

Areas of research interest

Areas of research interest (ARIs) give details about our research priorities.

We use science and evidence to tackle the challenges of today, to identify and address emerging risks, and to ensure the UK food safety regulation framework is modern, agile and represents consumer interests. Our policies and decisions are based on the best available scientific data and analysis. This includes expert advice provided by our independent [Scientific Advisory Committees](#) and [Science Council](#), and we make all our [research outputs](#) publicly available.

The issues influencing food safety and standards and consumers' possible exposure to them are wide ranging, meaning our Areas of Research Interest (ARI) are broad. Our ARIs are research questions we want to address in collaboration with partners including academia and the wider research community. We want to promote and protect public health by ensuring that UK consumers are well informed and have sustainable access to foods which are safe, traceable, and properly labelled.

By disseminating, communicating and regularly reviewing our ARIs, updating them as required, we aim to be better prepared for the future by growing our evidence base, creating and taking advantage of opportunities to:

- build and extend collaborations with other Government departments, the devolved administrations, local authorities, industry, consumers and groups that represent them to enable a full understanding of the food system and the impact of interventions.
- develop joint initiatives with [UK Research and Innovation](#) (UKRI) and other funders
- engage with universities and other research providers working at the cutting-edge of innovation by commissioning research, co-designing exciting new projects and development projects and by supporting fellowships and scholarships
- sustain and improve the access to and use of expert networks, including our [Scientific Advisory Committees](#) and Register of Specialists
- identify new opportunities for testing research and development to assure high standards of capability and capacity for food safety sampling, including within the Official Control Laboratory system, supported by the UK's Food and Feed National Reference Laboratories

We work in partnership with others to support the safe and resilient food supply chain in the UK. Helping to address and advance questions within our ARIs is an opportunity for partners to demonstrate significant impact on the food system and consumer protection.

Our Chief Scientific Adviser, Professor Robin May, says:

'A strong, scientific, evidence-based approach has been, and will always be, integral to our mission to ensure food is safe, is what it says it is, and to empower consumers to make informed choices in relation to food.'

Our ARIs outline the range of scientific research providing evidence for our policy, advice and operations, highlighting current strategic priorities. The themes

presented form the backbone of our future research and development programme ambitions, and will be used to promote engagement with other government departments and the wider academic community to address crucial and shared areas of interest.'

Research priorities

We have identified four research priorities. Under each of these strategic priorities, there is a set of research themes, which are the basis of our co-ordinated research and evidence programmes. Within each of these we have more detailed questions, giving a closer overview of the areas where we seek to advance and/or improve our scientific capabilities.

Our ARIs are not a direct invitation to tender. The department's research calls are published and procured through [a tender portal](#) and details of new UK Governmental research tenders are also available on [the contract finder website](#).

Research priority one: food hypersensitivity and allergy

We have laid out our vision to make the UK the best country in the world for consumers with food hypersensitivity.

[View FSA 20-01-08 - Food Hypersensitivity Strategy as PDF](#) (183.17 KB)

To achieve this, we need access to the best science and evidence to understand how to best protect those with food allergies and help improve their quality of life. We want to build a genuinely interdisciplinary approach to address this challenge. We will draw on both the natural and social sciences to allow us to develop our understanding of the biological and clinical manifestation of food allergy, its diagnosis, socio-economic impact and behavioural insight to aid the mitigation of impact.

Our research theme for this priority:

- How can the FSA protect the UK consumer from the health risks posed by food hypersensitivity (including allergies and intolerance)?

Research priority two: assuring food safety and standards

At the heart of our role is the need to protect consumers from food safety risks and ensure high food standards. Core to this is a new [risk analysis process](#) which relies on independent, science-led risk assessment and socio-economic analytical evidence, to support effective risk management decisions.

Our research themes for this priority:

- How can the impact of chemical contaminants (including nanomaterials and microplastics) in food be assessed and minimised?
- How can the FSA better understand and reduce the impact of foodborne pathogens?
- How can the FSA improve the evidence base concerning Antimicrobial Resistance (AMR) and food?
- What is the role of food safety and standards in nutrition and health?

Research priority three: innovation in food regulation

We aim to be a modern and accountable regulator. We must be innovative, be able to develop and take advantage of new approaches to support the work we do. This includes adopting technological advances from areas such as diagnostics (for example next generation sequencing or portable chemical analysers) and digital tools and data analytics. It is also about using advances in social research to aid the co-design of innovation with those deploying new technology to ensure its effective implementation. This includes getting greater insight into the behaviour of consumers and the food businesses that supply them.

Our research themes for this priority:

- What role does consumer and Food Business Operator behaviour and perception play in ensuring food safety and standards?
- How can data and digital innovations be used to create a safer food system?
- How can the FSA remain at the cutting-edge when developing and implementing food regulations?

Research priority four: the future of food systems

The 21st century food system is characterised by its complexity. It is also a global system, where the UK not only imports around half of the food it consumes but is also an exporter of quality food and drink. The emergence of Covid-19 and the subsequent pandemic has put immense strain on the food system and tested its resilience. It highlighted that, in this interconnected and fast-moving world, we need access to the best intelligence and horizon scanning to understand changes in the system, the impact of these and how they create vulnerabilities. Global events, new consumer trends and business practices, can all create new risks and opportunities. In this area, we need research and evidence to understand the potential for disruption in our food system, for example, caused by changes in behavior and practice linked to Covid-19, the introduction of novel foods (such as alternative protein sources or genetically engineered foods) or approaches to help counter the negative impact of food crime.

Our research themes for this priority:

- How can the FSA remain responsive to emerging challenges and opportunities in the UK food system including unprecedented challenges such as those associated with Covid-19?
- What is the impact of novel and non-traditional foods, additives and processes on the UK consumer?
- What is the impact of crime in the UK food supply chain, including food fraud, and how can it be better detected and monitored?

Contact us

To discuss any of the information above on science engagement with the FSA and our ARIs, please contact [the FSA Science Strategy, Research and Capability Unit](#).