Welcome to the Seventh FoodIntegrity and penultimate Newsletter. As this project comes to its final few months, the outcomes and legacy of this 5-year 60 partner project have established a solid basis for providing assurance to consumers and other stakeholders about the safety, authenticity and quality of our food.

The final conference, taking place in Nantes on 14-15 November will showcase the latest research and state of the art solutions for tackling food fraud. This multidisciplinary conference comprises 15 sessions with over 60 speakers on a range of topics including: non-targeted analysis, the impact of trade wars, debates on who is the real victim of food fraud, the latest hand held devices for authentication, sessions on future research priorities. Something for everyone.

One of the acknowledged successes of FoodIntegrity has been its ability to act as a global forum to meet and discuss food integrity issues. In addition to the international audience that will attend Nantes, the project has travelled the globe contributing to key conferences in the Americas, Africa, China and Singapore. We hope to have news soon on how we can continue to spread the FoodIntegrity message in the future.

Finally, special thanks to our advisory board, who will be meeting for the last time in Nantes, for their contributions the last 5 years of the project.

And don’t forget, there are many ways by which you can still get involved with the project and keep up to date with news, events and activities. Don’t hesitate to visit our web site at www.FoodIntegrity.eu or sign up as an expert or stakeholder in the FoodIntegrity Network. Please contact us (foodintegrity@fera.co.uk) with any suggestions for improvement.

**FoodIntegrity Around the World:**

**Belfast, Northern Ireland**

*Chris Elliott, Chair of the ASSET organising committee, Queen’s University Belfast*

The inaugural Belfast Summit on Global Food Integrity took place on 28-31 May at the Waterfront Hall and attracted over 600 delegates from 47 countries over four days. The Summit was a great success, with a lively line-up of plenary and keynote speakers, workshops, EU project meetings, (including two scientific session of FoodIntegrity), entertainment from Television scientist Marty Jopson and a range of spinoff events. Speakers from the United Nations, Pepsico, World Wildlife Fund and leading research centres throughout the world gave us thought-provoking insights: such as like how AMR is likely to be a bigger public-health threat than cancer by 2050; that 96% of all mammals left in the world are farmed animals with the remaining 4% of wildlife squeezed into smaller and smaller areas of forest, and how it’s all connected. Biodiversity (or lack of), climate change, geopolitics, pollution, terrorism, Brexit, agriculture, all have a direct impact on our global food supply system.
A central message to come out of the Summit is that there’s still time to turn things around with some creativity, focus and action, but the action is needed now. To that end, the next step is to funnel the outcomes of the Summit into clear recommendations and then feed these back into the regulatory organisations which participated in the Summit so policy can be influenced at the highest levels.

**FoodIntegrity Around the World:**

**Pretoria, South Africa**

*Simon Kelly, Joint FAO/IAEA Division of Nuclear Applications in Food and Agriculture - WP Leader FoodIntegrity Network*

The National Metrology Institute of South Africa along with their partners, hosted the Africa Food Safety Workshop in Pretoria, South Africa from 4-8 June 2018. The workshop aimed to contribute to the improvement of food safety control systems in Africa by combining talks on topics including food safety and authenticity, mycotoxins, veterinary drug and pesticide residues and food microbiology. The workshop attracted 238 delegates from 54 countries, from Africa, Asia, Canada, Europe, Latin America and United States of America.

The Food Integrity Session covered:

- the Industrial Perspective on effective available solutions to detect food fraud.
- The authenticity and safety of spirit drinks.
- Food Fraud Early Warning Systems.
- Stable isotope methods in food authenticity and traceability.
- Situation analysis of food fraud, food crime and economically motivated adulteration of food in Uganda.
- Authenticity and safety in the fruit juice industry through industrial self-control.
- Multi-spectrum method for the determination of food authenticity in China

Session Wrap up and discussions were facilitated by Paul Brereton.
FoodIntegrity Around the World: Edinburgh, Scotland

**Edinburgh, Scotland**

*Ian Goodall, SWRI – WP Leader Spirit Drinks*

In June 2018, the Scotch Whisky Research Institute (SWRI) ran a FoodIntegrity Spirit Drinks Authenticity Workshop to help shape the future direction of anti-counterfeiting and authenticity research for the sector. The FoodIntegrity project has advanced the sector’s ability to detect counterfeit products. This has come not only through improvements in technology and analytical capability, but also by building networks of spirit drinks producers, analysts, technology providers, regulators and enforcement agencies. The purpose of this workshop was to bring together these stakeholders to discuss and influence the future direction of SWRI and EU research on spirit drinks authentication. As well as presentations from SWRI scientists on the work carried out during the project, there were also talks from experts including:

- Nick Soper, Internal Market Director at spiritsEUROPE
- Paul Brereton, Director of Strategic Alliances at the Institute for Global Food Security
- Bryan McCullough, Senior Researcher from the National Measurement Laboratory
- Dr David Ellis, Senior Experimental Officer at the Manchester Institute of Biotechnology
- Michal Stupak, who has just completed a PhD at the University of Chemistry and Technology in Prague, part of which focussed on Scotch Whisky authenticity analysis

Brainstorming exercises in multidisciplinary groups identified remaining challenges, potential solutions and priorities for future research and development. One of the main themes that came out of the discussions was the need for ongoing collaboration and communication. There was also consensus that rapid, portable, ‘through-bottle’ analysis is the holy grail in spirit drinks authenticity testing. Challenges identified included how we deal with the large data sets generated by high-resolution analysis and how we can bridge the gap between the development of solutions by technology providers and the industry’s commitment to invest in them.

In addition to the main workshop, the SWRI also held a smaller session the previous day, where attendees had the opportunity to learn about SWRI’s authenticity research and analytical capabilities.

Over 40 people attended the workshop, hailing from different organisations across Europe. Spirit drinks producers, government laboratories, technology companies, regulators, enforcement agencies and trade bodies were represented, including BNIC’s Station Viticole, the SWRI’s equivalent research institute for Cognac.

Presentations from the workshop, and all other outputs and resources from FoodIntegrity project, are available on the FoodIntegrity website. If you would like access, please contact Ian Goodall.

FoodIntegrity Around the World:

**Cordoba, Argentina**

*Paul Brereton, QUB – FoodIntegrity Science Coordinator*

The Seventh International Congress of Food Science and Technology (VII CICYTAC) aimed to promote a discussion, exchange experiences and update participants on new scientific and technological advances in the area of foods at national, regional and international levels.

Over 600 participants attended the congress in Cordoba, Argentina. FoodIntegrity speakers: Paul Brereton (QUB), Saskia van Ruth (Wageningen/Rikilt), Joachim Kopka (Max Planck), Daniel Wunderlin and Verónica Baroni (CONICET) presented the results of the latest research and solutions for addressing food fraud.
**FoodIntegrity Around the World:**

**Riyadh, Kingdom of Saudi Arabia**

*James Donarski, FERA Science Ltd, Project Coordinator*

The Saudi Food and Drug Authority hosted the SFDA Annual Conference and Exhibition in Riyadh, from the 25th to the 27th of September 2018. This conference serves as an annual gathering that connects SFDA with other stakeholders from private and public sectors. Invited FoodIntegrity speakers, Dr James Donarski (Fera) and Dr Francis Butler (UCD), presented the latest research in Early Warning Systems in the section entitled “Time to define Food Integrity”.

More information on the conference and exhibition can be found [HERE](#).

**FoodIntegrity Scientific Opinions**

The FoodIntegrity project has produced a set of 8 scientific opinions on topics chosen by the stakeholders themselves. These papers address key technical issues that stakeholders have identified as problematic, e.g. the future of new technologies such as Next Generation Sequencing, Best practice for producing databases, the role of non targeted analysis. Several of the opinions have already been published in Trends in Food Science and Technology.

All of the FoodIntegrity published papers along with the Scientific Opinions can be found by clicking [HERE](#).

The FoodIntegrity Scientific opinions will also soon be accompanied by Info-Graphic videos available on the FI YouTube Channel.

**FoodIntegrity Training Outcomes**

**FoodIntegrity Training**

*Monika Tomaniova, VSCHT, Technology transfer*

The task of technology transfer of FoodIntegrity outputs and knowledge to stakeholders is a major task and has been achieved through a number of activities and approaches: a comprehensive training program, a young scientist mobility program, the establishment of a Food Integrity training school, and the organisation of a series of workshops.

Various short-term and long-term training and education activities at different levels have taken place within the FoodIntegrity project training program and facilitated exchange of expertise among the participants within and outside the project consortium and supported both staff and young scientists in development of their careers. To ensure sustainability of the training program, (i) ‘train the trainer’ approach has been applied and (ii) training materials prepared by trainers’ centres will be accessible to the public.

95 applications for participation in the FoodIntegrity training programme coming from 24 countries of EU, Asia, Australia and Oceania, and South America have been received, 55 applicants have been selected and successfully completed trainings during 2018 in the training concepts they have applied for. Training program has been delivered in cooperation with well-established EU organisations in 13 short-term training activities:
• Vibrational spectroscopy and chemometrics (CRA-W, Gembloux, Belgium)
• FT-IR spectroscopy for authentication of food (BfR, Berlin, Germany)
• Stable isotope analysis of wine (BfR, Berlin, Germany)
• IRMS – Theory and lab fruit juice and wine (Fera Science Ltd, York, UK)
• Profiling with applications to honey (Fera Science Ltd, York, UK)
• Foodomics: Untargeted Analysis of Foods (QUB, Belfast, UK)
• Metabolomic fingerprinting / profiling based on high resolution mass spectrometry for food, nutraceuticals & feed authentication (UCT Prague, Prague, Czech Republic)
• Metabolomics for verifying authenticity of food (IAEA/FAO, Vienna, Austria)
• Stable isotopes for verifying authenticity of food (IAEA/FAO, Vienna, Austria)
• Analytical tools for authenticity of raw materials in pasta, sauces & bakery production (Barilla, Parma, Italy)
• ‘REGULATORY & RISK ASSESSMENT CONCEPT’ Frauds & adulterations management in strategic raw materials for pasta, sauces & bakery products & ‘SENSORY & MANAGEMENT CONCEPTS’ Consumers science & Industrial management skills useful to assure food integrity (Barilla, Parma, Italy)
• Data collection and analysis methods in consumer research (FiBL, Frick, Switzerland)
• Traceability in relation to food integrity (Nofima, Tromsoe, Norway)

(ii) and 4 scientists´ mobility activities:
• Vibrational spectroscopic methods applied on cereals (CRA-W, Gembloux, Belgium)
• Rapid tools for food integrity: testing on the field (Barilla, Parma, Italy)
• The power of tandem high-resolution mass spectrometry in food, natural products and feed authentication (UCT Prague, Prague, Czech Republic)
• Food fraud vulnerability assessments (RIKILT Wageningen UR, Wageningen, The Netherlands)

In addition, FoodIntegrity training week consisting of ‘Training school on assuring the integrity in the food chain’ and ‘Symposium for post-graduate students on food fraud’ has been organised in September 2018 for more than 30 participants; more details including program of the event and abstracts of all presentations can be found here.

In November 2018, two training workshops will be organised, on (i) The role of modern analytical approaches in fighting with food fraud (as satellite event of the FoodIntegrity 2018 conference, more details here), and (ii) Integrity management along commodity supply chains (more details here).
THANK YOU

A big thank you to all of our advisory board members that have supported and advised this project from 2013 to 2018.

Penny Bramwell  Andrew Damant  Sue Davies  Lucy Foster

Barbara Gallini  Carmen Guaru  Beate Kettlitz  Michèle Lees

James Lindsay  Shefalee Loth  Eric Marin  Leonardo Mirone

Jeff Moore  John Spink  Peter Whelan
How to Get Involved?

- Register for project communications.
- Please click here to register to be a part of the FoodIntegrity Network.
- Follow FoodIntegrity on Twitter or join the Network Group on LinkedIn.

Dates for Diary:

**FoodIntegrity Associated events:**

**Food Fraud Conference**
28 February 2019, London, UK

**External events:**

**Rapid Methods Europe (RME2018)**
5-7 November 2018, Amsterdam, the Netherlands

**Food Safety Analysis 2018**
27-28 November 2018, Singapore

**XX. EUROFOODCHEM**
17-19 June 2019, Porto, Portugal

**11th World Mycotoxin Forum**
14-16 October 2019, Belfast, UK

**9th International Symposium on Recent Advances in Food Analysis (RAFA 2019)**
5-9 November 2019, Prague, Czech Republic

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We hope you have found this e-Newsletter interesting and informative. We would welcome your views on any of the issues covered. Please email foodintegrity@fera.co.uk. Please feel free to distribute this FoodIntegrity e-Newsletter to other interested parties.

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