TECHNICAL MEETING OF THEMATIC PARTNERSHIP "TRACEABILITY AND BIG DATA"

Smart Specialization Platform S3P Agrifood

H2020 and regional projects and activities running in Emilia Romagna region: from projects to proposals focused on Specific Topic 2

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PILOT PROJECT IDEAS

1) DATA ANALYTICS AND INTELLIGENCE FOR FOR FOOD SAFETY AND QUALITY
- geotraceability
- sensors and omics technologies
- indicators
- quality assessment
- smart tagging
- smart packaging

2) MONITORING THE FOOD VALUE CHAIN
- data collection and data mining of quality parameters recorded during long term transport and storage of food products sensitive to thermal shock (frozen food, meat, oil, Smart Wine Cap)
- fraud protection
- thermal microsensors

H2020 projects

H2020 Project – **OLEUM: Advanced solutions for assuring the overall authenticity and qualityof olive oil (2015-2019)**

UNIVERSITÀ DI BOLOGNA   Coordinator: Prof. Tullia Gallina Toschi

OBJECTIVES: OLEUM will generate new and more effective analytical solutions to detect and fight the most common and emerging frauds and to verify the overall quality of olive oils. Research activities are based on the development of analytical methods by targeted and omics approaches.

RESULTS: a web-based easily-accessible, scalable and updated OLEUM DATABANK, containing information from OLEUM research and other reliable international sources, available for download data and spectra and to help achieve satisfactory harmonization of analytical approaches among control laboratories
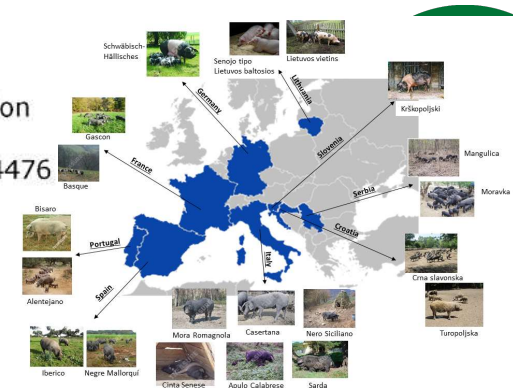
OBJECTIVES: Genetic characterization of local and untapped pig breeds and development of DNA tools for authentication, traceability, conservation and breeding programs. Development of a European collective trademark for pork products.

RESULTS: Identification of breed specific DNA markers by mining whole genome resequencing datasets obtained from 20 pig breeds.
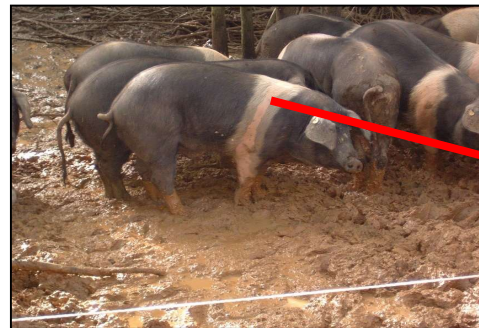
Regional projects
and other activities

INNOFRUVE - industrial research and innovation in the fruit produces

Prof. Pietro Rocculi

OBJECTIVES: to transfer methodologies and technologies for the preservation and processing of food of plant origin (transfer of models, skills, technologies and prototypes in various stages of the chain of vegetables, considering various lines of storage and processing in an integrated view of supply chain).

METHODOLOGY AND EXPECTED RESULTS: Improvement of frozen food shelf life by applying instrumental models and numerical methods and instrumental assessments to estimate the maintenance of the physical, chemical, nutritional and sensorial products under actual conditions of cold chain management.
Monitoring the quality retention during long term storage life and estimation of product shelf-life. Acquisition of big data from long life storage (quality parameters and environmental conditions)

MO.RE.FARMING - A MOnitoring and REmote system for a more sustainable farming


OBJECTIVES: To build a system prototype that can collect data from satellites, drones, environmental sensor, traps, and from public and private databases, to support farmers and technicians in the application of more sustainable farming protocols. Collected data can be used for the traceability of the product and the description of production process.
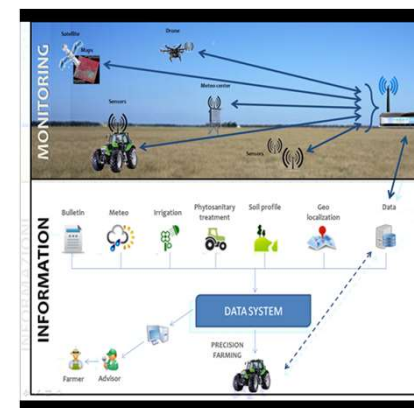
RESULTS: Platform for data collection and management (expected at the end of 2018)- Farm side; RESULTS: Platform for data collection and management (expected at the end of 2018) – Farm side, post-harverst side, whole-production chain side.

T- BRAND (ENEA)

Authentication, Databank creation and determination Of oRigin of Olive oil (ADORO)
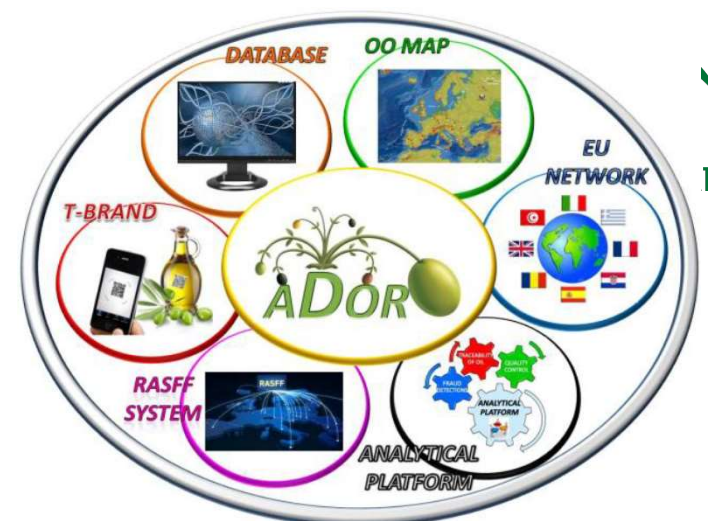
OBJECTIVES: multidisciplinary analytical platform, comprehensive Mediterranean Olive Oil map, Traceability Brand, network of laboratories, competitiveness, sustainability. The proposed databank will be public and accessible to all partners and EU countries.
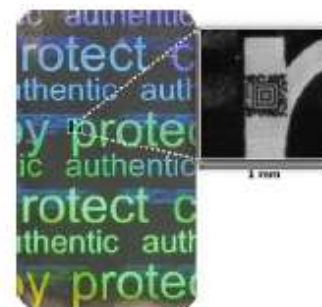
Examples of smartphone application and anti-counterfaction tag (photo courtesy from Scriba Nanotech srl)

Other projects, research activities and interests

ORGANIZATION	Project/Research activities
University of Ferrara	Food security and geo-traceability of exellence
University of Ferrara	Etichette intelligenti e micro sensori termici interrogabili
Università Cattolica del Sacro Cuore	Integrating omic technologies for smart traceability of typical food products
University of Parma	Market trend prediction using big data
University of Parma	Diet profiling for improved end user-oriented services
University of Bologna	Use and integration of genomics and metagenomics for food authenticity and traceability (GRIFFA)
University of Bologna	SMART irrigation (meteo, drones, sensors and modelling data for decisions on irrigation; FP7: FIGARO)
University of Bologna	Development of public databases on food metabolites (JPI HDHL: Foodball project)
University of Bologna	Integrate data from European fish species for traceability (FP7: FishPopTrace)
University of Bologna	Data on healthy eating (FP7: EATWELL)
University of Modena and Reggio Emilia	Develops innovative sensors and RFID for agri-food applications.

Proposals/
interests in
Emilia Romagna
region

For more information:

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