

# ACMSF Annual Report 2022

## Introduction

This is the thirty-first annual report of the ACMSF and covers the calendar year 2022. The aim of this report is to provide a brief background to the Committees' decisions. Those seeking further information on a particular subject can obtain details from the discussion papers and minutes, available from the [Committee's website](#) or ACMSF Secretariat.

The various issues addressed by the Committee since its inception are detailed in this and [previous Annual Reports](#) and in a series of [subject-specific reports](#).

ACMSF is committed to opening up its work to public scrutiny. The agendas, minutes, and papers (subject to rare exceptions on grounds of commercial or other sensitivity) of the full Committee's meetings are publicly available and are posted on the ACMSF website. Also, on the Committee's website are summaries of meetings of the Working and *Ad Hoc* groups.

In common with other independent advisory committees, Committee members are required to follow a Code of Conduct which also gives guidance on how commercial interests should be declared. Members are required to declare any commercial interests on appointment and, again during meetings if a topic arises in which they have an interest. If a member declares a specific interest in a topic under discussion, and it is considered to be a conflict of interest, he or she may, at the Chairman's discretion be allowed to take part in the discussion but is excluded from decision-making. The Committee's Code of Conduct is available [here](#) and the Good Practice Agreement for Scientific Advisory Committees can be found on the [FSA's website](#).

## Membership

### **New appointments in 2022**

No new members were appointed to the ACMSF in 2022.

## Retirements and resignations in 2022

Emma Hill (expert on commercial catering) resigned her membership in summer 2022.

## Current membership and Declarations of Interests

Full details of the membership of the Committee and its *Working* and *Ad Hoc* Groups are given in Annex I. A Register of Members' Interests is at Annex II. In addition to the interests notified to the Secretariat and recorded at Annex II, Members are required to declare any direct commercial interest in matters under discussion at each meeting, in accordance with the ACMSF's Code of Practice. Declarations made are recorded in the minutes of each meeting.

## Committee and Sub-Group meetings

The full Committee met three times in 2022. Meetings in February and October (chaired by Professor Bill Keevil) were plenary meetings open to the public. The June meeting was a horizon scanning workshop (chaired by Professor Bill Keevil) which was held in closed session.

The Antimicrobial Resistance Working Group met three times in 2022, in March, July and November. All meetings were held virtually and were chaired by Professor Bill Keevil.

The Ad Hoc Group on toxin producing Clostridia in food met virtually in March, June and November. The meetings were chaired by Dr Gary Barker.

## Meeting minutes in 2022

Minutes for the two plenary meetings are available on the committee's website [ACMSF 2022 meetings](#) .

## Papers the committee considered in 2022

Number	Name of Paper	Meeting Number	Date of Meeting
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ACM/MIN/99	Minutes of the 99th meeting	100th	9th February 2022
ACM/1377	Matters arising	100th	9th February 2022
ACM/1378	PATH-SAFE: Tracking Foodborne Pathogens and Antimicrobial Resistance Microbes	100th	9th February 2022
ACM/1379	FSA's Kitchen Life 2 Project	100th	9th February 2022
ACM/1380	100th Meeting of the ACMSF - Reflections	100th	9th February 2022
ACM/1381	Dates of future meetings	100th	9th February 2022
ACM/1382	FSA surveys on frozen breaded/battered chicken products	100th	9th February 2022
ACM/1383	ACMSF Work plan	100th	9th February 2022
ACM/1384	Update from other committees	100th	9th February 2022

ACM/1385	Items of interest from the literature	100th	9th February 2022
ACM/1386	Botulism in cattle, sheep and goats Literature update	100th	9th February 2022
ACM/1387	APHA response to ACMSF Botulism in cattle, sheep and goats reports recommendations (Members Use Only)	100th	9th February 2022
ACM/1388	Emergence of suspected type D botulism in ruminants in E&W (2001 to 2009) associated with exposure to broiler litter (Published paper)	100th	9th February 2022
ACM/1389	Differential impact of the Covid-19 pandemic on laboratory reporting of norovirus and Campylobacter in England: A modelling approach (Published paper)	100th	9th February 2022
ACM/1390	Food and You survey- Wave 3	100th	9th February 2022
ACM/1391	UK Food Security Report 2021	100th	9th February 2022
ACM/MIN/100	Minutes of the 100th meeting	101st	20th October 2022

ACM/1391	Matters arising	101st	20th October 2022
ACM/1392	Horizon Scanning Workshop Output	101st	20th October 2022
ACM/1393	Quality Assurance of Microbiological Strategic Risk Assessments	101st	20th October 2022
ACM/1394	Dates of future meetings	101st	20th October 2022
ACM/1395	Epidemiology of Foodborne Infections Group	101st	20th October 2022
ACM/1396	Survey of microbiological quality of ready to eat food sold on social media	101st	20th October 2022
ACM/1397	Update/milestones IID3	101st	20th October 2022
ACM/1398	ACMSF Work plan	101st	20th October 2022
ACM/1399	Update from other committees	101st	20th October 2022

ACM/1400	Items of interest from the literature	101st	20th October 2022
ACM/1401	Food and You Wave 4	101st	20th October 2022

## **The Committee's Work in 2022**

### **PATH-SAFE: Tracking Foodborne Pathogens and Antimicrobial Resistance Microbes**

The committee considered the work on the cross-government Pathogen Surveillance in Agriculture, Food and the Environment (PATH-SAFE) project commissioned to track foodborne pathogens and antimicrobial resistant microbes in all four nations of the UK. The PATH-SAFE programme is a £19.2m Shared Outcomes Fund research programme which aims to develop a national surveillance network, using the latest DNA-sequencing technology and environmental sampling to improve the detection, and tracking of foodborne human pathogens and AMR through the whole agri-food system from farm-to-fork.

The committee made a number of comments on the work presented at the meeting and concluded that ACMSF recognises the importance of this initiative and look forward to receiving progress reports as the programme develops.

### **FSA's Kitchen Life 2 Project**

The committee was updated on the FSA's study on food safety behaviour in kitchens which was Commissioned to understand real-life behaviour in the kitchen, provide accurate data to risk assessment teams, uncover areas for potential behavioural interventions and inform comms campaigns and guidance for businesses. Members were invited to comment on the study and provide expert opinion.

### **UK Food Security Report 2021**

The committee discussed the UK Food Security Report 2021, an analysis of statistical data relating to food security, fulfilling the duty in the Agriculture Act

2020 to present a report on food security to Parliament at least once every three years. Members focus was on the chapter related to foodborne disease and incidents.

The report was drawn to the committee's attention by a member who felt some of the material in the report was relevant to the committee's work, Defra did not specifically seek input from ACMSF on the report.

### **FSA surveys on frozen breaded/battered chicken products**

The committee was updated on survey of *Salmonella*, *E. coli* and AMR on frozen part-cooked breaded or battered products at retail sale in the UK and the social science survey on consumer handling of frozen breaded products in closed session.

They provided a number of comments on the report.

### **Quality Assurance of Microbiological Strategic Risk Assessments**

The committee were given an update on the process used to review the FSA's microbiological food safety strategic risk assessments. It was explained that following the UK's exit from the EU Health Ministers, alongside FSA and FSS, have taken on responsibility for ensuring that the high standard of food safety and consumer protection enjoyed in the UK is maintained. Currently assessment of the risk associated with food and feed is governed by the FSA risk analysis process which ensures that policy decisions are informed by quality-assured science and evidence. Within this process framework, strategic risk assessments are produced to enable the development of policy, standards and import controls.

The committee members discussed how they would like to see the quality assurance process handled going forward, considering routine risk assessments and those that require review by the full committee.

### **UK Food Safety Network**

Members were briefed on the objectives of the UK Food Safety Network and its research priorities. Members were informed that UKSRN is funded by the Biotechnology and Biological Sciences Research Council and the FSA, and was launched in April 2022. UKSRN's vision is to apply science to improve the safety of food in the UK and has a strapline of Grow Safe, Make Safe and Eat Safe.

Committee members commented in the work done by the network.

### **Epidemiology of Foodborne Infections Group (EFIG)**

The committee were updated on key discussions at recent EFIG meetings, including *Salmonella* in Livestock production, the National Control Programme data, Animal Feed and *Salmonella* (including Dogs and *Salmonella*), human infection data (summary of key pathogens for 2021), food surveillance in England, Scotland and Wales, *Campylobacter* enhanced surveillance project, FSA thresholds for four main pathogens and PATH-SAFE: Tracking Foodborne Pathogens and Antimicrobial Resistant Microbes.

A number of comments were made by the committee and suggestions on how to represent the data in the report.

### **Survey of microbiological quality of ready to eat food sold on social media**

The committee were updated by FSS on an intended survey to provide a baseline understanding of the microbiological quality of RTE food sold through social media. highlighted that using social media platforms (notably Facebook Marketplace) as a means to advertise and sell food products is an emerging, and growing, practice. Sellers using Facebook Marketplace are advised that they are responsible for “complying with all applicable laws and regulations”, indicating that the platform itself does not perform any checks on sellers. Competent authorities (such as the Food Standards Scotland, FSA and the European Commission) have recognised sale of food via the internet (including on social media) as an area where data is required to understand adherence to food standards and the safety of such products sold in this way. Members were invited to comment on any aspect of the proposed survey and to consider the following questions:

- Comments on the proposed tests what to test for, for what category, physicochemical.
- Comments on the sampling proposal risk score, categories for exclusion
- Suggestions on how best to engage with potential contractors (i.e. academics) as we recognise the novelty and complexity of this survey.

### **Update/milestones IID3**

The committee was given a presentation on the third study of Infectious Intestinal disease in the UK project (IID3) providing an update on current progress. This study is being funded by the FSA and FSS. IID usually presents as diarrhoea and

vomiting. In the UK, IID usually goes away on its own and has no long-term effects. Despite this, it has a high cost associated with it in terms of the number of people made ill, and the consequences of them being off work or receiving treatment. In some cases, IID can lead to death for high-risk individuals.

Areas covered in the presentation included background, aims of IID3, IID3 consortium, IID3 study design, IID3: included microorganisms, outcomes and current progress.

### **Horizon scanning workshop**

A horizon scanning workshop was held on the 23<sup>rd</sup> June 2023. Committee members were asked to consider how the following issues likely to affect the burden of foodborne disease in the UK over the next 10-20 years, in terms of existing and new hazards and likelihood of exposure, including AMR? What are the key evidence gaps?

- Challenges associated with disruption to food supply chains
- Changes in methods of food production and new food technologies
- Changes in consumer behaviour and preferences
- Challenges associated with changes in the sizes of vulnerable groups
- Anything else?

## **The Subgroup's Committee's Work in 2022**

### **Antimicrobial Resistance Working Group**

In 2022, AMR working group, were asked by the FSA to review the following survey reports:

- A survey of *Salmonella*, *Escherichia coli* and antimicrobial resistance in frozen, part-cooked, breaded or battered poultry products on retail sale in the UK
- Surveillance of Antimicrobial Resistance in *E. coli* and *Campylobacter* from retail turkey meat and *E. coli* from retail lamb.
- A survey of the levels of *Campylobacter* contamination and prevalence of selected AMR determinants in fresh whole UK-produce chilled chicken at retail sale ( non-major retailers)
- The FSA's proposed Surveillance of AMR bacteria in raw dog and cat food on retail sale in the UK

During the AMR Working Group meeting on **8<sup>th</sup> of March 2022** the key issues considered include:

- Findings of the following FSA funded studies: Evolution, diversity and epidemiology of bacterial foodborne pathogens based on whole genome sequencing Survey of AMR *E. coli* and *Campylobacter* on lamb and turkey meat on retail sale, FSA project FS307037: Modelling framework to quantify the risk of AMR exposure via food products and FSA project FS430677: Survey of *Salmonella*, *E. coli* and AMR in frozen part-cooked breaded and battered poultry products)
- Regulated products application on use of nisin in food and the risks in relation to AMR
- The FSA's AMR research programme
- FSA's AMR programme review workshop,
- AMR One Health activities across government
- Defra antimicrobial resistance coordination group's activities
- Output from the One Health, Environment and Society conference: Tackling Antimicrobial Resistance in Food Producing Environments (this took place in Brussel in June 2022)

During the AMR Working Group meeting on the **26<sup>th</sup> of July 2022** the key issues considered include:

- Findings of the following FSA funded studies: FSA project FS307037 (Modelling framework to quantify the risk of AMR exposure via food products: example of chicken and lettuce) and FSA project FS430677 (Survey of *Salmonella*, *E. coli* and AMR in frozen part-cooked breaded and battered poultry products)
- An update on FSA's AMR programme review workshop which is being planned for March 2023
- An update on One "Health, Environment and Society" conference: Tackling Antimicrobial Resistance in Food Producing Environments

During the AMR Working Group meeting on **15<sup>th</sup> of November 2022** the key issues considered include:

- Findings from the FSA funded study: FSA Project FS307031 (Levels and trends of AMR *Campylobacter* spp. from chicken in the UK)
- AMR terminology: Use of resistance and reduced susceptibility. The Group agreed that a few members of the AMR WG should consider this issue and pull together an initial set of definitions/terms for the full Group's consideration at a future meeting.

- Antimicrobial resistance and wild birds
- Veterinary Antimicrobial Resistance and Sales Surveillance (VARSS) 2021

### **Ad Hoc Group on toxin producing Clostridia in food**

This subgroup was set up in April 2021 and had its first meeting in June 2021. The objective of the subgroup is to produce a report, for consideration by ACMSF, which updates and builds on a previous ACMSF report on “Vacuum Packaging and Associated Processes”, produced in 1992.

The group had full meetings in March, June and November 2022. Meetings using MS Teams were fully attended by the group and included presentations from invited specialists. In May 2022 some group members met with Dr Gauri Godbole who contributed expertise and experience with respect to clinical aspects of botulism.

All seven chapters of a group report have been drafted and a process of compilation and review is in progress. In accord with the Terms of Reference the group has been considering four distinct hazards; botulism in chilled foods, botulism in low acid ambient foods, other neurotoxic Clostridia and other bacteria that have been associated with botulinum neurotoxin genes. The group has identified nine incidents (13 cases) of food-borne botulism in the UK since the publication of the previous ACMSF report in 1992. The period of the group’s review includes relevant trends in food manufacture and packaging, food distribution and food behaviours. A global assessment of food borne botulism is very complex. The group intends to have a compiled report suitable for group review by the whole committee in early 2023.

### **Surveillance working group**

In 2022, the surveillance subgroup committee members were asked by the FSA to review the final report for the survey of the levels of Campylobacter contamination and prevalence of selected AMR determinants in fresh whole UK-produce chilled chicken at retail sale ( non-major retailers)

### **Subgroup on microbiological risk assessments in relation to food incidents**

In 2022, the incidents subgroup, responded to three requests for advice from the FSA. Group responses, in April, May and June 2022, were in the form of shared e-mail contributions from group members.

In April 2022 the FSA produced a rapid risk assessment and literature review in relation to vegetable oils that might replace sunflower oils in UK food manufacturing and asked the ACMSF Incidents Group for urgent review of “What is the risk to the consumer if all sunflower seed oil in the UK diet is replaced by alternative oils as listed in the statement of purpose?” The request from FSA was in response to the potential for disruption of the UK supply of Sunflower Oil from Ukraine. The FSA review indicated that there was very little evidence for microbial hazards associated with refined sunflower oils and the ACMSF subgroup indicated that an argument based on substantial equivalence for substitute materials was potentially valid.

In April 2022 the FSA and FSS requested the ACMSF Incidents subgroup to review their draft risk assessment on “The risk to vulnerable consumers from *Listeria monocytogenes* in blue cheese”. The ACMSF subgroup provided comments and suggested changes to the text of the risk assessment document and three appendices. The ACMSF subgroup was in agreement with the assessment expressed in the report using the ACMSF framework and noted several places where population variability was significant in cheese making.

In May 2022 the FSA and FSS requested the ACMSF Incidents subgroup to review their draft risk assessment “The risk to vulnerable consumers from *Listeria monocytogenes* in smoked fish” which had been prepared for submission to FSA/ FSS policy division. The subgroup submitted comments and provided direct annotations to the draft report - the draft was acknowledged as a good representation of the hazard domain. Most significantly the Incidents subgroup indicated that a clear distinction should be made between cold and hot smoking processes and that cold smoking was much more strongly associated with microbiological hazards in general including *L. monocytogenes*. The FSA science and evidence team responded to this suggestion by partitioning the risk characterization.

### **[Subgroup on newly emerging pathogens](#)**

In 2022, this subgroup commented on the draft version of the recently published FSA funded study Survival of SARS-CoV-2 on food surfaces. Some of the comments/suggestions were the need to attach appropriate caveats around some of the data in the report and advice that should be considered when applying the findings of the study to the real life and future revisions of the FSA 2020 risk assessment. The study was carried on the back of the risk assessment published by the FSA in 2020 (Qualitative Risk Assessment: What is the risk of food or food contact materials and surfaces being a source or transmission route of SARS-CoV-

2 for UK consumers) that concluded that it was very unlikely that you could catch coronavirus via food. This assessment included the worst-case assumption that, if food became contaminated during production, no significant inactivation of virus would occur before consumption.

### **Animal feed and TSE subgroup**

This group was established in June 2022 to provide advice on issues relating to animal feed and TSEs. Their terms of reference were:

- Review two risk assessments produced by APHA on the risk of introducing TSEs into UK livestock from proposed changes to animal feed regulations.
- Address any further issues requiring ACMSF input that arise from the review of these two risk assessments, until the Advisory Committee on Animal Feeding stuffs is reconvened.

The subgroup members agreed with the conclusions of the two risk assessments, as long as some caveats and concerns were addressed. The group has now been disbanded as the Advisory Committee on Animal Feeding stuffs (ACAF) has been reconvened. ACAF had its first meeting on 6 October 2022.

### **Regulated products subgroup**

The subgroup on regulated products was setup in 2021. The aim of this subgroup is to consider risk assessment matters relating to regulated products.

## **Outcome and Impact of ACMSF Advice**

The Committee's advice in a number of areas has been used to underpin the FSA's risk management decisions, survey reports and research proposals. Areas that received ACMSF's advice include:

FSA's Kitchen Life 2 Project: The committee agreed that the study was a very useful behavioural survey and indicated that they look forward to receiving further updates on the study. An ACMSF member is on the advisory group supporting this study, providing microbiological food safety expertise.

UK Food Security Report 2021: The committee made a number of comments on the report. It was noted that the authors of the report did not seek input from the FSA or ACMSF when it was produced. The committee agreed that the secretariat should approach Senior Managers in the FSA to discuss how to interact with the Defra group who produced the report on how to involve ACMSF in future reports.

Quality Assurance of Microbiological Strategic Risk Assessments: Members welcomed the current approach of subgroups reviewing risk assessments. It was agreed that so far, they have the expertise to address the issues raised in the risk assessment. This approach does not need change. Members agreed that it would be helpful to know at least two weeks in advance when documents are coming for review. A minimum deadline of two weeks deadline to do the review was suggested. It was added that having short deadlines to review reports may compromise the quality of the responses.

UK Food Safety Network: The committee endorsed the work of the UKFSN. Although UKFSN has prioritised the areas it intends to look at under the following headings (reducing microbial risk of known pathogens, understanding risk of alternative proteins and new plant based foods, applying food safety knowledge and new tools to ready-to-eat foods), output from the committee's 2022 horizon scanning workshop would be a good resource for UKSRN to seek access to as the report covers a wide range of areas that falls within the remit of the network.

Survey of microbiological quality of ready to eat food sold on social media: The committee welcomed the approach of carrying a pre-survey to get a picture of the social media food marketplace before the full survey is launched and suggested a number of points to consider when designing the study. On behalf of the Committee the Chair stated that this is a valuable piece of work which would be very interesting and challenging to carry out. He added that the Committee look forward to receiving a presentation on the findings of the survey.

Infectious Intestinal disease in the UK project (IID3): Several committee members provide advice and comments on the proposal for this study during drafting. The full committee provided additional comments and suggestions during the October plenary.

Horizon scanning workshop: The Committee's horizon scanning workshop held in June 2020 identified emerging issues around a series of specific questions and agreed a prioritised list of recommendations that could be seen to have the greatest impact on reducing foodborne illness. As the committee received an update on progress being made on prioritised list of recommendations, additional comments were provided for the FSA to consider.

A number of FSA and Strategic risk assessments and research reports and specifications were reviewed by either the full committee or committee subgroups, providing relevant expertise and quality assurance. This included:

Research reports:

- Survey of Salmonella, E. coli and AMR in frozen part-cooked breaded and battered poultry products)
- A survey of *Salmonella*, *Escherichia coli* and antimicrobial resistance in frozen, part-cooked, breaded or battered poultry products on retail sale in the UK
- Surveillance of Antimicrobial Resistance in *E. coli* and *Campylobacter* from retail turkey meat and *E. coli* from retail lamb.
- A survey of the levels of *Campylobacter* contamination and prevalence of selected AMR determinants in fresh whole UK-produce chilled chicken at retail sale (non-major retailers)
- FSA project FS307037 Modelling framework to quantify the risk of AMR exposure via food products: example of chicken and lettuce
- FSA Project FS307031 Levels and trends of AMR *Campylobacter* spp. from chicken in the UK
- FSA funded study Survival of SARS-CoV-2 on food surfaces

#### Research Specification:

- The FSA's proposed Surveillance of AMR bacteria in raw dog and cat food on retail sale in the UK

#### Strategic Risk Assessments:

- What is the risk to the consumer if all sunflower seed oil in the UK diet is replaced by alternative oils as listed in the statement of purpose?
- The risk to vulnerable consumers from *Listeria monocytogenes* in blue cheese"
- The risk to vulnerable consumers from *Listeria monocytogenes* in smoked fish
- Qualitative Risk Assessment: What is the risk of food or food contact materials and surfaces being a source or transmission route of SARS-CoV-2 for UK consumers.

## Annual Costs

The operation of the ACMSF is funded by the FSA. The total cost for members expenses and fees in 2022 was £59,771.59. Information on fee rates and expenses guidance are included in the [ACMSF's Code of Practice](#).

## Annex I Membership

### **Professor Bill Keevil, Chair**

Professor of Environmental Healthcare, Head of the Microbiology Group, at the University of Southampton. Chair of the subgroups on Antimicrobial Resistance (AMR) and regulated products. Member of the incidents subgroup.

### **Professor Dan Tucker (Deputy Chair)**

Professor in Veterinary Public Health at the Department of Veterinary Medicine, University of Cambridge. He is fellow and Director of Studies in Medicine and Veterinary Sciences, Pembroke College, Cambridge. Chair of the New Emerging Pathogens subgroup. Member of the AMR and regulated products subgroups

### **Dr Gary Barker**

Research Scientist in Norwich. He has been actively involved in research since 1981 in the Physics Department at Sheffield University and from 1984 until 2018 at the Institute of Food Research. Chair of the subgroup on incidents, botulinum toxin-producing Clostridia in food and quaternary ammonium compounds and biocides used in food processing. Member of the Newly Emerging Pathogens subgroup.

### **Dr Gauri Godbole**

Consultant Medical Microbiologist and Parasitologist at the National Infection Service, UK Health Security Agency. Member of the AMR, Newly Emerging Pathogens and Incidents subgroups.

### **Mr Alec Kyriakides**

Independent Food Safety Consultant. Former Head of Product Quality, Safety & Supplier Performance at Sainsbury's. Chair of the Surveillance subgroup. Member of the incidents, Newly Emerging Pathogens, quaternary ammonium compounds and biocides used in food processing and botulinum toxin-producing Clostridia in food subgroups.

### **Miss Heather Lawson**

Senior Environmental Health Officer at the Royal Borough of Greenwich where her work involves food hygiene and food standards inspections involving microbiological food safety issues. Member the surveillance and quaternary ammonium compounds and biocides used in food processing subgroups.

### **Dr Rohini Manuel**

Consultant Clinical Microbiologist at the Public Health Laboratory London, National Infection Service, UK Health Security Agency. Member of the AMR, Newly Emerging Pathogens and regulated products subgroups.

**Professor Peter McClure**

Microbiologist and former Microbiology Department Manager for Europe, at Mondelēz International R&D Ltd. Member of the surveillance, incidents and botulinum toxin-producing Clostridia in food subgroups.

**Mrs Ann Williams**

Commissioning and contracts manager at Liverpool City Council responsible for the local Healthwatch services. Member of the AMR subgroup.

**Dr Wayne Anderson**

Director of the Food Science and Standards Division at the Food Safety Authority of Ireland. Member of the incidents and botulinum toxin-producing Clostridia in food subgroups.

**Dr Edward Fox**

Senior Lecturer at Northumbria University and has previously held a Newman Fellowship at University College Dublin's Centre for Food Safety where his research examined food processing hygiene and food safety, and the role of microbial communities in influencing the colonisation of pathogenic bacteria in food processing environments. Member of the regulated products subgroup.

**Dr Jane Gibbens**

Consultant veterinary epidemiologist with extensive experience in providing advice to enable veterinary policy making and development, and in the design, implementation and analysis of disease surveillance and control protocols. She formerly worked for Defra and the Animal and Plant Health Agency, most recently as Head of the Bovine TB Epidemiology Assessment Centre, and Head of the Epidemiology and Risk Group. Her focus has been on bovine tuberculosis, statutory diseases exotic to the UK and scanning veterinary surveillance. Member of the surveillance subgroup.

**Professor Francis Butler**

Professor in the School of Biosystems and Food Engineering at University College Dublin and a Principal Investigator in the UCD Centre for Food Safety. His main

research area is in food safety with a particular focus on quantitative risk assessment /modelling of microbiological hazards in foods. Member of the Newly Emerging Pathogens subgroup.

### **Mr Martin Briggs**

Currently works for GLW Feeds Ltd. His scientific background is in applied biology. Member of the regulated products subgroup.

### **Dr Nicol Janecko**

She is a Career-Track Group Leader at the Quadram Institute Bioscience, Norwich, UK with a research emphasis in genomic and metagenomic approaches to understanding *Campylobacter* diversity and transmission. She is an epidemiologist and microbiologist with a long-standing career focus on foodborne zoonotic pathogens and antimicrobial resistance. Member of the surveillance subgroup.

### **Prof Linda Scobie**

Presently teaches Biomedical Science and Microbiology programmes at Glasgow Caledonian University. She leads a research group interested in viral zoonoses in the context of novel technologies.

### **Prof Cath Rees**

Professor Cath Rees is a Professor of Microbiology in the School of Biosciences, University of Nottingham.

### **Dr Dragan Antic**

Dr Dragan Antic is a Senior Lecturer in Veterinary Public Health at the Institute of Infection, Veterinary and Ecological Sciences, University of Liverpool.

## **Annex 2 Declarations of interest**

In line with FSA policy and established good practice for accessing external expertise, Scientific Advisory Committee members are required to declare any personal or non-personal interests which represent a real or potential conflict in respect of general or specific aspects of work undertaken. Interests will be managed in accordance with the FSA's policy and guidance.

If members have interests not specified in these notes, but which they believe could be regarded as influencing their advice or other work for FSA, they should

declare them. However, members are not under any obligation to search out interests of which they might reasonably not be aware. For example, either through being unaware of all the interests of family members, or of not being aware of links between one company and another.

Member	Personal	Non-personal
Professor Bill Keevil (Chair)	<p>Direct employment: University of Southampton</p> <p>Membership: American Academy of Microbiology, Royal Society of Biology, Royal Society of Public Health, BSI Committees</p>	<p>Various research grants from public and private sector</p>
Professor (AW) Dan Tucker (Deputy Chair)	<p>Direct employment: University of Cambridge, Fellow and Trustee, Pembroke College, Cambridge</p> <p>Consultancy: Genus plc, Farming Partnership, WJW Tucker and sons</p> <p>Membership: Royal College of Veterinary Surgeons, UK Pig Veterinary Association, UK Veterinary Public Health Association, European College of Pig Health Management, American Association of Swine Veterinarians</p>	<p>Grants: Research funding to support pig clinical residency training programs (Zoetis Animal Health and Ceva Animal Health)</p>
Dr Gary Barker	<p>Direct employment: Nil (Retired research scientist)</p> <p>Membership: Nil</p>	<p>Grants: Research Funding in collaboration with industrial partners</p>

Dr Gauri Godbole	Direct employment: UK Health Security Agency Membership: Nil	Grants: Research funding from part public sector
Dr Rohini Manuel	Direct employment: Employee UK Health Security Agency Membership: Nil	Grants: Research funding from public and private sector
Mrs Ann Williams	Direct employment: Liverpool City Council Membership: Nil	Nil

Direct employment: Nil

Consultancy: Independent Food Safety  
Consultant

Shareholder: J Sainsbury Plc

Non-Executive Board Member  
(unremunerated): Campden BRI

Non-Executive Board Member  
(unremunerated): Institute of Food  
Science and Technology

Mr Alec  
Kyriakides

Nil

Honorary Lecturer (unremunerated):  
Queen's University Belfast

Independent Governance Board Member  
and Chair of Technical Standards  
Committee (remunerated): Safe to Trade  
Scheme

Membership: Institute of Food Science  
and Technology, International  
Association for Food Protection

Direct employment: Nil (former  
Microbiology Department Manager for  
Europe, at Mondelēz International R&D  
Ltd)

Professor  
Peter  
McClure

Shareholder: Unilever

Nil

Royalties for book chapters: Woodhead  
Publishing and Elsevier  
Membership: Nil

Miss Heather Lawson	<p>Direct employment: Royal Borough of Greenwich</p> <p>Membership: Chartered Institute of Environmental Health</p>	Nil
Dr Wayne Anderson	<p>Direct employment: Food Safety Authority Ireland (FSAI)</p> <p>Membership: International Commission on Microbiological Specifications for Food (ICMSF) and IFST</p>	Nil
Dr Jane Gibbens	<p>Direct employment: Nil</p> <p>Consultancy: Fee paid work from organisations and consultancies seeking veterinary epidemiological advice, including membership of the Defra bovine TB Partnership</p> <p>Membership: Royal College of Veterinary Surgeons, European College of Veterinary Public Health, Association of Government Veterinary Surgeons, British Veterinary Association</p>	Nil

Professor Francis Butler	<p>Direct employment: University College Dublin</p> <p>Consultancy: Fee paid work from relevant organisations and consultancies; occasional fee-paying consultancy with the Saudi Food and Drug Authority in relation to risk assessment and occasional food safety consultancy with the Irish Food Industry</p> <p>Board member: Food Safety Authority for Ireland</p> <p>Membership: Nil</p>	<p>Grants: Partial industry support for research project on dairy products safety (Dairy industry); recent (2022) grant relating to biotoxins in shellfish (Irish Ministry of Agriculture)</p>
Dr Edward Fox	<p>Direct employment: University of Northumbria</p> <p>Membership: International Association for Food Protection, Australian Society for Microbiology</p>	<p>Grants: Research funding from public and private sector</p>
Mr Martin Briggs	<p>Direct employment: GLW Feeds</p> <p>Membership: Nil</p>	<p>Nil</p>

Dr Nicol  
Janecko

Direct employment: Quadram Institute,  
Bioscience, Norwich

Membership: Royal Society of Biology,  
Microbiology Society

Grants: Institute Strategic  
Program Microbes in the  
food chain Campylobacter  
objectives

Professor  
Linda Scobie

Direct employment: Glasgow Caledonian  
University

Consultancy: Axiom/Xenotherapeutics  
Plc, USA

Membership: Nil

Grants: Food Standards  
Agency, Other research  
funding from public and  
private sectors