Barbara Rega

CURRICULUM VITAE

NAME: Barbara Rega
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Resumé: Barbara Rega is associate professor in Food Chemistry at AgroParisTech, France. Barbara's teaching fields are food chemistry and innovation. Her research focuses on the understanding of the food reactivity linked to formulation and process interactions. She is an expert in process-induced compounds linked to food flavor and safety such as Maillard reaction products. She has supervised more than 10 PhD students and more than 30 MSc. Thesis interns on this field. She is a founder member of ProDeJIP (International Association for the Promotion and Development of Joint International Programmes) and EM-ACT (Erasmus Mundus Association for Consortia Cooperation). She believes in Education and Research as a way of opening minds, sharing knowledge and experiences. She loves working in an international and inspiring environment. She wants to contribute to train new generations of students towards the development of innovative, healthy and sustainable food for future generations.

Key qualifications: Assistant Professor in food chemistry. Managing Coordinator of the International Erasmus Mundus Master Food Innovation and product Design (2010 to date); Team leader of the Calipro research team -30 people 2017-2019. Member of the Scientific Advisory board of the Paris-Saclay Food and Bioproduct Engineering Joint Research Unit (Paris).

EDUCATION:

- MSc. in Chemistry, option Biochemistry, University Federico II of Naples, UNINA – Italy (1998)
- PhD in Food Science, University Federico II of Naples - Italy and University of Burgundy – France (2003).
- Habilitation à Diriger des Recherche, University of Burgundy – France (June 2020).

RESEARCH Activities

Interactions between process and food products. Reactivity and functionalities of food flavour.

Research topic: Understanding thermal reaction mechanisms in model and real food products leading to the formation / degradation of odor-impact compounds and / or potentially toxic compounds.

SELECTED PUBLICATIONS

1. Lee, J., Roux, S., Le Roux, E., Keller, S., **Rega, B**., Bonazzi, C., (**2022**). *Unravelling caramelization and Maillard reactions in glucose and glucose+leucine model cakes: formation and degradation kinetics of precursors, a-dicarbonyl intermediates and furanic compounds during baking.* Food Chemistry. *DOI: 10.1016/j.foodchem.2021.131917.*

2. Krause, S., Asamoah, E., Keller, S., Descharles, N., Bonazzi, C., & **Rega, B.** (**2022**). Lipid oxidation during the beating of cake batter containing yellow pea (*Pisum sativum* L.) flour. LWT 154, 112770*.*
3. Krause, S., Keller, S., Hashemi, A., Descharles, N., Bonazzi, C., & **Rega, B**. (**2022**). From Flours to Cakes: Reactivity Potential of Pulse Ingredients to Generate Volatile Compounds Impacting the Quality of Processed Food. *Food Chemistry.* https://doi.org/10.1016/j.foodchem.2021.131379.
4. Lee, J., Roux, S., Descharles, N., Bonazzi, C., **Rega, B**. (**2021**). Quantitative determination of volatile compounds using TD-GC-MS and isotope standard addition for application to the heat treatment of food. Food Control, 121 (2021) 107635.
5. Lee, J., Bousquières, J., Descharles, N., Roux, S., Michon, C., **Rega, B**., Bonazzi., C. (**2020**). Potential of model cakes to study reaction kinetics through the dynamic on-line extraction of volatile markers and TD-GC-MS analysis. Food Research International, 132 (2020), 109087.
6. Cepeda-Vázquez, M., Camel, V., Blumenthal, D., **Rega. B**. (**2019**). Quality-driven design of sponge cake: insights into reactivity, furan mitigation and consumer liking. Food Chemistry, 285, 94-103.
7. Cepeda-Vázquez, M., **Rega, B**., Descharles, N., Camel, V. (**2018**). How ingredients influence furan and aroma generation in sponge cake. Food Chemistry, 245, 1025-1033.
8. Srivastava, R., Bousquières, J., Cepeda-Vásquez, M., Roux, S., Bonazzi, C., **Rega, B**. (**2018**). Generation of furan and furfural from glucose and leucine during baking: a kinetic study in a cake model. Food Chemistry, 267, 329-336.
9. Cepeda-Vázquez, M., Blumenthal, D., Camel, V., **Rega. B**. (**2017**). Multivariate optimization of headspace trap for furan and furfural simultaneous determination in sponge cake. Talanta, 164: 708–715.
10. Huault, L., Descharles, **Rega, B**., Bistac, S. Bosc, V., Giampaoli, P. (**2016**). Furan quantification in bread crust: Development of a simple and sensitive method, using headspace-trap GC-MS. Food Additives and contaminants, 33 (2): 236-243.
11. Fehaili, S. Courel, M., **Rega**, **B.,** Giampaoli, P. (**2010**). An instrumented oven for the monitoring of thermal reactions during the baking of sponge cake. Journal of Food Engineering 101 *(3):* 253-263.
12. Siciliano R., **Rega B**., Amoresano A., Pucci P. (**2000**). Modern Mass Spectrometric Methodologies In Monitoring Milk Quality. *Analytical Chemistry*, 72, 408-415.
13. Siciliano R., **Rega B.**, Marchetti M., Seganti L., Rossi P., Antonini G., Valenti P. (**1999**). Bovine lactoferrin peptidic fragment involved in inibition of herpes simplex virus type 1 infection. *Biochemical and Biophysisical Research Communications,* 264 *(1):*19-23.

Books

The Cooking Passport. A unique collection of recipes with a pinch of food science and sustainability (2021). Gallagher, R., Auzet, L., El Chemali, M.L., Karagiannaki, K., Safira Kinanti, E., Sotiangco, I., Andersson, E., Laissy, I., **Rega, B.** *Ed.*, AgroParisTech Editions *Pub.* ISBN : 978-2-493139-00-9.