

Patrizia Perego

Patrizia Perego PhD, is Full Professor of Chemical Plants (ING-IND/25), in the Polytechnic School, Department of Civil, Chemical & Environmental Engineering (DICCA) and Deputy Dean of the Polytechnic School Genoa University -

2001-2004 Deputy member of MURST Commission concerning criteria and procedures to assign economic resources of “Investment Fund for Basic R&D Activities” (FIRB).

2001-2004 Member of the Administrative Board of Genoa University.

2002 - Member of Genoa University Commission for Internationalization.

2002-2004 Member of the Supervisory Board of Genoa University.

2004-2007 Member of the Administrative Board of Genoa University.

2004 - Responsible for teaching in “Food and Process Technologies” course for graduate.

2006 - Member of the Teaching Staff of the Ph.D. in Chemical, Material and Process Engineering and of the Teaching Staff of the Ph.D. School of Innovating Science and Technologies for the Industrial Engineering.

Referee of International Journals of Food Technologies and Biotechnologies.

Published more than 200 papers of which more than 100 in International Journals.

Member of the Examining Board of PhD in Food Science and Technology of Vigo University, Ourense, Spain (20/06/2005).

Coordinator of the scientific activities related to several research projects funded from MIUR, other national and international agencies and many important industrial companies.

Since several years, she has been engaged in cooperation activities with the following research-groups: Tennessee Valley Authority, USA, on “Alcohol fermentation of woody hydrolyzates (1983-1987), Solar Energy Research Institute, USA, on “Alcohol fermentation of woody hydrolyzates (1983-1987), Roquette Italia S.p.A., Cassano Spinola, AL, Italy, on “Isomerization of glucose to fructose” and “Setting-up of automated methods for the continuous determination of the sugar components of corn starch hydrolyzates” (1996-1999), Milan University, Faculty of Agriculture, Department of Food and Microbiology Science and Technology, on “Bio-esterifications and bio-oxidations by lyophilized cells of fungi and acetic bacteria” (1997-2006), Biotechnology Department, FAENQUIL, Lorena-SP, Brazil, on “Production of xylitol from lignocellulosic materials” (1998-2006), Vigo University, Campus of Ourense, Spain, on “Xylitol production from lignocellulose hydrolyzates by pentose-fermenting yeasts” and Student Mobility within the EU Socrates/Erasmus Program (1999-2006), Department of Microbial Physiology, Federal University of Viçosa, Viçosa-MG (Brazil), on “Xylitol production from xylose by *Debaryomyces hansenii*” (2004-2006).

2002-2003 Research coordinator for the project funded by A&A F.lli Parodi Chemical Industry, titled: “Biotechnological production of flavors and antioxidant compounds”.

The scientific activity of Patrizia Perego has addressed towards the following research fields:

Technology of Food Preservation:

- pasteurization of canned vegetables;
- mild technologies for food stabilisation and functionality improvement;
- optimization of the shelf-life of vegetable sauces by means of modified atmosphere packaging (MAP).

Industrial process optimization:

- rheology of lamination dough for biscuit and snack production;
- roasting plant of cocoa beans;
- drying process of pasta products.

Nutraceutical and functional food development:

- olive oil: technology development for improving olive oil nutraceutical value and its preservation ability by means of ultrasound and/or enzymes in the extractive process;
- soy-bean germ: important source of nutraceutical compounds (vitamins, phytosterols, PUFA – omega-3, omega-6). Application of an innovative technology with the aim of obtaining a product with a purity degree greater than 95%, thus leading to its exploitation as a food additive;
- wine industry: valorization of industrial waste by means of extraction methodology optimization for the recovery of antioxidant compounds (such as resveratrol) for the food and pharmaceutical industry.

Optimised processes for the probiotic production:

- effect of culture composition and fortification of the milk base on the growth, acidification rate, survival and metabolism of probiotic bacteria in fermented milk.

Non conventional 'rice milk' beverage development:

- process development in order to improve nutritional properties by means of starch hydrolysis and protein availability optimization.

She is member of the Italian Society for Biotechnological Engineering and Environmental Biotechnology (SIBA) of European Federation on Biotechnology (EFB), of Gruppo di Ingegneria Chimica dell'Università (GR.I.C.U.), of the Council of the Interuniversity Centre of Human Ecology (CIEU) and Interuniversity National Consortium "Chemistry for the Environment" (INCA).