e-Newsletter:



Multidisciplinary approach to strengthen cooperation and establish novel platform

for comprehensive assessment of food and feed safety

Issue no. 1 - March 2017





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www.multicoop.eu

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Welcome to the first edition of the MultiCoop Newsletter.

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

The MultiCoop consortium consisting of 3 partners from 3 countries has considerable complementary expertise in various aspects of 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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www.multicoop.eu

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

The main interests for substantial knowledge transfer are innovation in the field of analytical chemistry incorporating 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 assessment of currently unknown risks resulting from 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.

MultiCoop will:

- (i) Establish close links between project partners through organization a series of training and mobility initiatives:
- (ii) Disseminate and communicate project outcomes achieved by raising scientific capacity and through publication of joint scientific papers;
- (iii) Identify new and important research topics which will result in further development of new collaborations through preparation of joint projects proposals;
- (iv) Enhance profiles and competences of participating researchers.

PROJECT ACTIVITIES:



Training activities:

To strengthen the competences in scientific activities of the project partners, the training and exchange program was developed at the beginning of the project and is continuously updated according to the research needs of each partner to reach a maximal gain in an expertise improvement. Numerous trainings have already been delivered according to the plan, focused e.g. on:

- Marine bioprospecting and bioactive compounds for health
- The use of ion mobility for separation of mycotoxins
- Pesticide analysis
- Rapid evaporative ionisation mass spectrometry (REIMS)
- Application of metabolomics in food / feed analysis
- Plant metabolomics

Acquirement of new knowledge and enhancement of attendees' competence(s) in the specific research area will lead to improving the competition of the trainees on the job market in both research and business areas and will help the participants to realize their own research ideas in the future.



Mycotoxin Summer Academy (BOKU, Tulln, Austria) has been also organised, supported by the MultiCoop project.

Emphasis was given also to females' participation in the training activities, which was equal to male.

These knowledge transfers/training, involving the young scientist mobility program, with the aim both to help in capacity building of young researchers and assist in the transfer of knowledge within the project consortium, will enhance competences of all project partners in science & technology activities.



Training course on Plant metabolomics



Training on Rapid evaporative ionisation mass spectrometry (REIMS)

Dissemination activities:

To ensure the project results have the largest impact and sustainability on the target communities, the MultiCoop Dissemination and Communication Strategy has been developed. This plan can be considered as a guideline for the efficient implementation of dissemination and communication activities, sustainability and contributes to the overall aims of the project.



All project partners cooperated closely to achieve this plan and contributed significantly to dissemination and communication activities via presentations at a range of international and national events and publications of papers in peer-reviewed journals. In addition, the project website www.multicoop.eu has been created, dissemination materials have been produced.

First results of the MultiCoop activities published:

- Stranska-Zachariasova M., Kastanek P., Dzuman Z., Rubert J., Godula M., Hajslova J.: <u>Bioprospecting of microalgae: Proper extraction followed by high performance liquid chromatographic—high resolution mass spectrometric fingerprinting as key tools for successful metabolom characterization.</u> Journal of Chromatography B-Analytical Technologies in the Biomedical and Life Sciences (2016) 1015–1016: 22–33.
- Stranska-Zachariasova M., Kurniatanty I, Gbelcova H., Jiru M., Rubert J., Nindhia T.G.T., D'Acunto C.W., Sumarsono S.H., Tan M.I., Hajslova J., Ruml T.: <u>Bioprospecting of Turbinaria macroalgae as a potential source of health protective compounds</u>. Chemistry & Biodiversity (2017), 14 (2): e1600192.
- Berthiller F., Brera C., Iha M.H., Krska R., Lattanzio V.M.T., MacDonald S., Malone R.J., Maragos C., Solfrizzo M., Stranska-Zachariasova M., Stroka J., Tittlemier S.A.: <u>Developments in mycotoxin analysis: an update for 2015-2016</u>, <u>Review Article</u>. World Mycotoxin Journal (2017) 10 (1): 5-29.

Project consortium is progressing well and all these activities enabled excellent visibility of the MultiCoop project even in its early stage.



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 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.

Common research projects undertaken by members of the MultiCoop consortium:

Knowledge and Innovation Community (KIC) on Food

Queen's University's Institute for Global Food Security will play a key role in EIT Food, a new leading partnership which will tackle the global challenge of feeding the world's growing population, as well as enabling the partners to access up to €400 million in funding. The Institute has secured the partnership through the European Institute of Innovation and Technology (EIT). This has led to the formation of a new Knowledge and Innovation Community, EIT Food, a large scale public-private innovation partnership of 50 leading companies, universities, and scientific partners, covering the entire food value chain.



The Institute will be a key participant in the <u>FoodConnects</u> consortium and will deal with major food issues affecting the world, including cutting back on food waste and coming up with healthier options for society. VSCHT is an associate partner.

 <u>EU-China-Safe</u> project (Delivering an Effective, Resilient and Sustainable EU-China Food Safety Partnership) funded by HORIZON 2020 that will commence in September 2017.



The project will be coordinated by QUB and includes partners from many other universities including VSCHT, industry, small to medium enterprises and non-profit research organisations in Europe and China. The project aims to develop and implement a shared vision of best practice within the EU and China that will enhance food safety, deter food fraud, restore consumer trust, deliver mutual recognition of data and standards and support the flow of agri-food trade between the two trading blocks to promote economic growth.

 Project "Faces of changing climate in Danube region: occurrence of mycotoxins in maize and suggesting the mitigation strategies" (MycoClime) funded by <u>Danube-INCO.NET</u> has commenced in January 2017.



VSCHT and BOKU, institutes originating from countries along the Danube river that only can apply for funding, will work closely on research activities aimed at targeted LC-MS/MS and metabolomics to be used to assess mycotoxins contamination in the Danube region.



 <u>FoodSmartphone</u> project (Smartphone analyzers for on-site testing of food quality and safety) funded by HORIZON 2020 has commenced in January 2017.

The project is coordinated by RIKILT Wageningen UR, the Netherlands, with substantial contribution of QUB (leader of WPs on Data handling and Software tools and Network-wide Training) and VSCHT (leader of WPs on Demonstration of FoodSmartphone Applicability and Benchmarking and Communication, Social Media and Dissemination). 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.

Contact us:

Do you wish to receive information about MultiCoop (activities, newsletters, organised events...)?

Do you wish to cooperate with us?

Please Contact us <u>here</u> or Sign up for our newsletter <u>here</u>.



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Dates for diary:



Mycotoxin Summer Academy

4-15 July 2017, BOKU, Tulln, Austria

Mycotoxin Summer Talks

8 July 2017, BOKU, Tulln, Austria

8th International Symposium on Recent Advances in Food Analysis (RAFA 2017)

7-10 November 2017, Prague, Czech Republic

Belfast Summit on Global Food Integrity (ASSET 2018)

29-31 May 2018, Belfast, Northern Ireland, UK

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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