



Multidisciplinary approach to strengthen cooperation and establish novel platform for comprehensive assessment of food and feed safety

Issue no. 2 – January 2018



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Welcome to the second edition of the MultiCoop Newsletter.

MultiCoop is a European three-year “Twinning” project that has been built to implement activities in a multidisciplinary approach for a comprehensive assessment of food and feed safety, that will help in enhancing a research potential of both of staff involved and particularly institution from a widening country.

The MultiCoop consortium consisting of 3 partners from 3 countries has considerable complementary expertise in various aspects of a food and feed safety assessment enabling strengthening cooperation and establishing a novel platform for common research activities.

The aim of this newsletter is to provide you with a brief summary of the project and update you on some of the progress and project activities. We hope you find the newsletter useful.

Please contact us at multicoop@vscht.cz with any suggestions for improvement.

On behalf of MultiCoop project partners, coordination team VSCHT, Prague, Czech Republic

MultiCoop IN A NUTSHELL:

Key facts:

Horizon 2020 Project

Type of action:
CSA, TWINNING

Acronym:

MultiCoop

Duration:

36 months

January 2016 – December
2018

Co-ordinator:

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Website:

www.multicoop.eu

MultiCoop is aimed at promoting new opportunities for participating partners ([University of Chemistry and Technology, Prague, Czech Republic](#) (VSCHT); [Queen's University Belfast, UK](#) (QUB); and [University of Natural Resources and Life Sciences, Vienna, Austria](#) (BOKU / IFA-Tulln) by a development of levels of excellence and expertise of all three institutions in the field of a comprehensive food and feed safety assessment. A major focus will be in enhancing the range of competences of VSCHT.

The main interests for a substantial knowledge transfer are innovation in the field of analytical chemistry incorporating a holistic analytical approach for analytical methods for targeted analysis of contaminants and health beneficial compounds, analytical approaches for non-targeted screening and metabolomic fingerprinting/profiling, and methods for identification of important metabolomic markers. Furthermore, interests in fit-for-purpose methods for the assessment of currently unknown risks resulting from the presence of mixtures of chemical contaminants in food and feed and novel approaches used in bioprospecting, a new tool for uncovering important natural resources for improving health, are included.

Our strategy is the delivery of knowledge transfer from partners with the greatest experience and expertise in a particular field to those whose needs are the greatest. A substantial benefit for this effective knowledge transfer is that a partial overlap of partners' competencies exists, which will allow for a smooth implementation of the knowledge gained by the particular partner institution.

PROJECT ACTIVITIES:



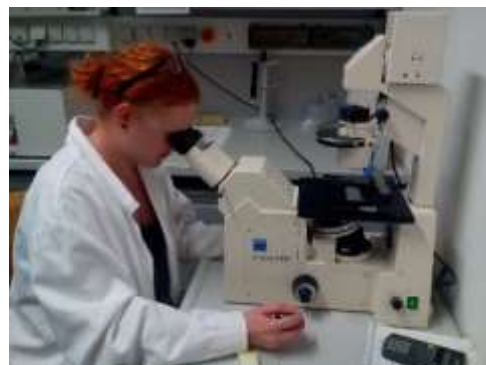
NEWS from the Training activities:

Training and exchange activities are one of key pillars of a knowledge transfer among the project partners. Most of the trainings have been organized according to the plan developed at the beginning of the project. Some training exchanges were scheduled additionally based on the research needs of partners in order to maximize the gain in different fields of expertise.

In 2017, **training activities** continued and were focused on:

- Application of Rapid evaporative ionisation mass spectrometry (REIMS) in food analysis
- Toxicity testing of food borne contaminants
- Plant metabolomics
- Scientific writing

Gaining new knowledge or deepening knowledge in respective field of expertise, improving skills, strengthening ability for planning of experimental design of running projects were the major achievements of these trainings, resulting also in the professional development of all trainees both in science & technology activities and soft skills.



Training on Toxicity testing of food borne contaminants (Vienna, June 2017)

Workshop on “Food Integrity: Defining and Understanding the Challenges”

One of the elements of the training program are integration workshops aimed at training of participants in a specific scientific knowledge and enabling dialogue on common research activities. **Queen’s University Belfast**, in partnership with *safefood*, will be hosting on **13-14 February 2018** a post-graduate workshop “Food Integrity: Defining and Understanding the Challenges” examining the issues surrounding the integrity of our food.

Several leading academics from partner organisations within the MultiCoop consortium will share their knowledge on food safety, food authenticity and food fraud and discuss how collaboration between academia, industry and regulators is vital to protect the integrity of our food. A number of post-graduate students from QUB, VSCHT and BOKU will present their research and discuss its relevance to food integrity and the challenges involved.

The workshop is designed to urge post-graduate students to think about the principles surrounding food integrity and to define the major challenges and research questions that need to be answered. To facilitate a large group dialogue, this will be operated in a world café style where a number of tables will be 'anchored' by a 'principle champion' and the students will rotate around all the tables to have an input. The 'principle champions' will present the conclusions prompting further questions/discussions.



NEWS from the Dissemination activities:

From the last edition of the MultiCoop e-newsletter in March 2017, all project partners were very active in dissemination of outcomes of project cooperation at various international events (13), in the form of plenary lectures or oral presentations (16) or posters (26). In addition, MultiCoop supported [Mycotoxin Summer Talks](#) organised by BOKU in July 2017.



MultiCoop dissemination workshop: Novel platform for multidisciplinary assessment of food and feed safety at the 8th International Symposium on Recent Advances in Food Analysis ([RAFA 2017](#)) – **A BIG SUCCESS!**

First MultiCoop dissemination workshop has been organised as a satellite event of leading conference on advances in food analysis [RAFA 2017](#), on 7 November 2017, in Prague, Czech Republic. Workshop has received excellent attention and was very well attended by nearly 150 participants from more than 30 countries worldwide. Program offered series of lectures given by both the experts and young scientists from partner organisations and focused on various aspects of toxic and bioactive compounds analysis in food and food authentication.

New MultiCoop common paper published:

Malachova A., Stranska M., Vaclavikova M., Elliott C.T., Black C., Meneely J., Hajslova J., Ezekiel C.N., Schuhmacher R., Krska R.: [Advanced LC-MS based method to study the co-occurrence and metabolization of multiple mycotoxins in cereals and cereal-based food](#). Analytical and Bioanalytical Chemistry (2017), Special Issue to the 16th ABC anniversary, 1-25.



NEWS from the activities on Strengthening cooperation and scientific strategy:

To strengthen cooperation amongst the project partners and formulate a scientific strategy for further common research activities, and in particular increase the research and innovation potential of the partner from the widening country, all project partners have worked closely together to identify possible areas of future research based on the expertise within the consortium and by identifying gaps in research related to food and feed safety, quality and integrity. In addition, through their contacts, the consortium has investigated what networking opportunities exist to institute collaboration with industry, SMEs and national and international projects.

NEWS from Common research projects undertaken by members of the MultiCoop consortium:

- **EU-China-Safe project (Delivering an Effective, Resilient and Sustainable EU-China Food Safety Partnership)** funded by HORIZON 2020



Press release on the project can be found [here](#).

The EU-China-Safe kick-off meeting was held on 27-29 September 2017 in Dublin, Ireland, with a total number of 69 participants from Europe and China attending. The project coordinated by QUB is a partnership between the 2 continents (2 major trading blocks) to facilitate trade. It consists of 33 partners; 16 European partners and 17 Chinese partners from academia and industry and the objectives of the project are:

- To enhance food safety
- To deliver mutual recognition of data and standards
- To promote economic growth
- To deter food fraud
- To support the flow of agri-food trade
- To restore consumer trust

Over a four year period, these objectives will be delivered through a number of workpackages such as data management, food traceability systems, food authenticity (detecting fraud), chemical and microbiological food safety, consumer confidence building and dissemination and training.

Our Chinese partners will also be hosting an EU-China-Safe kick off meeting on 18th April 2018 in Beijing, China. This is to coincide with the 2018 International Forum on Food Safety, 19-20 April, Friendship Hotel, Beijing hosted by the [Chinese Institute of Food Science and Technology](#).



- **Project “Faces of changing climate in Danube region: occurrence of mycotoxins in maize and suggesting the mitigation strategies” (Mycoclime)** funded by [Danube-INCO.NET](#)

The received funding allowed especially the exchange of the staff among the partners. In 2017, the set of maize samples collected in Serbia was analysed with an LC-MS/MS method for multiple mycotoxin determination at IFA-Tulln in Austria. Metabolomic fingerprinting was performed at VSCHT, Czech Republic.

Evaluation of obtained data and its correlation with the meteorological data acquired during growing is planned for 2018. For this purpose, some more exchange visits will be organized.

- **FoodSmartphone project (Smartphone analyzers for on-site testing of food quality and safety)** funded by HORIZON 2020



The project is coordinated by RIKILT Wageningen UR, the Netherlands, with substantial contribution of QUB and VSCHT. FoodSmartphone proposes the development of smartphone-based (bio)analytical sensing and diagnostics tools for simplified on-site rapid pre-screening of food quality and safety parameters and wireless data transfer to servers of relevant stakeholders.

All 11 early stage researchers (ESRs) have been recruited and are making progress in the lab. Several of them presented their early results during the Open Days events in a ‘smart lab’ at the Recent Advances in Food Analysis ([RAFA 2017](#)) conference in November 2017. The FoodSmartphone concept was presented by the project coordinator in an oral session devoted to Smart portable and personalized food analysis systems. ESRs presented their first results and concepts through short videos and/or PowerPoint presentations which are available on the project website [here](#).

New project applications:

In 2017, MultiCoop partner organisations were also very active in a preparation of joint project applications, all project partners submitted 2 applications within the Marie Skłodowska-Curie Actions, Innovative Training Networks (ITN), on (i) The doctoral training programme for innovative and integrated control and reduction of biotoxins in the food and feed chain (BioToxDoc), and (ii) Fighting Food Fraud with Analytical Techniques – Training Network for innovative early stage researchers (FATE), both coordinated by BOKU. In addition, VSCHT and BOKU have applied within the CORNET (Collective Research Networking) for funding for application on “Volumetric preservation technologies for food quality improvement by retention of sensitive and mitigation of neoformed compounds (volTECH)”.

VSCHT alone has also received the financial support for several other projects related to MultiCoop activities and aimed at international collaboration on (i) Implementation of advanced analytical technologies for microalgae bioprospecting, linked to COST action [EUALGAE](#), (ii) New "masked" fusarium mycotoxins in malt and beer, elucidation of their origin and designing

mitigation strategies and (iii) Biomarkers of exposure to selected pollutants, assessment of health risks in the children population, all funded by The Czech Ministry of Education, Youth and Sports.

Promoting gender equality and addressing the unequal representation of women in science



A key task in the MultiCoop project is also the promotion of gender equality and addressing the unequal representation of women in science. QUB have a dedicated Gender Initiative programme with advisors from both within and outside of the university. To promote equality of opportunity in all its functions, QUB seeks to identify specific gender issues and address them, maintain mechanisms for monitoring, evaluation and review, organize seminars and networking opportunities, promote opportunities for engagement with training/mentoring programmes, co-ordinate benchmarking activities and award submissions, develop and maintain a website presence, raise awareness and publicity within the university and outside, work with other UK universities to share good practice and link with European networks to develop collaborative projects.

Contact was initiated between colleagues at QUB and VSCHT to enable the transfer of knowledge and advice from QUB to VSCHT regarding gender equality initiatives. The School of Biological Sciences, QUB, holds the Athena SWAN Gold Award in recognition of its outstanding progress in promoting gender equality and addressing the unequal representation of women in science. Professor Karen McCloskey, Queen's Gender Initiative Steering Group, was invited to attend a seminar for representatives of the senior management of ICT Prague, organized by collaborators of the international projects [TRIGGER \(FP7\)](#) and [MultiCoop \(H2020\)](#) on 19th May 2017. Professor McCloskey discussed the representation of women in senior academic posts and how this issue is being addressed at QUB.

Contact us:

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Dates for diary & Networking activities:

QUB Food Integrity Workshop in partnership with safefood

13-14 February 2018, Belfast, UK

[FoodFraud: A Global Insight](#)

1 March 2018, London, UK

[The World Mycotoxin Forum 10th conference](#)

12-14 March 2018, Amsterdam, The Netherlands

[2018 International Forum on Food Safety](#)

19 – 20 April 2018, Beijing, China

[14th Annual North American Summit on Food Safety](#)

17-18 April 2018, Toronto, Canada

[12th European Pesticide Residue Workshop](#)

22-25 May 2018, Munich, Germany

[ASSET 2018, Belfast Summit on Global Food Integrity](#)

29-31 May, Belfast, Northern Ireland, UK

[Metabolomics 2018](#)

25-28 June 2018, Seattle, USA

[55th North American Chemical Residue Workshop](#)

22-25 July 2018, Naples, Florida

[22nd International Mass Spectrometry Conference \(IMSC 2018\)](#)

26-31 August 2018, Florence, Italy

[AOAC Meeting and Exposition](#)

26-29 August 2018, Toronto, Canada

[38th International Symposium on Halogenated Persistent Organic Pollutants Dioxin 2018 & 10th International PCB Workshop](#)

26-31 August 2018, Kraków, Poland

[Innovations in Food Analysis](#)

19-21 September 2018, Munich, Germany

[32nd International Symposium on Chromatography \(ISC 2018\)](#)

23-27 September 2018, Cannes - Mandelieu, France

[China International Food Safety & Quality Conference](#)

7-8 November 2018, Shanghai, China

We hope you have found this e-Newsletter interesting and informative. We would welcome your views on any of the issues covered. Please contact us at multicoop@vscht.cz with any suggestions for improvement.

Please feel free to distribute this MultiCoop e-Newsletter to other interested parties.

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