**Contaminated food can cause more than 200 diseases – ranging from diarrhoea to cancers. One might assume that most of these diseases occur elsewhere in the world, but we know that foodborne diseases are also a major cause of illness in the EU. Food safety is the science of protecting our food supply from contamination. ILSI Europe is working on a number of key topics in this area, such as allergen, microbiological food safety, (natural) contaminants, packaging, low dose effect and the identification of new tools to assess the safety of foods.**

**LOW DOSE EFFECT**

The Threshold of Concernal Concern (TTC) concept states that, at sufficiently low enough exposure, the associated risk related to consumption of these substances can be calculated. This also avoids over-regulation for substances whose risk from substances when specific toxicological data are lacking.

**CONTAMINANTS**

Consumers are exposed daily to naturally occurring contaminants and process-related compounds, both of which can be toxic. ILSI Europe designs and implements programmes that help understand how these compounds are formed, improves our methods of detection and quantification and assess their safety implications effectively. Scientific knowledge on exposure and mitigation of contaminants in food is advanced so that safer food products can be created.

**MINERAL OIL RISK ASSESSMENT**

There is uncertainty about the exposure to mineral oils, how to measure and characterise, and ultimately what this exposure means in terms of consumer safety. This activity brought together stakeholders across sectors to examine the current approaches used to establish the safety of mineral oils.

**7th Symposium on Food Packaging**

The ILSI Europe International Symposium on Food Packaging is held every four years and aims at providing a snapshot of the current research and practice in the field of food packaging. This symposium will be held in November 2020, supporting the Food Packaging symposium will be held in November 2020, supporting the Food Packaging Symposium on packaging for FCMs Safety. This activity will create scientific understanding of stakeholders on the impact of packaging and FCMs on health, food safety.

**In Vitro Bioassays for FCMs Safety**

Packaging materials often contain substances, such as adhesives and inks, and it is important to understand how they come into contact with food and can further migrate into a food (Food Contact Materials (FCMs)). An urgent need to better understand how to validate the process to reduce migration of unknown migrants from FCMs.

**FOOD ALLERGY**

Up to 20 million Europeans suffer from food allergies and this trend is continuing to rise in both developed and developing countries, especially among children. Minimising the risk from allergenic foods is a shared responsibility of all stakeholders involved (e.g. food manufacturers, retailers, caterers and regulators). ILSI Europe aims to foster international collaborations to address the current challenges relating to food allergies.

**Verifying VITAL® 2.0 Reference Doses: Suitability of Analytical Methods**

Reliable analytical methods are a prudential requirement for the harmonization and adoption of reference doses for allergens. This activity will investigate the suitability of current reference doses for allergens to reliably measure proposed allergen concentrations resulting from the use of VITAL® 2.0.

**Tolerable Risk in Food Allergy**

This activity will define what constitutes tolerable risk in terms of food allergies: reactions attributable to unintended allergen presence (SARI) and decisions on the use of precautionary allergen labelling. This consideration will focus on the incidence of reactions and their characteristics (e.g. severity), but also will include factors such as quality of life considerations and beliefs from other similar marketings of risk.

** Authenticity of Food and Food Ingredients**

ILSI Europe explores the concept and strategies for ensuring the authenticity of food from the point of view of consumers, and the potential risk assessment.

**EU Project EFFORT**

ILSI Europe participated in the EC-funded project EFFORT on Antimicrobial Resistance (AMR) throughout the food chain, compiling the complex epidemiology and ecology of AMR using newly emerging omics analysis and bioinformatics technologies.

**NEW APPROACHES FOR FOOD SAFETY**

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**ERASMUS+ PROGRAME SUITFOOD**

SUITFOOD is a transnational Erasmus+ Programme that brings together European experts in food science, engineering and innovation communication, producing a holistic view of food safety and food quality development and training initiatives for researchers and engineers in the area of sustainable technologies for controlling food safety and stability.

**Food Safety**

A lot of debate has surrounded the use of animal studies for nutrition and food safety, especially regarding identifying when they are mandatory and when they can be replaced by alternative methods. The development of new alternative methods offers new opportunities for food safety, nutrition and food quality, ensuring consumer safety.

**Microbiological Food Safety**

Foodborne diseases are a common, costly, yet preventable – public health programmes worldwide all the measures implemented to reduce food safety, food-borne illnesses continue to pose serious health threats worldwide. Every year food-borne diseases cause almost one in every ten people to fall ill and children account for nearly one-third of deaths from food-borne diseases.

**Control Options for Viruses in Food Processing**

Pathogens are frequently and probably, the most under-recognised cause of food-borne disease outbreaks. There is a lack of information on how to control these viruses as they could also contaminate food during food production and processing. ILSI Europe aims to currently reviewing and summarising the current knowledge on different food processing.

**Process Validation Protocols**

In food production and processing, which could guide manufacturers in the validation of their processes, which are considered, when undertaking a validation task is to ensure that the food industry to perform validation with best practices. Duties and responsibilities presented in this article help to guide people with general guidelines suggested by others to be offered to the industry to understand how to validate the microbiological hazards associated with the products and processes to acceptable levels.

**VERIFIED VITAL® 2.0 REFERENCE DOSES: SUITABILITY OF ANALYTICAL METHODS**

Toxicological analysis is a prudential requirement for the harmonization and adoption of reference doses for allergens. This activity will investigate the suitability of current reference doses for allergens to reliably measure proposed allergen concentrations resulting from the use of VITAL® 2.0.

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**EUROPEAN LIFE SCIENCE INSTITUTE**

ILSI Europe Scientific Portfolio

**FOOD SAFETY**

**Carcinogen Dose-Response Database for TTC**

The CEFIC LRI-B18 project has advanced the state-of-the-art in cancer potency assessment. The project has extended existing datasets through data harvesting and analyses, the output of which has been published in the database.

**Certainty in TTC**

This activity will create scientific knowledge and improve the understanding of stakeholders on the risk assessment methods used in the context of the current TTC database (COSMOS TTC database). The current database aims to provide a significant step forward in risk assessment and help mitigation prioritization. The activity assessed and proposed biomarkers of dietary exposure to contaminants.

**MICRONUTRIENT-BASED INTERACTIONS**

This activity will characterise, and ultimately what this exposure means in terms of consumer safety. This activity brought together stakeholders across sectors to examine the current approaches used to establish the safety of mineral oils.

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