





## **FROM WASTE TO RESOURCES: Biomasses and biorefineries** for food and non-food productions

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CNRxEXPO together with:





5th August 2015 Italian Pavilion - Expo 2015, Milan from 2:30 pm to 5:00 pm



Coordinator: Nicoletta Ravasio Institute of Molecular Science and Technologies (ISTM)

This event aims to show how the "circular economy" concept can be applied to the agri-food industrial sector. Thus, food supply chain waste (FSCW) ca be used as raw materials to produce a number of materials with various added value. A very different approach from the one involving only the production of energy for the valorization of waste and residues.

Many possibilities can be envisaged. Bio-active compounds can be extracted from many residues and used as food additives, nutraceutical compounds or cosmetic ingredients, but the challenge is to get commodities such as hydraulic fluids, surfactants or plastics that, due to their renewable origin would be fully biodegradable.

Moreover some waste have also a negative impact on the environment and therefore it is worth finding an alternative use for them. Let's think about rice straw that is commonly tilled back into the soil from the farmer to avoid disposal costs. This practice generates 60 kg of methane (90 mc!!!) per ton of straw and accounts for 10-15% of the global anthropogenic emissions of this green-house gas.

Research is focused on some specific productive chain: fruit juice, rice, dairy, bread and baking products, tomato and wine. During the event the first interactive map of food supply chain wastes in Europe, organized both by country and by waste, will be presented. Starred chef Igles Corelli, inventor of the "Circular cooking" concept, will show interesting uses of kitchen wastes.

The event is co-organized by **COST** (European cooperation in science and technology) Action EUBis: Food waste valorisation for sustainable chemicals, materials & fuels. The overall aim of EUBis is to bring about a critical mass of researchers and stakeholders to harness the potential of Food Supply Chain Waste as an alternative carbon source to produce commercially viable chemical commodities.





## **AGENDA**

- Welcome from the Director of Chemical Sciences and Material Technologies Department of CNR, Dr. Luigi Ambrosio
- Current and future trends in food waste valorization for the production of chemicals, materials and fuels: a global perspective The Food waste map (presentation of an interactive program allowing one to see where and how much of a given waste is produced in Europe) Prof. James Clark, University of York, UK
- From food waste to products Nadia Plata, Eptes, Vevey, CH
- Moving from a food "supply chain" towards a virtuous "supply cycle" through valorization of food waste Lucinda Tolhurst, Lucid Insight, Oxford, UK
- Edible films from shrimp and citrus fruit wastes Salvatore Raccuia, ISAFOM CNR, Catania, Italy
- Fruits and vegetables wastes: the Veggie&Fruit waste valorization wheel (the wheel will be presented in the auditorium or at the reception desk in order that people can touch, sniff and eventually taste the products obtained from the wastes) Thierry Talou, INP, ENSIANET, Toulouse, France
- "Veggie peels, wastes and Cucina Circolare" Igles Corelli, ristorante Atman, Lamporecchio, Italy

