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Faculty of Technology University of Novi Sad, Novi Sad Serbia

# Reinforcing research potential in the Laboratory for Chemical Contaminants at the Faculty of Technology towards the establishment of the Center of Excellence in Food Safety and Emerging Risks

**Food safety** is currently one of the most important challenges confronting consumer, producers, and distributors. It is also an issue that is in the centre of interest of scientists and experts because it has great health, economic, and legal consequences. Frequent dramatic food emergencies occurred in Europe focus the attention on food safety in order to manage the risks for human health that could occur in any point of the food chain. Increased environmental pollution, rapid expansion in international trade of food and in tourism sector have resulted in increased risk of higher intake of food chemical contaminants through diet and detrimental health effects. Furthermore, the issue of **emerging pollutants** has risen to the forefront of the food safety area within the past decade. Emerging contaminants are previously unknown or unrecognized pollutants. Most of them have been present in the environment for a long time, but their significance and presence are only now being elucidated and, therefore, here is a need for reliable data on their occurrence in food in order to perform a valid quantitative risk assessment of human exposure. Food safety is a global challenge, too large to be met by countries acting alone.

### **The Project**

CEFSER is the FP7 project dedicated to the reinforcement of research capacities at the Laboratory for Chemical Contaminants in Food and the Environment (LabCHEMCONT) at the Faculty of Technology, University of Novi Sad, Serbia, in order to become a unique Western Balkan Country (WBC) Centre of Excellence in Food Safety and Emerging Risks. Through postulated general objectives such as capital investments in a highly sophisticated analytical upgrading of the existing instrument, equipment, reinforcement of the human resources (hiring, mobility, etc), and networking with advanced EU institutions, CEFSER integrates LabCHEMCONT and the Faculty of Technology within the European Research Area, contributing to general harmonization of R&D within the food safety and emerging risks research.

The EC reviewers evaluated the CEFSER proposal with the highest score, 15/15.

### Resources

The LabCHEMCONT is established at the Faculty of Technology in the last two decades, and the achievements of its staff are internationally well recognized for expertise on detecting chemical contaminants in the food and environment. The LabCHEMCONT team has a very strong background in chemical contaminants analysis and risk assessment regarding POPs and heavy elements. The laboratory possesses atomic absorption spectrometer with a graphite tube (GTAAS), gas chromatograph equipped with flame-ionization detector (GC/FID), GC with mass spectrometry detector (GC/MS) and liquid chromatograph with UV and diode array detector (HPLC/UV-DAD). Through CEFSER, the lab equipment is substantially reinforced primarily with installation of the highly sophisticated ultraperformance liquid chromatograph with triple quadrupole mass spectrometer (UPLC-MS/MS). In this way, LabCHEMCONT is fully equipped for the analysis of known and emerging contaminants in food and the environment, representing a modern analytical centre and an attractive partner for the joint research.







CEFSER is strongly linked with excellent research centers such as:

✓ CHIRON AS from Norway,

✓ Institute for Environmental Studies (IVM) at Vrije University (VU) from the Netherlands,

 $\checkmark$  the Spanish Instituto de Investigaciones Quimicas y Ambientales from Barcelona (IIQAB-CSIC), and

✓ Institute of Chemical Technology (ICT) from Prague, Czech Republic.

# **CEFSER in the FOOD CLUSTER**

From the very begging of the project lifetime, CEFSER is a member of the FOOD CLUSTER initiative of EC designed to establish European clusters of coordination in order to enhance regional research capacity building and regional economic development with significant impact at local level. Moving towards this increased European coverage by creating a European Food Cluster involves joining EU "hotspots" as regional food clusters, learning each other's strengths and weaknesses, defining regional strategies, investing in the strengths through integral use of national and regional funding (FP7/CIP/SF, etc) as a basis for establishing EU consortia founded on regional strengths in Food science - in fact using a European Food Cluster to building the ERA in Food.

CEFSER will contribute to the FOOD CLUSTER initiative by incorporating the gained knowledge on food safety and emerging pollutants, the food safety state-of-the-art in the WBC region, and by regional strengthening of food science and industry.



#### Contact

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# The Project Impact

• improvement of the potentials of the Faculty of Technology to participate in FP7 projects

•better integration of the Faculty of Technology in ERA

•contribution to the WBC regional capacity building

One of the main challenge in front of CEFSER is to effectively distribute gained information and knowledge on the recent findings and advances in the food safety to a variety of targeted audiences in the whole Balkan area and EU as well. A special attention is given to the involvement of different audiences and stakeholders' representatives in the events that will be organized by the CEFSER, for a better understanding of the project outcomes and potential benefits. For more information about the CEFSER events please check the official site.

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