ERASMUS+/ProFood: Getting to the Roots of Plant Protein Biochemistry

Stefania Iametti^a, Alessio Scarafoni^a, Patrizia Riso^a, Hanne Frøkiær^b, Poul Jensen^b, Loïc Rajjou^c, Loïc Lepiniec^c, Julia Zimerstein^c, Jean Pierre Grill^d, Jérôme Lamoine^d, Hayat Bouteau^d

^aUniversity of Milan; ^bUniversity of Copenaghen; ^cAgroparistech, ^dSorbonne University

This EU-sponsored program is aimed at students from four Universities: UNIMI in Milan, Sorbonne University and Agroparistech in Paris, and UCPH in Denmark. The main aim of the project is to provide students (at the MS level) with an hands-on experience on what makes plant proteins unique as for their general biochemical and nutritional properties, their capacity to form and stabilize network, the possibility of being broken down to generate a number of bioactive species, and the role they play – for better or worse – with regard to the bioavailability on macro- and micronutrients.

Students will be exposed to a number of innovative technologies as for addressing the structural features of plant proteins and their modification upon physical and biological food processing (a task often made complicated by solubility issues), as well as to models suitable for addressing the biochemical basis of their bioactivity or the determinants of their accumulation in various types of vegetal. In addition, non-biochemical experts from the involved institution will also try to frame molecular-based information about plant proteins into the conceptual scheme of the overall sustainability of the whole food chain, with an additional accent on the valorization of those plant proteins that are often thought of as mere "byproducts" of mainstream food processes.

