Report

ACMSF Annual Report 2024

Introduction

This is the thirty-third annual report of the ACMSF and covers the calendar year 2024. The aim of this report is to provide a brief background to the Committees' during this calendar year. 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.

Chapter 1: Administrative Matters

1.1 Membership appointments

Ms Claire Tomaso

Mr Andrew MacLeod

1.2 Membership Retirements

Prof. Peter McClure

Prof. Dan Tucker

Ms Heather Lawson

Dr Gauri Godbole

Mr Alec Kyriakides

Ms Ann Williams

1.3 Declarations of interest

Full details of the membership of the Committee and its Working and *Ad Hoc* Groups are given in Annex I. 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.

1.4 Meetings held in 2024

The full Committee convened three times in 2024. Plenary meetings were held in London in February and October, each comprising a public session and a closed session to discuss unpublished or sensitive data. The June meeting took place in York and featured a joint plenary session open to the public, followed by a closed horizon scanning workshop. All meetings and the workshop were chaired by Professor Bill Keevil.

The Antimicrobial Resistance Working Group convened once in January 2024 via a virtual meeting chaired by Professor Bill Keevil. This meeting marked the final session of the subgroup. Following discussions between the Secretariat and the Chair, a decision was made to disband the group and integrate its work into the main committee meetings.

Subsequently, a new Listeria monocytogenes Working Group was established and held its first meeting in May 2024, also virtually. This meeting was chaired by Dr. Gauri Godbole.

1.5 Meeting minutes from 2024

Minutes for the three plenary meetings are available on the committee's website ACMSF 2024 meetings | Advisory Committee on the Microbiological Safety of food.

1.6 Papers the committee considered in 2024

Paper Number	Name of Paper	Meeting Number	Date of Meeting
ACM/MIN/104	Minutes of the 104th meeting	105th	08/02/2024
ACM/1419	Matters arising	105th	08/02/2024
ACM/1420	PATH-SAFE update	105th	08/02/2024
ACM/1421	Kitchen Life 2 Update	105th	08/02/2024
ACM/1422	Epidemiology of Foodborne Infections Group update	105th	08/02/2024
ACM/1423	Items of Literature	105th	08/02/2024
ACM/1424	Committee Update	105th	08/02/2024
ACM/MIN/105	Minutes of the 104th meeting	106th	19/06/2024
ACM/1425	Matters arising	106th	19/06/2024
ACM/1426	Wave 7 of the Food and You 2 survey	106th	19/06/2024
ACM/1427	Epidemiology of Foodborne Infections Group update	106th	19/06/2024

Paper Number	Name of Paper	Meeting Number	Date of Meeting
ACM/1428	Approaches to assessing the detriment of antimicrobial resistance (AMR) in the food chain to inform qualitative risk assessments	106th	19/06/2024
ACM/1429	ACMSF AMR WG recommendation on AMR terminology in FSA reports	106th	19/06/2024
ACM/1430	Items of Literature	106th	19/06/2024
ACM/1431	Committee Update	106th	19/06/2024
ACM/MIN/106	Minutes of the 106th meeting	107th	24/10/2024
ACM/1432	Matters arising	107th	24/10/2024
ACM/1433	Sheep survey	107th	24/10/2024
ACM/1434	Sheep survey – Reserved business	107th	24/10/2024
ACM/1435	Raw pet food survey	107th	24/10/2024
ACM/1436	PATH-SAFE FBD.1 Correlating surveillance of foodborne pathogens in wastewater with IID determination in the UK population	107th	24/10/2024
ACM/1437	Items of Literature	107th	24/10/2024

Paper Number	Name of Paper	Meeting Number	Date of Meeting
ACM/1438	Committee Update	107th	24/10/2024

Chapter 2: The Committee’s Work in 2024

2.1 Plenary meeting discussion items

2.1.1 PATH-SAFE programme

The committee was updated on the work of the PATH-SAFE programme, which aims to enhance national surveillance of foodborne diseases and antimicrobial resistance using DNA sequencing and environmental sampling across the agri-food system. It comprises four workstreams focused on genomic data platforms, multi-location sampling, portable diagnostics, and environmental AMR surveillance.

The committee suggested improving data sharing by incentivising contributions from private labs and overcoming security-related barriers in organisations like DSTL. They recommended better stakeholder engagement through Chief Scientific Advisors and maintaining a contact database. Members also encouraged making meetings accessible online, expanding future work to consider patient vulnerabilities, and ensuring long-term sustainability of the data infrastructure.

2.1.2 Kitchen Life 2

The Kitchen Life 2 (KL2) project, commissioned by the FSA, investigated food safety behaviours in 70 households and 31 food business kitchens using cameras, surveys, interviews, and temperature monitoring. Completed in June 2023, KL2 aimed to understand key behaviours and influencing factors. It produced seven detailed reports on issues such as improper handwashing, chopping board reuse, incorrect food storage, and food waste. The committee was provided an overview of the results of the project.

The committee welcomed the KL2 presentation. Members raised concerns about hygiene practices, such as tea towel and dishcloth use, and highlighted the need

for improved guidance. The study's insights into reheating habits and behavioural influences like fatigue were seen as valuable for shaping future interventions. The Behaviour Change Wheel was noted as a useful framework for designing practical solutions, and the extensive data, especially on fridge temperatures, was praised as a significant resource.

2.1.3 FSA *Campylobacter* Project

The committee was given an overview of a planned FSA *Campylobacter* project, which aims to understand why human cases of Campylobacteriosis haven't declined despite reduced contamination at retail. It includes systematic reviews, meta-analysis, expert elicitation, and a consumer survey. Early input was sought from members on the design of the project as well as interest in committee involvement.

Members proposed looking at import trends, using existing systematic reviews, incorporating PATH-SAFE sequencing data, and consulting the upcoming WHO/FAO report.

2.1.4 Regulated Product Service continuous improvements

The committee was presented with a paper which outlined enhancements to the Regulated Product Service (RPS) within the FSA and Food Standards Scotland (FSS), focusing on governance and efficiency in risk assessments. It proposed using abbreviated processes and other regulators' assessments for routine applications lacking novelty or complexity, allowing scientific resources to be redirected. A pilot is underway for renewals and reauthorisations, which form a large part of the caseload. The paper also introduced criteria for selecting assessment pathways and invited Scientific Advisory Committee members to provide feedback on oversight mechanisms for these streamlined processes.

The committee responded positively to the paper's content but cautioned against the broad use of the term "risk assessment," noting that not all applications involve a risk, some may only require hazard analysis. This distinction could streamline decision-making.

2.1.5 Food and You 2 survey

The findings of Wave 6 and 7 of the FSA's "Food and You 2" survey was presented to the committee. Waves 6 and 7 explored public attitudes and behaviours around food in England, Wales, and Northern Ireland. Wave 7 (April–July 2023)

highlighted rising concerns about food affordability and covered topics like food safety, authenticity, and online platforms. Wave 6 (published July 2023) included core topics plus food safety at home, eating out, hygiene ratings, and food hypersensitivities.

The committee welcomed the findings from the Food and You 2 survey and offered several suggestions to improve future research. Members recommended ensuring inclusivity in participant recruitment, especially for elderly and socio-economically disadvantaged groups, and suggested weighting data by socio-economic status. Concerns were raised about oversampling in Wales and Northern Ireland and its impact on UK-wide representation. Suggestions included exploring reasons behind food safety behaviours, such as use-by date adherence and seasonal variations, and comparing self-reported versus observed behaviours. Members also proposed linking findings with Kitchen Life 2 and investigating motivations behind risky food practices to inform future policy and research.

2.1.6 Food Fraud

The committee engaged actively with an FSA presentation on the Food Crime Unit’s work, offering several insightful suggestions and queries. Members explored the potential use of the dark web for intelligence gathering, raised concerns about regulatory divergence post-Brexit, and discussed risks such as waste diversion and veterinary fraud. They emphasized the importance of whistleblower protection and asked about trends in food fraud, including surveillance practices and specific commodities affected. The committee also encouraged foresight planning around emerging fraud risks and regulatory changes, highlighting the need for continued vigilance and collaboration with international partners like Europol.

2.1.7 Microbiological contamination in sheep at slaughter survey

Committee members were presented with the findings from three interlinked surveys on microbiological contamination in sheep at slaughter. In the closed session, unpublished results from Defra’s caecal *Salmonella* survey and PATH-SAFE’s AMR monitoring were shared with members.

Committee members discussed the implications of the findings. Concerns were raised about cross-contamination in multi-species abattoirs and cleaning protocols. Questions also focused on data accessibility and the anonymisation

agreements needed to secure abattoir participation. Members acknowledged the complexity and cost of the study and discussed the balance between qualitative and quantitative data.

2.1.8 *Campylobacter* expert elicitation

Findings were presented from an expert elicitation exercise on *Campylobacter*, aimed at identifying which interventions across the broiler production chain have been effective in reducing contamination and which could most impact human Campylobacteriosis cases. The committee discussed the strategic focus of interventions, considering whether efforts should target *Campylobacter*-free poultry or emphasize downstream controls such as abattoir hygiene and consumer practices. It was noted that while targets for reducing highly contaminated birds have been met, this has not translated into reduced human illness, suggesting a need to reassess intervention strategies and consider additional contributing factors. The committee agreed that further exploration and reassessment of strategies are warranted.

2.1.9 Raw pet food at retail survey

The committee received a presentation from the FSA Feed Policy Team outlining the legislative framework governing raw pet food, including relevant EU regulations and the roles of various government departments. UKHSA then presented findings from a survey on antimicrobial-resistant bacteria in raw pet food, highlighting the presence of AMR *E. coli* and *Salmonella*.

Committee members raised detailed questions about methodology, such as the detection of MRSA and *Campylobacter*, and the prevalence of multi-pathogen contamination. Concerns were voiced about traceability, with discussion around ABP codes and the limitations of current regulatory oversight. Members queried the significance of MRSA in pigs and the implications for human health. The issue of consumer messaging was also discussed, with suggestions to involve behavioural science experts. Overall, the committee provided critical insights into data interpretation, regulatory gaps, and public health communication.

2.1.10 PATH-SAFE FBD.1

An update was presented to the committee on the PATH-SAFE FBD.1 project, which focuses on wastewater surveillance of five foodborne pathogens to complement the IID3 study. Discussion focused on the comparative value of

wastewater data, with concerns raised about its ability to confirm human-origin pathogens due to potential livestock runoff. Members noted that wastewater indicates presence, while IID3 measures prevalence, highlighting its potential to detect underreported pathogens. Broader interests included antimicrobial resistance and treatment efficiency. The cost-effective sampling approach was acknowledged.

2.1.11 Epidemiology of Foodborne Infections Group

The committee were updated on key discussions at the biannual EFIG meetings which took place in June and December. Data discussed included *Salmonella* in Livestock production, the National Control Programme data, Animal Feed and *Salmonella*, human infection data, food surveillance in England, Scotland and Wales.

Committee members raised concerns about data clarity and context in reports, noting it focuses on monitoring rather than exploring underlying causes. They highlighted a lack of integration between animal and human data, such as rising human salmonella cases despite poultry control success, and called for more discussion on potential interventions. Recommendations were made to improve data presentation, align with EFSA/CDC formats, and address specific outbreak details.

Various points were raised in relation to the data. For example, *Salmonella* trends in breeding flocks were flagged for further investigation due to rising regulated serovar detections. Concerns were also raised about increasing *Salmonella* in dog food, prompting suggestions for clearer consumer guidance and point-of-sale warnings.

2.1.12 Third study of infectious intestinal disease in the UK (IID3)

The study is intended to estimate the true burden of intestinal disease in the UK by giving an estimate of underreporting and providing an estimate of pathogens which are causing a certain percentage of infectious intestinal disease.

The committee were given brief updates at each meeting in 2024 on the ongoing results of the IID3 project in order to support and advise the ongoing work of the project.

Committee members provided valuable input on the IID3 project. They raised concerns about regional data gaps, approval delays across nations, and

dashboard limitations. Questions focused on pathogen detection rates, sample integrity, and data timelines. Members emphasized the importance of cross-nation collaboration and future data accessibility.

Committee member Nicol Janecko and Cath Rees also provided expertise as external reviewers for IID3 interim reports, in their capacity as ACMSF committee members.

2.2 Horizon Scanning Workshop

The committee held a horizon scanning workshop in York on the 19th of June 2024. The format of the workshop was devised by the secretariat and was intended, among other things, to help identify and further understand the effects of climate change on UK food safety, in line with the FSA's commitments under Risk Action H9.1 of the government's Third National Adaptation Programme (NAP3). All committee members were invited to attend, and collectively represent expertise in microbiology, food safety, public health, epidemiology, veterinary science, and food industry practices.

The FSA sought member input on which emerging microbiological issues and food sectors to prioritise, particularly in identifying probable indicators of climate change. Members were asked to score the risk of specific pathogens emerging during flooding, drought, and heatwave:

- *Escherichia coli*
- *Campylobacter*
- *Listeria*
- Norovirus
- *Salmonella*
- *Vibrio*
- Viruses such as Hepatitis A and B
- Verotoxigenic and Shigatoxigenic E.*coli* (VTEC/STEC)

The food sectors considered were:

- Fish
- Shellfish
- Beef
- Poultry
- Eggs
- Dairy (milk and cheese)

- Raw dairy
- Imported eggs
- Crops
- Ready-to-Eat (RTE) fruit and vegetable
- Chilled food sectors

During the workshop, three discussion groups were created and randomly assigned. Each group was provided with the same information, guidance, and table template. Groups were asked to assign scores from ten (most significant) down to one (least significant) to emerging microbiological issues within specific food groups that could arise following changes to the climate. Members were asked to consider the effects severe weather conditions (flooding, heatwaves, and drought) may have on food production, processing, and supply chain as well as the impact on food consumption and imports. Members were also asked to summarise key causes of the risks and mitigation strategies. Once each group had completed their scoring, a discussion was held to form a consensus.

The workshop concluded that the greatest food safety risk during flooding and drought was likely to be from Verotoxigenic and Shigatoxigenic *Escherichia coli* (VTEC/STEC) contaminating crops and RTE fruit and vegetables, while the greatest risk during a heatwave was likely to be from *Listeria* in chilled food due to disruption to the cold chain. Overall, the greatest risk is likely to be of faecal contamination of crops and ready-to-eat (RTE) fruit and vegetables during flooding, drought, and heatwaves. The full report can be found on the ACMSF website: ACMSF Horizon Scanning Workshop (June) 2024 summary of discussions and outputs | Advisory Committee on the Microbiological Safety of food

2.3 The Subgroup's Committee's Work in 2024

2.3.1 Antimicrobial Resistance Working Group

Role: To assess the risks to humans from foodborne transmission of antimicrobial-resistant microorganisms and provide advice to the FSA.

Two papers were finalised by the working group in 2024:

Use of AMR terminology in FSA reports.

Concerns were raised about the use of terms like "resistance" in FSA reports when describing bacteria based on ECOFF values rather than clinical breakpoints. FSA reports often use varied methods and criteria, including phenotypic and genotypic approaches. To address this, the AMR working group was tasked at the

April 2023 AMR meeting to write a paper to define AMR-related terms and draft a clarifying statement for future FSA reports.

The final paper was resented at the June 2024 plenary meeting. The paper focuses on standardising the use of AMR terminology in FSA reports. The finalised guidance aims to clarify definitions and ensure consistency in terminology. Key discussions included the distinction between intrinsic resistance (naturally occurring in organisms) and multiple drug resistance, which is acquired. Members debated how to classify organisms with intrinsic resistance to multiple antibiotic classes and the implications for risk assessment and treatment decisions. The Committee also discussed the use of terms like "microbiological resistance" and the interpretation of epidemiological cut-off values (ECOFFs), ultimately agreeing to label such cases as "resistant" for clarity. The document was approved by the Committee, with a recommendation that it be included at the beginning of FSA-AMR related surveys and research reports to guide terminology use.

Approach to assessing detriment of AMR genes in food risk assessments.

In October 2019, the ACMSF recommended that FSA should move towards using a two-dimensional framework for microbiological risk assessment, which considers the probability of the adverse effect occurring alongside the detriment (harm or damage) associated with the severity of the microbiological hazard(s) being considered. The AMR working group brough a paper to the June 2024 plenary meeting which proposed a framework for assessing the detriment of AMR in the food chain. While the committee acknowledged the potential of the framework, questions were raised about whether a quantitative or descriptive matrix should be used, and whether AMR risks should be assessed separately or in combination with pathogenic risks. The consensus leaned toward a combined risk assessment when data permits, aligning with Codex guidance. Discussions also highlighted the complexity of AMR risk, which is indirect and conditional, unlike the immediate risks posed by pathogens. UKHSA’s surveillance data, including genotypic and phenotypic resistance profiles, was identified as a key resource, though gaps remain in hospital-level data on treatment failures due to resistance. Ultimately the committee agreed to accept the final version of the paper and emphasized the need for feedback from the FSA on how the recommendations will be implemented, given the strategic importance of the work.

2.3.2 *Listeria* Working Group

Newly established in 2024, the working group had one meeting in May 2024 to agree function and terms of reference. The meeting took place virtually and was Chaired by Dr. Gauri Godbole.

Role of working group:

To delve deeper into the specific issues surrounding *Listeria* strain variability and to develop specific recommendations for how strain-specific information can best be incorporated into future risk assessments and technical advice produced by FSA Science & Evidence teams for use to inform policy decisions.

Terms of Reference

- To carry out a risk assessment of *Listeria* within food facilities to inform risk mitigation.
- To produce a report on *Listeria* strain variability considering how this can affect food transmissibility, persistence in the environment and current control strategies using sequence data.
- To recommend future research priority that will be of interest to PATH-SAFE consortium or research that may benefit the food industries and promoted through the Food Safety Research Network.

2.3.3 Surveillance working group

Terms of reference: To facilitate the provision of ACMSF advice to government in connection with its microbiological food surveillance programme and other surveillance relevant to foodborne disease, particularly in relation to the design, methodology, sampling and statistical aspects; and to report back regularly to the ACMSF.

2.3.4 Subgroup on microbiological risk assessments in relation to food incidents

Role: Reviews the FSA’s risk assessments in relation to incidents

2.3.5 Subgroup on newly emerging pathogen

Terms of reference: To gather intelligence on a continuous basis in order to facilitate the rapid identification of potential threats to UK consumers from exposure to newly emerging or re-emerging pathogens through food chain exposure pathways.

2.4 Document review for FSA quality assurance

Throughout 2024, Committee members provided comments and feedback as part of the FSA quality assurance process for a range of documents, including strategic risk assessments, technical advice, and research projects.

Technical Advice:

- Technical Advice: Review of “Salmonella Micro Criteria Sampling Risk Assessment”
- FSS Shelf-life guidance: Guidance for food businesses for the setting of product shelf-life
- Advisory Committee on the Microbiological Safety of Food: Opinion on proposed amendments to Listeria Regulation 2073/2005

Strategic risk assessment:

- An assessment of the risk of companion animals acquiring Salmonella spp., beta-glucuronidase-positive Escherichia coli (E. coli), Shiga toxin-producing Escherichia coli (STEC), Campylobacter spp. and methicillin-resistant Staphylococcus aureus (MRSA) from contaminated raw pet food, and associated risks to pet owners from the use of these products in the home. DOI: https://doi.org/10.46756/sci.fsa.nss574
- Risk to consumers from the consumption of red meat produced in small throughput slaughterhouses due to Process Hygiene Criteria sampling exceptions
- Hypothetical Risk to UK Consumers From Highly Pathogenic Avian Influenza H5N1 Strain B3.13 in UK Dairy Cattle, Milk, Dairy Products, Colostrum and Colostrum-Based products. DOI: https://doi.org/10.46756/001c.128392
- Risk to UK Consumers From Meat, Mince and Offal From Beef, in the Hypothetical Scenario That Highly Pathogenic Avian Influenza H5N1 Strain B3.13 Is Found in UK Beef and Dairy Cattle. DOI: https://doi.org/10.46756/001c.128380
- Updated Risk Assessment: Risk to UK Consumers From Highly Pathogenic Avian Influenza (HPAI) H5N1 B3.13 in US Dairy and Beef Products. DOI: https://doi.org/10.46756/001c.128394

Rapid risk assessments:

- Rapid Risk Assessment of the Detection of Listeria Monocytogenes in Enoki Mushrooms DOI: https://doi.org/10.46756/001c.122719
- Rapid Risk Assessment: Risk to UK consumers from Highly Pathogenic Avian Influenza (HPAI) H5N1 B3.13 in US dairy products. DOI:

https://doi.org/10.46756/001c.127181

2.5 Annual Costs

- The operation of the ACMSF is funded by the FSA. The total cost for members expenses and fees in 2024 was £55,945.45. 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.

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.

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.

Dr Inaki Deza-Cruz

Dr Inaki Deza Cruz is a Senior Lecturer in Veterinary Public Health at the University of Edinburgh and a visiting lecturer at University of Surrey. With over 20 years of experience in the field, Dr Deza-Cruz has cultivated a rich and diverse background, having worked in academia, the private sector, and government organizations such as the FSA and the Animal and Plant Health Agency. His career has grown at the intersection of human and animal health, focusing on the two vital aspects of veterinary public health: epidemiology and food safety.

Dr Adri Bester

Dr Adri Bester is Senior Food Technologist in the School of Applied Science, London South Bank University, and a mentor and auditor for the Safe and Local Supplier Approval Accreditation.

Dr Roberto Vivancos

Dr Roberto Vivancos is a consultant in public health and medical epidemiologist working with the Field Services of the UK Health Security Agency (UKHSA). He has over 15 years of experience working in Public Health in the fields of health protection and epidemiology. He has contributed to the investigation of numerous outbreaks of gastrointestinal infections and food related illness, from local to international level, working closely with local and national authorities, and regulatory agencies. He has been involved in several collaborative research projects focusing on the burden, epidemiology, and control of gastrointestinal infections. He is currently co-director of the National Institute of Health Research (NIHR) Health Protection Research Unit in Gastrointestinal Infections and has published widely on epidemiology and communicable disease control in peer reviewed scientific journal.

Ms Claire Tomaso

Ms Claire Tomaso is a Principal Environmental Health Officer managing the Food Safety Team within the London Borough of Enfield. She also lectures at Middlesex University in Environmental Health.Mr Andrew MacLeod

Mr Andrew MacLeod

Mr Andrew MacLeod has been an advocate and proponent of a scientific approach to OCs since his career began some 27 years ago and where he has entirely specialised in Food Control.

Prior to this Andy qualified with a BSc joint honours in Ecology and Human Biology, going on to take the BSc Environmental Health part time in Manchester and the Masters programme in Food Safety at Birmingham.

A Chartered Scientist (Food Science & Technology), Andy was elected as a Fellow of the IFST for his work on Inspection technique and PCR based control of viruses in oysters.