Adverse reaction to foods: characterization of plant food allergens; studies on the effects of processing and (in vitro) gastrointestinal digestion on food allergens. Particular reference to cereal foods, fruits and derivatives. Evaluation of wheat flour, dough and processed wheat foods digestibility.

Food technology: development and improvement of food products: a) alcoholic beverages from fruits and their quality characterization (sensory, possible presence of allergens and development of techniques for their elimination, health effects, stabilization) b) unripe grape juice (verjuice): sensory, chemical and functional characterization (health, antimicrobials and antioxidative effects); verjuice as dressing and preservative for vegetables. c) enzymes and enzyme inhibitors for the improvement of food quality and preservability. d) development of functional foods with antioxidative activity. e) foams and emulsions from plant proteins to be used in new food products.

Enology: wine chemistry and biochemistry. Particular reference to grape and wine macromolecules (proteins, polysaccharides), and their effects on sensory and technological quality. Development of new processing aids to be used in winemaking. Foams and effervescence of sparkling wines.

Agro-food industry: by-product valorization. a) preparation and utilization of bioactive compounds from by-products for the control of food rancidity. b) extraction and characterization of prebiotic fiber to be used as food ingredient.

Sensory analysis: (trained panel and consumer test) on traditional and new foods. Pairing tests for typical Italian products (e.g., wines, etc., and dairy foods, etc.). Sensory analysis of cheeses produced with new coagulants. Food texture (cheese, baked foods, emulsions) by sensory and instrumental (rehometry) analysis.

Laboratories: Laboratory of Food Science and Technology, DANAEE, Agripolis; Legnaro; Laboratory of Oenology, CIRVE, Conegliano; Laboratory of Sensory analysis, Agripolis, Legnaro

Species: Grape (Vitis vinifera); Cereals (Triticum spp., Hordeum spp.); Rosacee (Malus spp., Prunus spp.)

Technologies/Metodologies: electrophoresis, chromatography, immunochemistry, spectrometry

ERC: LS9_6 Food sciences