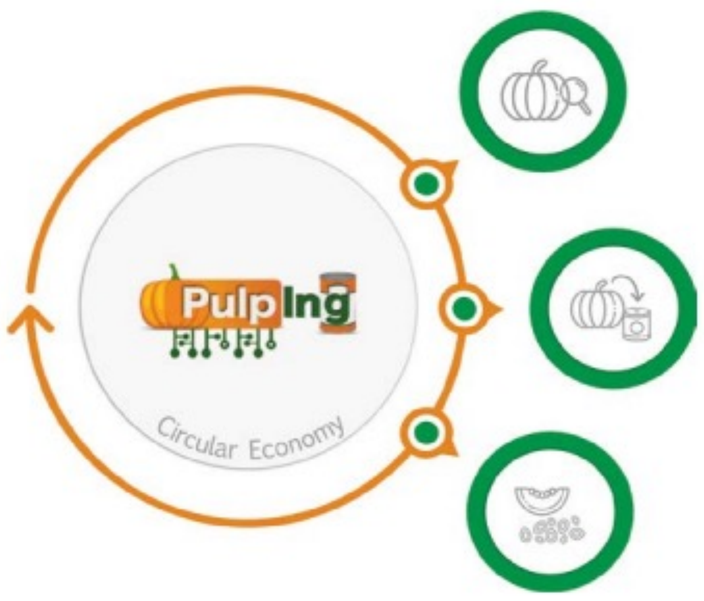
# PULPING: DEVELOPMENT OF PUMPKIN PULP FORMULATION USING A SUSTAINABLE INTEGRATED STRATEGY

**Lillian Barros[1], Alexandre Gonçalves[2], Miguel Azevedo[3], Spyridon A. Petropoulos[4], Riadh Ksouri[5], Neji Tarchoun[6], Oliver Schuter[7], Khaldoun Bachari[8], Mustafa Mohamed[9]**

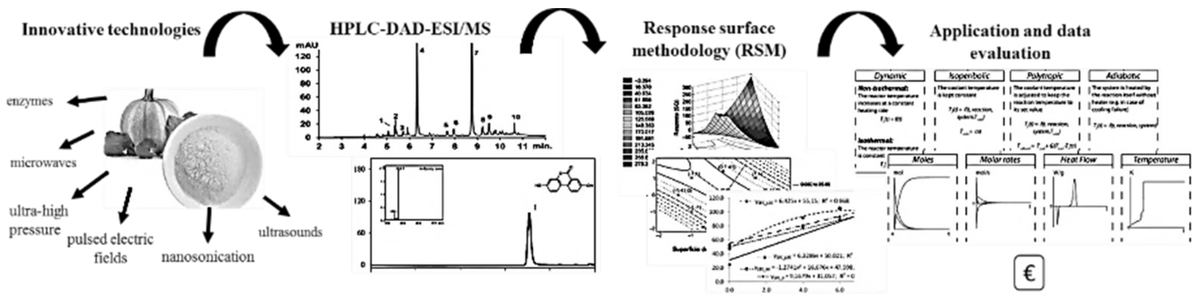
[1] Centro de Investigação de Montanha (CIMO), Instituto Politécnico de Bragança, Campus de Santa Apolónia, 5300-253 Bragança, Portugal.
[2]MORE – Montanhas de Investigação – Associação, Edifício Brigantia Ecopark, Av. Cidade de Léon 506, 5300-358 Bragança, Portugal
[3]Decorgel - Produtos Alimentares S.A., R. Progresso 363, 4785-647 Trofa, Portugal.
[4]Department of Agriculture Crop Production and Rural Environment, University of Thessaly, Volos, Greece.
[5]Centre de Biotechnologie de Borj Cédria (CBBC), Tunisia
[6]High Agronomic Institute of Chott Mariem 4042, Sousse, Tunisia.
[7]Leibniz Institute for Agricultural Engineering and Bioeconomy (ATB), Max-Eyth-Allee 100, 14469 Potsdam, Germany
[8]Centre de Recherche Scientifique & Technique en Analyses Physico-Chimiques (CRAPC), Bou Ismaïl 42004, Algeria
[9]Benha University (BU), Banha, Al Qalyubia Governorate 13511, Egypt

*lillian@ipb.pt




Aligned with the recent global priorities, it is necessary to move from the current unsustainable food system to a resource-efficient paradigm, based on a circular economy approach. This transition is urgent but complex, particularly because the multiple aspects of food production and consumption are closely interrelated. Nevertheless, the overall objective can be effectively achieved in regions with advantageous characteristics, such as the Mediterranean basin. In this region, a variety of crops and native species can be rationally valorised for food production and for recovering of added value compounds from the generated by-products, fulfilling the needs associated to sustainable production systems in the entire food chain.

PulpIng is a financed research project that intends to stimulate and improve the sustainable valorisation of pumpkin fruit in African and European countries in an integrative and waste-free manner. The agronomic performance of *Cucurbita* sp. will be improved based on sustainable farming tools and the plant as a whole will be used, in a circular economy point of view.


The chemical and nutritional profiles of the pumpkin fruit will be analysed, and further transformed into a pulp product targeting African and European markets, among others. Besides, pumpkin fruit (rind and seeds) and crop (leaves) by-products will be screened for molecules with preservative potential and tested as food preservatives in the pumpkin pulp. Thus, safety issues and extended shelf-life will be assured by the incorporation of these natural ingredients/preservatives, obtained by optimized processes and innovative processing and preservation technologies. The viability of these processes will be proved through the execution of life-cycle cost analysis and the obtained results will be disseminated and exploited through several activities. A whole value-chain from nature to safe food products/ingredients will be generated, improving crop yield, creating jobs and fostering the local economies of the Mediterranean region.

Overall, this project will create innovation, and, most importantly, it will provide the industry with sustainable solutions and answers by reusing the waste material from pumpkin production to create added value molecules and preserve the newly designed pumpkin pulp. Moreover, this project will be conducted in straight collaboration with pumpkin enterprises (producers and processors) that will give full support to this proposal.

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