



House of Commons
Science and Technology
Committee

My Science Inquiry

Third Report of Session 2022–23

*Report, together with formal minutes relating
to the report*

*Ordered by the House of Commons
to be printed 26 October 2022*

HC 618

Published on 8 November 2022
by authority of the House of Commons

Science and Technology Committee

The Science and Technology Committee is appointed by the House of Commons to examine the expenditure, administration and policy of the Government Office for Science and associated public bodies.

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[Dawn Butler MP](#) (*Labour, Brent Central*)

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[Graham Stringer MP](#) (*Labour, Blackley and Broughton*)

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Powers

The Committee is one of the departmental select committees, the powers of which are set out in House of Commons Standing Orders, principally in SO. No. 152. These are available on the internet via www.parliament.uk.

Publication

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Committee reports are published on the Committee's website at www.parliament.uk/science and in print by Order of the House.

Committee staff

The current staff of the Committee are: Ian Cruse (Second Clerk) Gina Degtyareva (Senior Select Committee Media Officer), Emma Dobrzynski (Committee Operations Officer), Claire Kanja (Committee Specialist), Dr Claire Housley (Committee Specialist), Danielle Nash (Clerk), Hafsa Saeed (Committee Operations Manager), and Ben Shave (Committee Specialist)

Contacts

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You can follow the Committee on Twitter using [@CommonsSTC](https://twitter.com/CommonsSTC).

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The 'My Science Inquiry' process and next steps

The process

1. In July 2022, we issued a call to the science, research and innovation communities and the public for ideas for what we should investigate next.¹ This followed our predecessor Committees undertaking similar exercises in the 2017 and 2019 Parliaments.² We asked submitters in 200 words to set out:

- a) Why the Science and Technology Committee should examine this area;
- b) Why is this the right time for the Committee to examine the area;
- c) Why this area would benefit from parliamentary scrutiny;
- d) Why the Government needs to act in this area; and
- e) How Government policy in this area could be developed or improved.

2. We received more than 90 submissions, which we have published on our website.³

3. We reviewed the submissions received and selected six for presentation and examination in oral evidence on 19 October.⁴ The shortlisted topics were:

- Product development pipeline policy (relating to malaria interventions)—presented by Andrea Lucard on behalf of Medicines for Malaria Venture, Innovative Vector Control Consortium and Malaria No More UK;⁵
- Regulatory standards and guidelines for biofilms—presented by Professor Jo Slater-Jefferies on behalf of herself and Professor Cait MacPhee;⁶
- Methane recovery from sewage and farm slurry—presented by Dr James Dowden;⁷
- Regulation for the use of bacteriophages as an alternative to antimicrobial drugs—presented by Professor James Ebdon on behalf of Applied Microbiology International;⁸
- Delivering genomic/personalised medicine in the UK—presented by Professor Louise Jones on behalf of the Royal College of Pathologists;⁹ and

1 Science and Technology Committee, [MPs seek your suggestions for new inquiry in science and technology](#), 14 July 2022

2 Science and Technology Committee, Ninth Report of Session 2016–17, [Future programme: 'My Science Inquiry'](#), HC 859, and Science and Technology Committee, Sixteenth Report of Session 2017–19, ['My Science Inquiry'](#), HC 1716

3 Science and Technology Committee, [My Science Inquiry: Publications: Written evidence](#)

4 Science and Technology Committee oral evidence on [19 October 2022](#)

5 Malaria No More UK, Innovative Vector Control Consortium, Medicines for Malaria Venture ([MSI0018](#))

6 Prof Cait MacPhee (Professor; Co-Director at The University of Edinburgh; National Biofilms Innovation Centre); Professor Jo Slater-Jefferies (Chief Executive Officer at National Biofilms Innovation Centre) ([MSI0084](#))

7 James Dowden ([MSI0016](#))

8 Society for Applied Microbiology ([MSI0071](#))

9 The Royal College of Pathologists ([MSI0009](#))

- Cross-science collaborations for critical minerals supply—presented by Dr Sarah Gordon on behalf of herself and Dr Rose Clarke, Ms Kirsty Benham, Dr Nicholas Gardiner, Dr Karen Hanghoj, Prof Richard Herrington, Mr Paul Lusty, Dr Daniel Smith, Mr Jeff Townsend and Prof Frances Wall.¹⁰

4. We received a number of submissions in this initiative recommending inquiries into aspects of policy on artificial intelligence. Our agreement that this is an important topic is demonstrated by the launch, on 20 October 2022, of our inquiry into the governance of artificial intelligence.¹¹

5. In general, we would encourage all those who put forward an inquiry proposal as part of the My Science Inquiry initiative to make submissions to any relevant inquiries in the future, including our governance of artificial intelligence inquiry.

Proposal for an inquiry

6. We are grateful to all those who submitted ideas to us and who engaged with this process. We particularly want to extend our thanks to those who presented their ideas to us on 19 October.

7. On the basis of the submissions we received, and the further discussions held on 19 October on six of these proposals, we have decided to develop and launch an inquiry into bacteriophages as an alternative to antimicrobial drugs. We will launch this inquiry during Parliament Week, which begins in the week commencing 14 November 2022.

10 Dr Sarah Gordon (CEO at Satarla); Ms Kirsty Benham (Founder at Critical Minerals Association); Dr Rose Clarke (Founder at Responsible Raw Materials); Dr Nicholas Gardiner (Energy Transition Theme Leader at Geological Society of London); Dr Karen Hanghoj (Director at British Geological Survey); Prof Richard Herrington (Head of Earth Sciences at Natural History Museum); Mr Paul Lusty (Director at Critical Minerals Intelligence Centre); Dr Daniel Smith (Associate Professor of Applied and Environmental Geoscience and Chair of the Mineral Deposits Studies Group at University of Leicester); Mr Jeff Townsend (Founder at Critical Minerals Association); Prof Frances Wall (Professor of Applied Mineralogy at Camborne School of Mines) ([MSI0065](#))

11 Science and Technology Committee, [MPs to examine regulating AI in new inquiry](#), 20 October 2022

Formal minutes

Wednesday 26 October 2022

Members present

Carol Monaghan, in the Chair

Aaron Bell

Tracey Crouch

Rebecca Long-Bailey

Stephen Metcalfe

Iain Stewart

Graham Stringer

Draft Report (*My Science Inquiry*), proposed by the Chair, brought up and read.

Ordered, That the draft Report be read a second time, paragraph by paragraph.

Paragraphs 1 to 7 read and agreed to.

Resolved, That the Report be the Third Report of the Committee to the House.

Ordered, That the Chair make the Report to the House.

Ordered, That embargoed copies of the Report be made available (Standing Order No. 134).

Adjournment

[Adjourned till Wednesday 2 November at 9.20am.]

Witnesses

The following witnesses gave evidence. Transcripts can be viewed on the [inquiry publications page](#) of the Committee's website.

Wednesday 19 October 2022

Andrea Lucard , Executive Vice President, Medicines for Malaria Ventures	Q1–5
Professor Jo Slater-Jefferies , Chief Executive Officer, National Biofilms Innovation Centre	Q6–11
Dr James Dowden , Associate Professor in Synthetic Chemistry, University of Nottingham	Q12–20
Professor James Ebdon , Member, Applied Microbiology International (formerly Society for Applied Microbiology)	Q21–26
Professor Louise Jones , Chair of the Genomics and Reproductive Science Specialist Advisory Committee, The Royal College of Pathologists	Q27–32
Dr Sarah Gordon , Chief Executive Officer, Satarla	Q33–37

Published written evidence

The following written evidence was received and can be viewed on the [inquiry publications page](#) of the Committee's website.

MSI numbers are generated by the evidence processing system and so may not be complete.

- 1 Ada Lovelace Institute ([MSI0102](#))
- 2 Alzheimer's Research UK ([MSI0093](#))
- 3 Aminian, Dr Gholamali (Researcher, The Alan Turing Institute) ([MSI0059](#))
- 4 Animal Free Research UK ([MSI0058](#))
- 5 Anonymised ([MSI0066](#))
- 6 Anthony Nolan ([MSI0085](#))
- 7 Atkinson, Dr David (Lecturer, York St John University) ([MSI0004](#))
- 8 Austin, Professor Caroline (Professor of Molecular Biology, Newcastle University) ([MSI0045](#))
- 9 Basford, Mr Rodney ([MSI0027](#))
- 10 Bayer Plc ([MSI0031](#))
- 11 British Association of Sport and Exercise Sciences ([MSI0020](#))
- 12 British Heart Foundation ([MSI0100](#))
- 13 Busby, Mr George ([MSI0025](#))
- 14 Cammies, Mr Christopher (Teaching Associate, University of Bristol); Crichton, Dr Rosemary (Teaching Technician, University of Bristol); Murray, Dr Rose (Lecturer, University of Bristol); and Davis, Mr Josh ([MSI0022](#))
- 15 Campaign for Science and Engineering ([MSI0074](#))
- 16 Cancer Research UK ([MSI0051](#))
- 17 Catapult Cell and Gene Therapy ([MSI0041](#))
- 18 Centre for Long-Term Resilience ([MSI0050](#))
- 19 Donaldson, Dr Ross (Research Fellow & Assistant Professor, Heriot-Watt University) ([MSI0062](#))
- 20 Dowden, James ([MSI0016](#))
- 21 Durham Energy Institute ([MSI0021](#))
- 22 Dutta, Miss Aditi (PhD student, University of Exeter) ([MSI0010](#))
- 23 Energy Futures Lab, Imperial College London ([MSI0064](#))
- 24 EngineeringUK ([MSI0038](#))
- 25 ForrestBrown Limited ([MSI0012](#))
- 26 Fund for the Replacement of Animals in Medical Experiments (FRAME) ([MSI0061](#))
- 27 Future Planet Capital ([MSI0090](#))
- 28 Galhena, Dr Thanuja (Senior Scientist, Versarien plc) ([MSI0005](#))
- 29 Gartlan, Mr Cillian (PhD student, University of Oxford) ([MSI0052](#))

- 30 Gerada, Professor Chris (Associate Pro-Vice-Chancellor for Industrial Strategy, Business Engagement and Impact, University of Nottingham); and Meek, Mr Stephen (Director, Institute for Policy and Engagement, University of Nottingham) ([MSI0057](#))
- 31 Global Peace Community Interest Company ([MSI0007](#))
- 32 Gonzalez-Rodriguez, Dr. Jose (Associate Professor in Analytical Chemistry, University of Lincoln) ([MSI0037](#))
- 33 Gordon, Dr Sarah (CEO, Satarla); Benham, Ms Kirsty (Founder, Critical Minerals Association); Dr Rose Clarke (Founder, Responsible Raw Materials); Gardiner, Dr Nicholas (Energy Transition Theme Leader, Geological Society of London); Hanghoj, Dr Karen (Director, British Geological Survey); Herrington, Prof Richard (Head of Earth Sciences, Natural History Museum); Lusty, Mr Paul (Director, Critical Minerals Intelligence Centre); Smith, Dr Daniel (Associate Professor of Applied and Environmental Geoscience and Chair of the Mineral Deposits Studies Group, University of Leicester); Townsend, Mr Jeff (Founder, Critical Minerals Association); and Wall, Prof Frances (Professor of Applied Mineralogy, Camborne School of Mines) ([MSI0065](#))
- 34 Hanley, Dr Bryan ([MSI0026](#))
- 35 Haynes, Professor Peter (Head of Department of Materials and Professor of Theory and Simulation of Materials., Imperial College London) ([MSI0081](#))
- 36 Hinge, Mr Michael (Senior Economist, ALLFED - The Alliance to Feed the Earth in Disasters); and Martínez, Mr Juan García (Research Coordinator, ALLFED - The Alliance to Feed the Earth in Disasters) ([MSI0091](#))
- 37 Humane Society International; Animal Aid; Cruelty Free International; Naturewatch Foundation; and People for the Ethical Treatment of Animals ([MSI0053](#))
- 38 Institute for Molecular Science and Engineering ([MSI0070](#))
- 39 Just Treatment; and STOPAIDS ([MSI0068](#))
- 40 Kamau-Mitchell, Dr. Caroline (Reader in Occupational Health, Birkbeck, University of London) ([MSI0044](#))
- 41 Kohlhepp, Ms Denise (DPhil candidate, University of Oxford) ([MSI0095](#))
- 42 LifeArc ([MSI0094](#))
- 43 MacPhee, Prof Cait (Professor; Co-Director, The University of Edinburgh; National Biofilms Innovation Centre); and Slater-Jefferies, Professor Jo (Chief Executive Officer, National Biofilms Innovation Centre) ([MSI0084](#))
- 44 Malaria No More UK; Innovative Vector Control Consortium; and Medicines for Malaria Venture ([MSI0018](#))
- 45 Matar, Professor Omar (Head of Department of Chemical Engineering, Imperial College London); Ryan, Professor Mary (Vice Provost for Research and Enterprise, Imperial College London); Adjiman, Professor Claire (Director of the Sargent Centre in Process Systems Engineering, Imperial College London); Shah, Professor Nilay (Professor of Process Systems Engineering, Imperial College London); Maitland, Professor Geoff (Professor of Energy Engineering, Imperial College London); and MacDowell, Professor Niall (Professor Future Energy Systems, Imperial College London) ([MSI0029](#))
- 46 Microbiology Society ([MSI0013](#))
- 47 Millman, Dr Helen ([MSI0002](#))

- 48 Moulange, Richard (PhD student, MRC Biostatistics Unit, University of Cambridge) ([MSI0063](#))
- 49 Murray, Professor Patricia (Professor of Stem Cell Biology and Regenerative Medicine, University of Liverpool) ([MSI0067](#))
- 50 Nairac, Mr Zachary (PhD Student, Next Generation Neural Interfaces Group, Imperial College London) ([MSI0048](#))
- 51 National Robotarium ([MSI0006](#))
- 52 Narain, Vedang (DPhil Candidate (Cancer Science), University of Oxford) ([MSI0098](#))
- 53 Parnham, Dr Jennie (Research Associate, Imperial College London); and Vamos, Dr Eszter (Senior Clinical Lecturer , Imperial College London) ([MSI0030](#))
- 54 Patelli, Dr Alina (Senior Lecturer in Computer Science, Aston University) ([MSI0060](#))
- 55 Pinch, Dr Richard (Vice-president (professional affairs and industry), Institute of Mathematics and its Applications) ([MSI0017](#))
- 56 Prentis, Dr Andrew (Visiting Fellow, Grantham Institute, Imperial College London) ([MSI0088](#))
- 57 Public Policy Projects ([MSI0024](#))
- 58 Pugh, Dr Jonathan (Senior Research Fellow, The Oxford Uehiro Centre for Practical Ethics) ([MSI0047](#))
- 59 QED Naval Limited ([MSI0028](#))
- 60 Queen Mary University of London ([MSI0096](#))
- 61 Rae, Mr James (Member, Imperial Policy Forum (Imperial College London)) ([MSI0089](#))
- 62 Richardson, Mr Joseph Matthew (PhD Student in Economics, Lancaster University) ([MSI0015](#))
- 63 Richie, Dr Cristina (lecturer, TU Delft (Also have a UK global talent visa)) ([MSI0019](#))
- 64 Robinson, Dr Caitlin (Academic Fellow, University of Bristol) ([MSI0075](#))
- 65 Royal Society of Chemistry ([MSI0056](#))
- 66 RSPCA ([MSI0003](#))
- 67 Schoenaker, Dr Danielle (Research Fellow, University of Southampton); Professor Alwan, Nisreen (Professor of Public Health, University of Southampton); Professor Godfrey, Keith (Professor of Epidemiology and Human Development, University of Southampton); and Professor Stephenson, Judith (Professor of Sexual and Reproductive Health, University College London) ([MSI0072](#))
- 68 SCI ([MSI0046](#))
- 69 Senior, Carl ([MSI0008](#))
- 70 Sense about Science ([MSI0076](#))
- 71 Smith, Dr Andy (Retired Professor, n/a) ([MSI0032](#))
- 72 Society for Applied Microbiology ([MSI0071](#))
- 73 Space Forge Ltd ([MSI0014](#))
- 74 The Association of the British Pharmaceutical Industry ([MSI0087](#))
- 75 The British Academy; The Royal Academy of Engineering; and The Royal Society ([MSI0092](#))
- 76 The Daphne Jackson Trust ([MSI0080](#))

- 77 The Natural History Consortium ([MSI0023](#))
- 78 The Physiological Society ([MSI0069](#))
- 79 The Royal Academy of Engineering ([MSI0079](#))
- 80 The Royal College of Pathologists ([MSI0009](#))
- 81 The Science Council ([MSI0034](#))
- 82 The Smith School of Enterprise and the Environment, University of Oxford ([MSI0099](#))
- 83 Titirici Group ([MSI0073](#))
- 84 Tokay, Dr Begum (Associate Professor, Faculty of Engineering, University of Nottingham) ([MSI0083](#))
- 85 UKCloud; and UKCloud ([MSI0101](#))
- 86 UK Metamaterials Network ([MSI0054](#))
- 87 University of Glasgow ([MSI0001](#))
- 88 VCTC ([MSI0077](#))
- 89 Vet Sustain ([MSI0097](#))
- 90 Whittall, Dr Craig (Policy and Programme Officer, Imperial Policy Forum (Imperial College London)) ([MSI0086](#))
- 91 Wilkinson, Dr Rachael (Innovation Technologist, Swansea University) ([MSI0033](#))
- 92 Woodward, Professor Guy (Professor of Ecology, Department of Life Sciences, Imperial College London); Barron, Dr Leon (Reader in Analytical & Environmental Sciences, School of Public Health, Imperial College London); Mijic, Dr Ana (Reader in Water Systems Integration, Civil and Environmental Engineering); and Prentis, Dr Andrew (Veterinary Surgeon, Environmental Advisor, British Veterinary Association) ([MSI0082](#))

List of Reports from the Committee during the current Parliament

All publications from the Committee are available on the publications page of the Committee's website.

Session 2022–23

Number	Title	Reference
1st	Pre-appointment hearing for the Executive Chair of Research England	HC 636
2nd	UK space strategy and UK satellite infrastructure	HC 100

Session 2021–22

Number	Title	Reference
1st	Direct-to-consumer genomic testing	HC 94
2nd	Pre-appointment hearing for the Chair of UK Research and Innovation	HC 358
3rd	Coronavirus: lessons learned to date	HC 92

Session 2019–21

Number	Title	Reference
1st	The UK response to covid-19: use of scientific advice	HC 136
2nd	5G market diversification and wider lessons for critical and emerging technologies	HC 450
3rd	A new UK research funding agency	HC 778