section 44(1)(c) of the Charities and Trustee Investment (Scotland) Act 2005. Our audit work has been undertaken so that we might state to the charitable company's members those matters we are required to state to them in an auditor's report and for no other purpose. To the fullest extent permitted by law, we do not accept or assume responsibility to anyone other than the charitable company and the charitable company's members as a body, for our audit work, for this report, or for the opinions we have formed.

Joanna Pittman (Senior statutory auditor)
22 July 2022

for and on behalf of Sayer Vincent LLP, Statutory Auditor
Invicta House, 108–114 Golden Lane, London, EC1Y 0TL

Sayer Vincent LLP is eligible to act as auditor in terms of section 1212 of the Companies Act 2006

Microbiology Society
Statement of financial activities
(incorporating the income and expenditure account)
For the year ended 31 December 2021

	Notes	Unrestricted 2021 £'000	Restricted 2021 £'000	Total 2021 £'000	Total 2020 £'000
Income from:					
Donations and legacies		-	67	67	22
Charitable activities					
Publishing		3,564	-	3,564	3,548
Professional development (includes membership)		240	-	240	217
Scientific conferences		156	-	156	7
Other income		-	-	-	6
		<u>3,960</u>	<u>67</u>	<u>4,027</u>	<u>3,800</u>
Investments		75	-	75	88
Total income		<u>4,035</u>	<u>67</u>	<u>4,102</u>	<u>3,888</u>
Expenditure on:					
Charitable activities					
Publishing		1,581	60	1,641	1,690
Members' programmes		1,403	-	1,403	1,636
Grants and awards	2	69	-	69	187
Raising awareness and influencing policy		1,024	-	1,024	887
		<u>4,077</u>	<u>60</u>	<u>4,137</u>	<u>4,400</u>
Raising funds					
Investment management costs		55	-	55	72
Total expenditure	6	<u>4,132</u>	<u>60</u>	<u>4,192</u>	<u>4,472</u>
Net (expenditure) before net gains on investments		(97)	7	(90)	(584)
Net gains on investments	11	1,663	-	1,663	1,434
Other recognised gains: foreign exchange		1	-	1	53
Net income and net movement in funds for the year		<u>1,567</u>	<u>7</u>	<u>1,574</u>	<u>903</u>
Fund balances brought forward		<u>16,051</u>	<u>-</u>	<u>16,051</u>	<u>15,148</u>
Fund balances carried forward		<u>17,618</u>	<u>7</u>	<u>17,625</u>	<u>16,051</u>

All the above results relate to continuing activities.
The charity had no restricted income or expenditure in the previous year.

The annexed notes form part of these financial statements

Microbiology Society
(Limited by guarantee no. 01039582)
Balance Sheet
As at 31 December 2021

	Notes	2021 Total £'000	2020 Total £'000
Fixed assets			
Intangible assets	9	112	221
Tangible assets	10	4,557	4,600
Investments	11	<u>12,373</u>	<u>10,702</u>
		<u>17,042</u>	<u>15,523</u>
Current assets			
Debtors	12	540	401
Cash at bank and in hand (including deposits)		<u>2,442</u>	<u>2,275</u>
		<u>2,982</u>	<u>2,676</u>
Creditors: amounts falling due within one year	13	2,399	2,148
Net current assets		583	528
Net assets		<u>17,625</u>	<u>16,051</u>
Funds:			
Restricted funds	16	7	-
Unrestricted funds : General	16	17,618	16,051
Total funds		<u>17,625</u>	<u>16,051</u>

These financial statements have been prepared in accordance with the special provisions for small companies under part 15 of the Companies Act 2006.

Approved and authorised for issue on 1 July 2022 and signed on behalf of Council.

Professor Gurdyal Besra
President

Professor Robin May
Treasurer

The annexed notes form part of these financial statements

Microbiology Society
Statement of cash flows
For the year ended 31 December 2021

	2021 £'000	2020 £'000
£	£	£
Cash flows from operating activities:		
Net (expenditure) for the year before net gains on investments (as per the statement of financial activities)	(90)	(584)
Adjustments for:		
Amortisation charges	114	113
Depreciation charges	100	97
Dividends and interest from investments	(75)	(88)
(Increase) / decrease in debtors	(139)	129
Increase / (decrease) in creditors	251	(360)
Net cash provided by / (used in) operating activities	161	(693)
Cash flows from investing activities:		
Dividends and interest from investments	75	88
Purchase of intangible assets	(5)	-
Purchase of fixed assets	(57)	(95)
Net sales of investments	(8)	477
Net cash provided by investing activities	5	470
Change in cash and cash equivalents in the year	166	(223)
Cash and cash equivalents at the beginning of the year	2,275	2,445
Change in cash and cash equivalents due to exchange rate movements	1	53
Cash and cash equivalents at the end of the year	2,442	2,275

The annexed notes form part of these financial statements

Microbiology Society
(Limited by guarantee)
Notes to the financial statements
Year ended 31 December 2021

1. Accounting policies

Basis of accounting

These financial statements have been prepared under the historical cost convention as modified by the revaluation of investment property and fixed asset investments, and are prepared in accordance with the Financial Reporting Standard applicable in the UK and Republic of Ireland (FRS 102). The Charity is a public benefit entity for the purposes of FRS 102 and therefore has also prepared the financial statements in accordance with the Statement of Recommended Practice applicable to charities preparing their accounts in accordance with the Financial Reporting Standard applicable in the UK and Republic of Ireland (The FRS 102 Charities SORP), the Charities Act 2011, the Charities and Trustee Investment (Scotland) Act 2005 and the Charities Accounts (Scotland) Regulations 2006.

The trustees have assessed whether the use of the going concern basis is appropriate and have considered possible events or conditions that might cast significant doubt on the ability of the Charity to continue as a going concern. The trustees have made this assessment for a period of at least one year from the date of approval of the financial statements. The trustees have given due consideration to the effects of the current global economic uncertainty brought about by the Russia – Ukraine war, plus other major factors including inflation and the Society's changing business model; that may have an impact on the Society both financially and operationally. The Society continues to operate very well despite these factors, with journal income for 2022 in line with expectations. The Society has also returned to in-person events in 2022 and has delivered its flagship annual conference in person for the first time in three years with income exceeded expectations due to higher-than-expected delegate numbers. The trustees have concluded that there is a reasonable expectation that the Charity has adequate resources to continue in operational existence for the foreseeable future. The Charity therefore continues to adopt the going concern basis in preparing its financial statements.

The presentational currency used is British pound sterling, and balances are rounded to the nearest £1,000.

A separate income and expenditure account has not been prepared as the information required by the Companies Act 2006 is given in the statement of financial activities and in the notes to the financial statements.

Critical accounting judgements and key sources of estimation uncertainty

In the application of the charity's accounting policies, Trustees are required to make judgements, estimates, and assumptions about the carrying values of assets and liabilities that are not readily apparent from other sources. The estimates and underlying assumptions are based on historical experience and other factors that are considered to be relevant. Actual results may differ from these estimates.

The estimates and underlying assumptions are reviewed on an on-going basis. Revisions to accounting estimates are recognised in the period in which the estimate is revised if the revision affects only that period, or in the period of the revision and future periods if the revision affects the current and future periods.

The key estimates used in the preparation of these Financial Statements are the depreciation rate and amortisation rate of fixed assets (as detailed later in this note) and the recoverability of trade debtors. In the view of the Trustees, there are no other key assumptions concerning the future and other key sources of estimation uncertainty at the reporting date that have a significant risk of causing a material adjustment to the carrying amounts of assets and liabilities within the next financial year.

Financial instruments

The company has elected to apply the provisions of Section 11 'Basic Financial Instruments' and Section 12 'Other Financial Instruments Issues' of FRS 102 to all of its financial instruments. Financial instruments are recognised in the company's balance sheet when the company becomes party to the contractual provisions of the instrument. Financial assets and liabilities are offset, with the net amounts presented in the financial statements, when there is a legally enforceable right to set off the recognised amounts and there is an intention to settle on a net basis or to realise the asset and settle the liability simultaneously. With the exceptions of prepayments and deferred income all other debtor and creditor balances are considered to be basic financial instruments under FRS 102.

Intangible assets

Assets with a cost in excess of £1,000 and which have an expected useful life of over one year are capitalised.

Amortisation is provided on all intangible assets at rates calculated to write off the cost, less the estimated residual value, of each asset over its expected useful life, as follows:

CRM - at 20% p.a. on a straight line basis Website - at 25% p.a. on a straight line basis

Tangible fixed assets

Assets with a cost in excess of £1,000 and which have an expected useful life of over one year are capitalised.

Depreciation is provided on all fixed assets at rates calculated to write off the cost, less the estimated residual value, of each asset over its expected useful life, as follows:

Office equipment, fixtures and fittings - at 25% or 20% p.a. on a straight line basis Freehold property: - Building at 2% p.a. on a straight line basis
 - Fit out costs at 5% p.a. on a straight line basis
 - Freehold land is not depreciated Fixed asset investments

The fixed asset investments are carried at market value based on the bid price at the balance sheet date. Unrealised and realised gains are both recognised in the Statement of the Financial Activities.

Investment income includes the appropriate tax deductions and tax credits and interest accrued on all fixed-interest stocks.

Income

Income is recognised in the Statement of Financial Activities in the period in which the Society is entitled to the income, it can be measured reliably and receipt is probable. Income from membership and publication subscriptions is included in the statement of financial activities in the period to which it relates. Subscription receipts in advance are recorded as deferred income. Income from memberships, publications and conferences is recognised in the period to which it relates. Any amount received in advance is deferred. Investment income is recognised on an accruals basis.

Expenditure

All expenditure is accounted for on an accruals basis and has been classified under headings that aggregate all costs related to the category. Grants payable are recognised where the grant has been approved and the recipient has been informed it has been awarded. Where costs cannot directly be attributed to particular headings they have been allocated to activities on a basis consistent with the use of resources. In particular, support costs are apportioned to direct activities based on the direct staff costs allocated to those activities.

Foreign currencies

Transactions in foreign currencies, principally US dollars, are recorded at the rate ruling at the date of the transaction. Assets and liabilities denominated in foreign currencies are converted at the year end exchange rate. All exchange differences are reflected in the income and expenditure account.

Stock

Stock is valued at the lower of cost and net realisable value.

Pensions

The Society operates defined contribution pension arrangements, the assets of which are held separately from those of the Society in independently administered funds. Contributions are charged to the income and expenditure account as they become payable.

	2021 £'000	2020 £'000
2. Grants awarded		
Harry Smith Vacation Studentships (19 grants, 2020: 24)	50	61
Education and Outreach Grants (3 grants to fund microbiology promotion, 2020: 5)	3	5
International Development Fund (2 grants to fund microbiology training in developing countries, 2020: 4)	10	20
Total institutional grants	63	86
Research Visit Grants (4 grants for research visits, 2020: 4)	12	10
Society Conference Grants (see below) (36 grants for attendance at digital Society meetings, 2020: 357 grants for travel and accommodation at Society meetings)	1	87
Travel Grants (12 grants, 2020: 18)	2	8
Microbiology in Society Award (1 grant, 2020: 2)	5	9
Total grants to individuals	20	114
Grants approved in the prior year not taken up	(14)	(13)
Total grants	69	187

The Society delivered a digital events programme in 2021, and so delegate attendance costs for these events were considerably reduced. The Society Conference Grant offerings were adjusted accordingly, and so fewer awards and grant amounts were made overall.

3. Turnover

At 31 December 2021, Included within Publication Income and Membership fees is overseas income amounting to 76% of the total income generated from these activities.

4. Expenditure

	2021 £'000	2020 £'000
Costs include:		
Auditor's remuneration: Audit fees	16	16
Amortisation	114	113
Depreciation	100	97

5. Expenses reimbursed to members of Council

3 (2020: 7) members of Council were reimbursed expenses of £1,393 (2020: £2,781) relating to travel and subsistence.

6. Total expenditure

CURRENT YEAR

	Staff costs £'000	Other direct costs £'000	Support allocation £'000	2021 £'000	2020 £'000
Publishing	548	607	486	1,641	1,690
Members' programmes	714	56	633	1,403	1,636
Grants and awards	-	69	-	69	187
Raising awareness and influencing policy	496	88	440	1,024	887
Investment management	-	55	-	55	72
Support	649	910	(1,559)	-	-
Total expenditure	2,407	1,785	-	4,192	4,472

PRIOR YEAR

	Staff costs £'000	Other direct costs £'000	Support allocation £'000	2020 £'000
Publishing	670	478	542	1,690
Members' programmes	607	538	491	1,636
Grants and awards	-	187	-	187
Raising awareness and influencing policy	425	118	344	887
Investment management	-	72	-	72
Support	602	775	(1,377)	-
Total expenditure	2,304	2,168	-	4,472

Support costs are apportioned to direct activities based on the direct staff costs allocated to those activities.

7. Support costs

	2021 £'000	2020 £'000
Governance costs		
Council and committee meetings and events	21	10
Audit fees	16	16
	37	26
Other support costs:		
Human Resources	98	48
Premises & General Office	147	109
Information Technology	218	149
Professional & Legal	139	169
Depreciation & Charges	271	274
Staff costs	649	602
	1,559	1,377

8. Staff costs

	Notes	2021 £'000	2020 £'000
Salaries		1,934	1,810
Social security costs		204	189
Other pension costs	15	269	266
Redundancy		-	39
		2,407	2,304

The average monthly number of persons employed by the Society during the year were 50 (2020: 47).

No member of Council received any remuneration in respect of their services to the Society.

The number of employees whose emoluments amounted to over £60,000 in the year, not including pension contributions and employer National Insurance contributions, were as follows:

	2021 No.	2020 No.
£60,000 - £70,000	1	-
£80,000 - £90,000	1	2
£90,000 - £100,000	1	1
£120,000 - £130,000	1	1

Contributions to the pension scheme on behalf of the employees noted above amounted to £64,623 (2020: £69,853).

The key management personnel of the Charity comprise the trustees, the Chief Executive and Senior Management team. The total employee benefits of the key management personnel, inclusive of employer pension contributions and employer National Insurance contributions, were £404,820 (2020: £525,310).

9. Intangible assets - CRM and Website

	Total £'000
Cost or valuation	
At 1 January 2021	584
Additions	5
Disposals	-
At 31 December 2021	<u>589</u>
Amortisation	
At 1 January 2021	363
Provided during the year	114
Released on disposal	-
At 31 December 2021	<u>477</u>
Net book value	
At 31 December 2021	<u>112</u>
At 31 December 2020	<u>221</u>

10. Tangible fixed assets

	Freehold land and buildings £'000	Office equipment, fixtures and fittings £'000	Total £'000
Cost or valuation			
At 1 January 2021	4,531	202	4,733
Additions	50	7	57
Disposals	-	-	-
At 31 December 2021	<u>4,581</u>	<u>209</u>	<u>4,790</u>
Depreciation			
At 1 January 2021	71	62	133
Provided during the year	57	43	100
Released on disposal	-	-	-
At 31 December 2021	<u>128</u>	<u>105</u>	<u>233</u>
Net book value			
At 31 December 2021	<u>4,453</u>	<u>104</u>	<u>4,557</u>
At 31 December 2020	<u>4,460</u>	<u>140</u>	<u>4,600</u>

11. Investments

	2021 £'000	2020 £'000		
Market value at 1 January	10,702	9,745		
Additions at cost	96	9,555		
Sales proceeds	(372)	(9,605)		
Net gain on revaluation	1,663	1,434		
Net movement in cash	284	(427)		
Market value at 31 December	<u>12,373</u>	<u>10,702</u>		
	Cost 2021 £'000	Cost 2020 £'000	Market value 2021 £'000	Market value 2020 £'000
Equities	6,861	7,142	9,765	8,563
Bonds	893	797	923	811
Alternatives	1,569	1,569	1,272	1,205
Cash	413	123	413	123
	<u>9,736</u>	<u>9,631</u>	<u>12,373</u>	<u>10,702</u>

The following investments held on 31 December 2021 represented over 5% of the total investment portfolio at the year end:

	% of total portfolio holding
Fundsmith Sustainable Equity Fund I Inc	9.6%
Findlay Park American GBP Unhedged	9.6%
GuardCap Global Equity Fund I GBP Inc	8.9%
AMP Capital Global Companies Fund B GBP Acc	8.7%
TB Evenlode Global Income Fund F Income GBP	8.4%
Morgan Stanley Investment Funds - Global Sustain Fund ZX	8.3%
Brown Advisory Global Leaders Fund Sterling Class SI Distribution	8.2%
Smithson Investment Trust plc	7.1%
Lindsell Train Global Funds plc - Lindsell Train Global Equity Fund D GBP Inc	6.1%

As at the date of these accounts being approved, the latest value of the investments was £11,027,000. The Council considers that the fall in value is temporary and will continue to monitor the investment performance in the coming year.

12. Debtors

	2021 £'000	2020 £'000
Other debtors	32	85
Prepayments and accrued income	508	316
	<u>540</u>	<u>401</u>

13. Creditors

	2021 £'000	2020 £'000
Trade creditors	135	126
Sundry creditors	152	182
Other taxation and social security	66	55
Income received in advance (see Note 14)	2,046	1,785
	<u>2,399</u>	<u>2,148</u>

14. Income received in advance

	2021 £'000	2020 £'000
Institutional sales of publications in advance	1,965	1,716
Members' subscriptions in advance	81	69
	<u>2,046</u>	<u>1,785</u>
	2021 £'000	2020 £'000
Balance at 1 January	1,785	1,943
Amount released to income	(1,785)	(1,943)
Amount deferred in the year	2,046	1,785
Balance at 31 December	<u>2,046</u>	<u>1,785</u>

15. Pensions

The Society operates defined contribution pension arrangements, the assets of which are held separately from those of the Society, in independently administered funds. The pension cost charged represents contributions payable by the Society to the funds amounting to £269K (2020 - £266k). At 31 December 2021, the amounts payable to the pension fund amounted to £Nil (2020 - £Nil).

16. Funds

	1 January 2021 £'000	Income £'000	Expenditure £'000	Gains £'000	31 December 2021 £'000
Current year					
Restricted funds:					
Open Research Platform	-	60	(60)	-	-
Unlocking Potential	-	7	-	-	7
Total restricted funds	-	67	(60)	-	7
Unrestricted fund	16,051	4,035	(4,132)	1,664	17,618
	<u>16,051</u>	<u>4,102</u>	<u>(4,192)</u>	<u>1,664</u>	<u>17,625</u>
	1 January 2020 £'000	Income £'000	Expenditure £'000	Gains £'000	31 December 2020 £'000
Prior year					
Unrestricted fund	15,148	3,888	(4,472)	1,487	16,051
	<u>15,148</u>	<u>3,888</u>	<u>(4,472)</u>	<u>1,487</u>	<u>16,051</u>

Purposes of restricted funds

Open Research Platform

To help our community get the most out of our journals, we are always looking for new, innovative ways to make sure microbiology research is impactful and accessible to everyone. We are converting our current sound science journal, Access Microbiology, to an open research platform with funding from the Wellcome Trust. On this platform, original research is posted as a preprint, which undergoes full, transparent peer review. Our open research platform safeguards the scientific record, ensuring that the review process is robust, transparent, and fair. On the platform, all peer review materials and previous versions of an article are publicly available, making sure nothing is missing from the story. The platform can be used as a trusted location to share early versions of work and disseminate findings quickly. All work posted in the open research platform is given a DOI and can be shared, cited and receive community feedback straight away.

Unlocking Potential

This fund was launched in May 2021 and is a traditional fundraising campaign that will allow us to open a new grant stream, the 'Unlocking Potential Grant' which would fund early and mid-career members who may require support for a variety of reasons, in order to help them to progress and to reach their full career potential. This follows the success of the Society's Early Career Microbiologists Forum and recent focus on microbiologists at the mid-career stage, recognising a need for support in career development across varying levels.

17. Analysis of net assets between funds

	Fixed assets £'000	Net current assets £'000	Total £'000
Current year			
Restricted funds	-	7	7
Unrestricted funds	17,042	576	17,618
Total funds	<u>17,042</u>	<u>583</u>	<u>17,625</u>
	Fixed assets £'000	Net current assets £'000	Total £'000
Prior year			
Unrestricted funds	15,523	528	16,051
Total funds	<u>15,523</u>	<u>528</u>	<u>16,051</u>

18. Financial Instruments

The year end carrying value of financial assets and financial liabilities (measured at amortised cost, with the exception of investments which are measured at fair value), was as follows:

	2021 £'000	2020 £'000
Financial assets measured at amortised cost	133	90
Financial liabilities measured at amortised cost	<u>287</u>	<u>308</u>

19. Related party transactions

There were no related party transactions in the year (2020: None).



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The Microbiology Society is a membership charity for scientists interested in microbes, their effects and their practical uses. It is one of the largest microbiology societies in Europe with a worldwide membership based in universities, industry, hospitals, research institutes and schools.

Our members have a unique depth and breadth of knowledge about the discipline. The Society's role is to help unlock and harness the potential of that knowledge.