PhasmaFood

e-BULLETIN

Sensing FOOD for SAFETY

Issue 2/December 2018

IN THIS ISSUE

KEY FACTS

Grant Agreement: 732541 - H2020-ICT-2016-1

Start date: 01 / 2017

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Budget: 3,1M€

Coordinator: INTRASOFT International

www.phasmafood.eu

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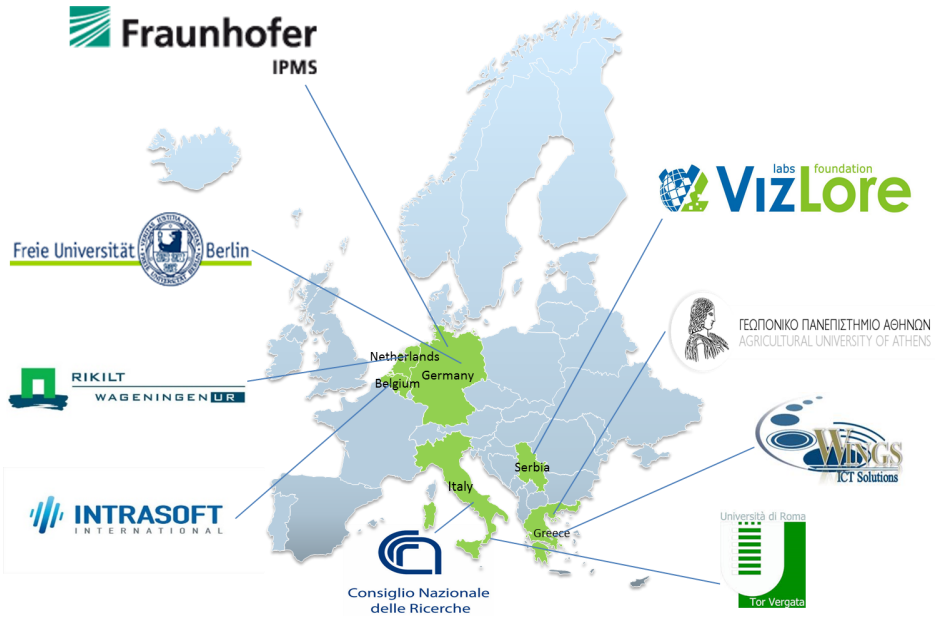
PhasmaFOOD Project Community on Sensing Technologies for Food Quality & Safety

WELCOME TO THE SECOND ISSUE OF THE PHASMAFOOD E-BULLETIN!

If you are interested in innovative technologies for on-the-spot food quality sensing and shelf-life prediction, you are in the right place!

PhasmaFOOD is an EU-funded H2020 project that represents a strong consortium of nine leading food security, sensing technologies and information technology stakeholders in Europe, coordinated by INTRASOFT International. PhasmaFOOD is working on the development, demonstration and exploitation of a miniaturized smart integrated system that will be able to detect food hazards, food spoilage and food fraud through heterogeneous micro-scale photonics.

PhasmaFOOD is addressing a market, where similar devices are already positioned and customers and the general public are increasingly becoming familiar with food sensing technologies. Strong R&D and product-driven development are important strengths of PhasmaFOOD and the consortium is capitalising upon them seeking synergies with similar development efforts. In addition, rapid exploitation opportunities are pursued via pilot applications addressing niche food markets.



HIGHLIGHTS FROM OUR EXPERTS

Follow the links below to listen to some of our multi-disciplinary experts regarding the PhasmaFOOD mission from the perspectives of their field of expertise and explaining their roles and ambitions in the project. The interviews took place during the first prototype testing @ our partner's RIKILT Wageningen University and Research premises in September 2018.

Dr Alexandra Lianou (AUA)
https://youtu.be/g_JG5JbIunI

Dr Annamaria Gerardino (CNR)
https://youtu.be/v4Hpza0Se9s

Mr Benedikt Gross (FUB)
https://youtu.be/i2xZBJM254A

Dr Susanne Hintschich (IPMS)
https://youtu.be/lUoKFWkj4VI

Dr Yannick Weesepoel (DLO)
https://youtu.be/HdBHeSEkoQQ

Dr Konstantinos Tsoumanis (WINGS)
https://youtu.be/u8laxptZj48

Mr Davide Di Giuseppe (UTOV)
https://youtu.be/KBjUDob29WA

PHASMAFOOD SUCCESSFUL REVIEW

The PhasmaFOOD consortium is pleased to announce the project's successful midterm review which took place in Brussels on 20th September 2018. The partners presented in detail all the project achievements and the preliminary significant exploitable results delivered during the first half of the project.

The first round of the PhasmaFOOD deliverables is available at the PUBLIC DELIVERABLES section @ http://www.phasmafood.eu/documentation

THE FIRST INTEGRATED PROTOTYPE PHASMAFOOD MULTISENSOR FOOD-SCANNING DEVICE IS READY!

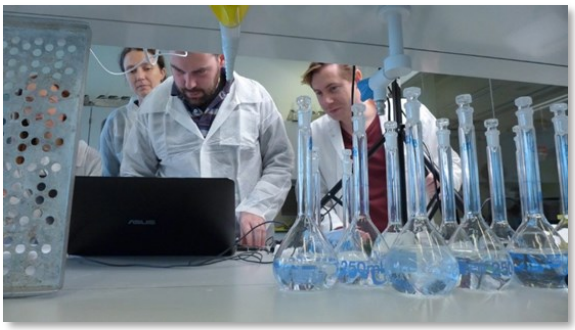
COVER STORY

The PhasmaFOOD consortium proudly announces that the **first integrated PhasmaFOOD prototype device** is now fully assembled, functional and is ready to be used in the first phase of validation and calibration activities of the project.

The architecture of the PhasmaFOOD system comprises three main parts: the sensing device, the end user's mobile device with the PhasmaFOOD application installed on it, and the cloud platform and database. The PhasmaFOOD sensing device integrates a sensing node, which includes an Ultraviolet-Visible (UV-VIS) spectrometer, a Near-Infrared (NIR) spectrometer, a camera, and Ultraviolet (UV), white and NIR illumination sources, in order to conduct the sensory measurements on the food samples and an electronic subsystem, which supports the operation of the sensing node by controlling the sensing measurements, collecting the sensory data, partially processing them and sending them to the end user's mobile device. The mobile device communicates the sensory data and contextual information to the cloud platform for further analysis, which eventually returns to the end user (at their mobile application/screen) the final decision on their scanned food sample.

Strong R&D and product-driven development are important strengths of PhasmaFOOD and the consortium is capitalizing upon them seeking synergies with similar development efforts. In addition, rapid exploitation opportunities are pursued via pilot applications addressing niche food markets. The first integrated PhasmaFOOD prototype device was successfully assembled in the beginning of September 2018 and is now functional and being used in the first phase of validation and calibration activities of the project.

PhasmaFOOD food quality partners will now be able to use the PhasmaFOOD prototype to collect information and experimental data allowing the continuation of data analysis and the completion of experiments for all considered use cases.



We strongly believe that the PhasmaFOOD prototype device, following the upcoming developments and extensive planned testing until the end of 2019 will constitute a very solid and realistic approach for adoption in everyday use at large scale, safeguarding public health in a cost effective, reliable and easy to use manner.

The PhasmaFOOD solution aims at providing end users a fast and safe decision on whether they should consume food samples or not, based on the level of mycotoxins, microbiological spoilage or adulteration they feature.

OTHER EVENTS

Forthcoming events and meetings:

- PhasmaFOOD 5th Plenary meeting - 23-24 January 2019, Novi Sad, Serbia
- Participation of Professor George-John Nychas (Agricultural University of Athens) as invited speaker in the Primary Health Care educational workshop "G. Papadakis" round table entitled "Food safety: guaranteed or sought out?", 13 February 2019, Athens, Greece
- 4th International Conference on Optical Characterization of Materials (OCM-2019) (biannual German event organised by Fraunhofer IOSB) – 13-14 March 2019, Karlsruhe, Germany
- Smart Systems Integration (SSI) 2019 – 10-11 April 2019, Barcelona, Spain
- International Association for Food Protection (IAFP) European Symposium - 24-26 April 2019, Nantes, France
- 5th Metabolomics Workshop, 16-17 May, 2019, Aristotle University of Thessaloniki, Thessaloniki, Greece
- International Association for Food Protection (IAFP) Annual Meeting - 21-24 July 2019, Louisville, Kentucky, United States of America
- 5th FoodIntegrity Conference on Assuring the integrity of the food chain: Delivering real world solutions - 14-15 November 2019, Nantes, France
- Recent Advances in Food Analysis - RAFA2019 – 5-9 November 2019, Prague, Czech Republic

RAFA 2019

PHASMAFOOD EVENTS

PROJECT EVENT

SUCCESSFUL PHASMAFOOD WORKSHOP IN ATHENS

The workshop on the "The role of Information Technology and Process Analytical Technology in assessing Food Quality & Safety - The case of the PhasmaFOOD project" took place on Thursday, 27th September, 2018. The event, kindly hosted by the Agricultural University of Athens, attracted about 30 stakeholders from industry and academia & research, interested in food sensing technologies.

The workshop sessions presented a broader spectrum of IT-supported advances readily applicable to quality and safety applications for the food industry. At the workshop, the prototype PhasmaFOOD multisensor food-scanning device was for the first time presented to the general public and attracted great interest.

The event was organised by the PhasmaFOOD project with honorary support of SEVT, the Federation of Hellenic Food Industry. The Federation expressed their interest to have the prototype PhasmaFOOD device and the project's findings presented also to their members, who represent the Food & Drink Industry in Greece.

PHASMAFOOD WILL HAVE A PROFOUND PRESENCE AT RAFA2019

PhasmaFOOD is proud to announce its participation to the major international bi-annual event on recent advances in food analysis – RAFA 2019!

The 9th International Symposium on Recent Advances in Food Analysis, RAFA 2019, takes place on 5 – 8 November, 2019 in beautiful Prague, Czech Republic.

The RAFA 2019 symposium will provide an overview of contemporary trends in Analytical & Bioanalytical Strategies in Food Quality and Safety Control and discuss Challenges for Novel Approaches.

Looking back at the success at RAFA 2017, PhasmaFOOD has been invited to contribute to the following activities:

- A full day oral presentations program within the context of the symposium's European workshop on portable on-site food analysis and citizen science (co-organised by several EU projects, including PhasmaFOOD, PortASAP and FoodSmartphone).
- A full day poster session program within the context of the symposium's European workshop on portable on-site food analysis and citizen science (contributions from the EU projects PhasmaFOOD, PortASAP and FoodSmartphone and other scientists).
- Two-day demonstration sessions at RAFA's Smart Lab.

During RAFA 2019, the PhasmaFOOD consortium will present its most mature results and will demonstrate the final prototype of the PhasmaFOOD integrated food sensing device to the interested community.

Read more at https://bit.ly/2ErlVNc

Check here the flyer of the event

PhasmaFOOD on the News

EU projects tap into 'paradigm shift' towards on-site testing

Two European projects are driving a 'paradigm shift' to allow on-site food testing ahead of possible consumer use.

The article, published by the FOODnavigator.com, provides the details about the two projects, FoodSmartPhone and PhasmaFOOD, which were presented at the RAFA 2017 Smart Lab in Prague.

The whole article is available here.

Food quality through an image on our mobile

The article, published by Naftemporiki, the Greece's most widely read daily business paper, describes the technologies developed and used by the Laboratory of Microbiology and Biotechnology of Food of the Agricultural University of Athens (AUA) and aimed at rapid and on-site assessment of food quality and adultery. Special emphasis is given to the PhasmaFOOD project, explaining its scope and potential benefits for Greek consumers.

The article is based on the interview with Professor George-John Nychas, the head of the Laboratory of Microbiology and Biotechnology of Foods and partner in the PhasmaFOOD project, after a very successful presentation of the project during at the 3rd Agricultural Conference of Naftemporiki, which took place on 23rd May 2018 in Athens.

Read the whole article here [in Greek].

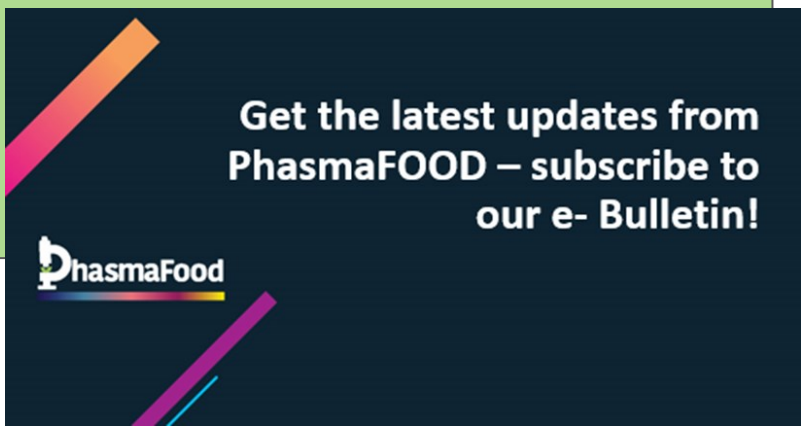
Stay Tuned!

We are looking forward to updating you on a regular basis about PhasmaFOOD work, activities and progress.

Check our previous e-Bulletin issue @ http://www.phasmafood.eu/documentation

Enjoy reading and stay tuned!

Subscribe to receive PhasmaFOOD e-Bulletin @ https://bit.ly/2oYzkmn



COLLABORATION WITH OTHER PROJECTS

PROJECT IN THE SPOTLIGHT: MYCOKEY

MycoKey - Integrated and innovative key actions for mycotoxin management in the food and feed chain - is a Horizon 2020 project that aims at delivering the first integrated ICT based solutions to address mycotoxin contamination along the food and feed chain. Given that PhasmaFOOD and MycoKey projects work in the similar food safety areas, we estimated that the cooperation may lead to mutual benefits in terms of information exchange and multiplied audiences.

The PhasmaFOOD consortium has signed a Memorandum of Understanding for cooperation with the MycoKey project. The collaboration foresees the realisation of measurements using PhasmaFOOD developed detectors for mycotoxin measurement in food samples provided by MycoKey project and joint participation to dissemination and exploitation activities.

In the context of this cooperation, the Mycokey partner, CNR ISPA is actively collaborating with the PhasmaFOOD partner CNR IFN providing Aflatoxins artificially and naturally contaminated samples to be tested with the PhasmaFOOD sensors.

In detail, five sets of samples have been prepared so far by CNR ISPA to test and validate the PhasmaFOOD detection capability.

In July 2017 and in May 2018 two measurement campaigns took place in the CNR ISPA in Bari. The first one on the first two sets the second one on the last three ones.

Moreover, in September 2017, in the framework of the 1st International MYCOKEY Conference: Advances on Mycotoxin Reduction in the Food and Feed Chain, a Round Table has been organized with title "Advanced detection methods for mycotoxins". Dr. Annamaria Gerardino, scientific responsible for CNR in PhasmaFOOD project, has been invited to participate to the Round Table. The discussion has been carried out according to the Nominal Group Technique (NGT). The NGT is a procedure based on small group discussion to reach consensus on the identification of key issues.

The results of the Round Table have been summarized and reported in a paper that has been published on the open access journal, Toxins (Leslie J.F et al., Toxins 2018, 10, 109, DOI: 10.3390/toxins10030109).

MycoKey website: www.mycokey.eu