Results of the EU funded SAFFI project were presented and discussed last May at the European meeting of the International Association for Food Protection (IAFP), in Aberdeen Scotland.

Major in progress achievements were discussed.

SAFFI
Safe Food for Infants in the EU and China

SAFFI Newsletter n.10

June, 2023

IAFP'S EUROPEAN SYMPOSIUM ON FOOD SAFETY
ABERDEEN SCOTLAND 3–5 MAY 2023

News on the SYMPOSIUM:

Food Safety of Infant Foods: Care for Our Most Precious (Organized by Prof. Marcel Zwietering of Wageningen University, NL)

Three seminal informative talks on Hazard Identification, Hazard Control and Hazard Detection were presented by investigators of the Horizon 2020 funded SAFFI (Safe Food For Infants) project at the European symposium on food safety held in Aberdeen, Scotland, in May 2023:

1. **Hazard Identification and Risk Ranking for Microbial Risks in Infant Foods (Kah Yen Claire Yeak, Wageningen University, NL)**
2. **Hazard Control in Infant Foods Using Emerging Processes Technologies (Sara Bover-Cid, IRTA, Spain)**
3. **Traditional and DNA-Based Analytics for Microbial Hazard Detection and Behaviour in Infant Foods (Kalliopi Rantsiou, University of Turin, Italy)**

"*Infants are more vulnerable to foodborne diseases. To ensure food safety, in general but even more so for infant foods, it is relevant to identify and rank hazards, to control the risk by properly validated interventions and to test for the hazards in the food and food processing environment for verification*". This say prof. Kalliopi Rantsiou, full professor of Microbiology at the University of Turin in Italy. Professor Rantsiou, speaker at the international meeting on food safety held in Aberdeen, Scotland in May 2023, was interviewed by the editors of this newsletter on the importance of properly monitoring the presence of hazards in the commercial chain of food produced and offered to infants.

Professor Rantiou is one of the research leaders in the Horizon 2020 funded Safe Food For Infants project (SAFFI), developed by a Chinese-European Consortium of 20 international research centers, which aim is developing an integrated approach to enhance the identification, assessment, detection and mitigation of safety risks raised by microbial and chemical hazards all along EU and China infant food chains. Among the speakers at the meeting in Aberdeen, organized by professor Marcel Zwietering of the Wageningen University of the Netherlands, there were other members of the SAFFI consortium, including dr. Kah Yen Claire Yeak of Wageningen University, and dr. Sara Bover-Cid, researcher at the Institute of Agrifood Research and Technology in Girona, Spain. Participants in this symposium discussed the key aspects that are required for infant food safety: identification, ranking and control and monitoring of potential hazards. Most importantly the work carried out in the framework of the SAFFI project and the progresses achieved were also presented at the meeting.

European Commission | Horizon 2020 European Union funding for Research & Innovation

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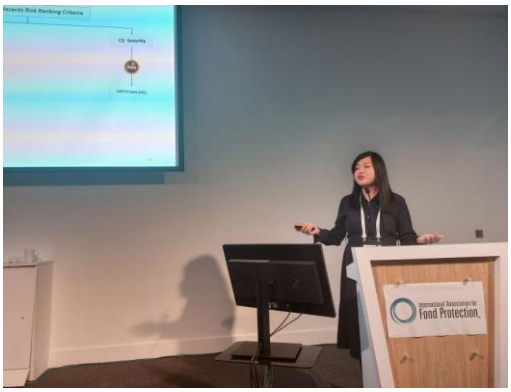
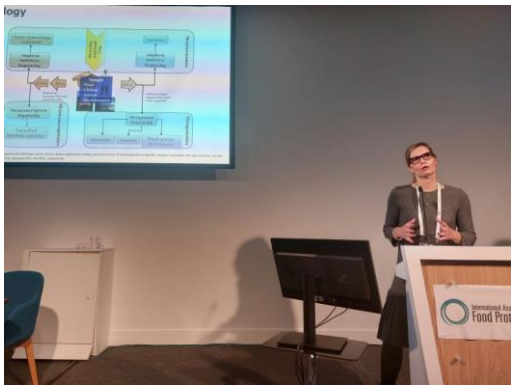
In fact, the important methodological approach adopted by the SAFFI research groups was described and discussed during the session dedicated to food safety. Variety of databases on hazards, foods, outbreaks, and epidemiological data were used to develop a decision support system for hazard identification and risk ranking. Moreover, SAFFI's researchers have assessed the impact of emerging processing and preservation technologies on the behavior of prioritized pathogens in infant food. Very interesting was the case-study dealing with high pressure processing of fruit purees and the decision support system prototype developed for setting the conditions of this non-thermal technology to control hazards. Finally, traditional and molecular detection techniques applied to ingredients, environmental and end products.

Professor Rantsiou further emphasizes how the work performed by the SAFFI researchers supplies crucial information to develop efficient monitoring and sampling strategies at operational (infant food companies) and governmental (food safety agencies) level, designing or evaluating Hazard Analysis and Critical Control Point (HACCP) programs, performing quantitative risk assessments. An example that well describes the importance of these findings is their use in assisting auditing activities and therefore their relevance for food industry, governments, and academia in ensuring the safety of infant food.

During the session dedicated to food safety of infant food at the meeting in Aberdeen, the three speakers extensively presented and discussed the SAFFI project, which is one of the 3 projects selected within the framework of the European Horizon 2020 call for projects SFS-37-2019 "*Integrated approaches for food safety along the food chain*" concerning research and innovation actions. Dr.Bover-Cid, Dr. Yeak and professor Rantsiou illustrated how SAFFI researchers are proceeding to develop procedures that will enable discovering unexpected contaminants by predictive microbiology and improve risk-based food safety management of biohazards by omics and predictive microbiology. To this regard the SAFFI consortium will develop and deliver to stakeholders a decision-support system (DSS) to enhance safety control all along the food chain. The importance of such DSS will be its ability to integrate the existing databases, procedures and methods and offer a useful framework for a generic DSS dedicated to other food.

From left to right. The SAFFI team attending the meeting in Aberdeen is pictured in the first image. Dr. Kah Yen Claire Yeak of the Wageningen University in the second picture and Professor Kalliopi Rantsiou, from the University of Turin in the third picture.

The meeting in Aberdeen signed a step forward to further improve the existing EU efficient control and monitoring systems of infant food safety. Resulting databases, tools and procedures will be shared, cross-validated, concatenated, benchmarked, and finally harmonized for further use in the EU and China. SAFFI will also set up training and knowledge transfer activities to foster EU-China harmonization of good practices, regulations, standards, and technologies, and will cluster with other projects under the EU-China initiative for continuous upgrade of food safety control.

As a final comment, the Editors of this Newsletters would like to raise attention on the importance of quality and safety aspects of infant nutrition, which are of key importance for child health, but oftentimes they do not get much attention. For instance, health care professionals, who are the prescribers, tend to focus mainly on functional benefits of early nutrition. Unbalanced diets and harmful food components induce particularly high risks for untoward effects in infants because of their rapid growth, high nutrient needs, and their typical dependence on only one or few foods during the first months of life. The concepts, standards and practices that relate to infant food safety have been well discussed by the SAFFI researchers at a scientific workshop in Aberdeen. The participants discussed past and current issues on safety, the role of different stakeholders, and recommendations to avert future issues. The important conclusions emphasized that a high level of quality and safety is currently achieved, but this is no reason for complacency. Global collaboration of food producers, food-safety authorities, pediatricians and scientists is needed to efficiently exchange information and to further protect public health. The EU Horizon 2020 SAFFI project moves in this direction with its effort to develop an effective and efficient decision support systems able to further enhance safety controls along the infant food chain.

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SAFFI: THE SINO-EUROPEAN CONSORTIUM PARTNER CENTERS

Coordination: French National Research Institute for Agriculture, Food and Environment (INRAE),

- Five international infant food companies (Friesland Campina, HiPP, YIOTIS, Beingmate, YFFC)
- Two food safety authority institutions (ZAIQ and ANSES)
- Three European technological SMEs (CremeGlobal, Computomics, BDS)
- The Union of 49 National European Societies of Pediatric (EPA-UNEPSA)
- Seven leading European and Chinese academic institutions (WU, UNITO, IRTA, IVV; ZJU, ZAAS, JAAS)

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