

Patrizia Perego PhD, is Professor of Chemical Plants at the Department of Civil, Chemical and Environmental Engineering and Deputy Dean of the Polytechnic School at the University of Genoa (Italy). She is member of the National Agricultural Academy.

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 appointed member of the observatory on research activity of Genova University.

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

2006 - Member of the Teaching Staff of the Ph.D. in Chemical, Material and Process Engineering.

2004-2007 appointed member of the observatory on research activity of Genova University.

2012 - Deputy Dean of the Polytechnic School of Genova University.

2011-2014 member of the Groups of Experts of Evaluation at the Italian Agency for the Evaluation of Universities and Research Institutions (ANVUR- VQR 2011-2014).

2013-2016 appointed, by the Academic Council, member of the university commission for Ph.D. research.

2017- appointed, by the Academic Council, member of the university Commission of Research and Technology Transfer.

2014, appointed, by the Academic Council, member of the Steering Committee of the School of Excellence of Genova University (IANUA-ISSUGE).

2013 – Reference Professor for the Academic co-operation agreement between the University of Genova and the University Polytechnic of Bucharest (Romania) that aims to organise programmes for the development of study courses at various levels, including the Double Degree, to promote research and study development grants at the University and to organise joint activities with exchanges of Professors, students, technical and administrative staff as well as possible future work programmes which will be documented by the specific protocols of reciprocity.

1998 – present: Coordinator of a research team at DICCA, University of Genova specialising in Agro-food technology, and responsible for the laboratory. The research team coordinated is composed of research fellows, graduate students and scholars from different countries with different academic backgrounds (agro-food and chemical engineers, chemists, bioengineers and biotechnologists). Section 4.2 provides additional evidence regarding the cultural uniqueness and relevance of the research team with respect to the national and international scene.

2013 – Vice President of the inter-departmental RESEARCH CENTER OF BIOLOGICALLY INSPIRED ENGINEERING IN VASCULAR MEDICINE AND LONGEVITY” (BELONG) which has as its objective the activity of research in a combined scientific field, engineering and

medical, that addresses issues related to the increase in the shelf-life and bioavailability of bioactive molecules by applying techniques of micro-and nano-encapsulation; development of engineered biomaterials; clinical and biological characterization of the molecular processes underlying the onset of vascular diseases; biological evaluation in vitro models and in vivo of bioactive compounds with a protective action in the context of vascular pathologies; research activities in the field of vascular biology both experimental and clinical.

Since her Ph.D. thesis, Patrizia Perego's research activity has been continually focused on Biotechnology and Food Technology, The development of these projects has brought to an interdisciplinary collaboration with the School of Medical Sciences & Pharmaceuticals, for the biological validation of antioxidant substances obtained by extraction through unconventional technologies. This collaboration led to the foundation of the BELONG centre and others scientific collaborations with the University of Lorraine in the field of nanoencapsulation applying liposome techniques, and with the Massachusetts Institute of Technology, Harvard MIT Health Sciences & Technology, Cambridge Massachusetts USA, in the production of Bioabsorbable Engineered Biomaterials and University of Sydney in the green extraction technologies and microencapsulation.

More recently, thanks to the collaboration with the Laboratory of Surfaces Chemistry & Industrial Catalysis, an additional branch of research was addressed to the Energy sector, with a special interest for the conversion of biomasses into biofuels.

Evidence of the results of the above mentioned collaborations can be found in International Scientific Journals and within the contents of International Congresses either published or in press.

She has authored over 300 scientific publications on international journals and conferences, among them more that 150 on peer-reviewed journal.

She has a member of the scientific evaluation committee for PhD thesis at the University of Vigo, Spain (2005, 2006, 2009), University of Granada, Spain (2008), University of São Paulo, Brazil (2010, 2011,2012, 2017), Indian Institute of Technology Roorkee (2014), University of Sydney (2015).

She has developed scientific collaboration with important national and international universities and companies.

1983 - 1987 - Tennessee Valley Authority, USA, on "Alcoholic fermentation of wood hydrolysates"
1983 - 1987 - Solar Energy Resource Institute, USA, on "Alcoholic fermentation of wood hydrolysates"

1998 - Department of Chemical Engineering, Faculty of Science, University of Vigo, home of Ourense, Spain on "Xylitol production from lignocellulosic hydrolysates."

1999 - Grupo de processos Fermentativos, Departamento de Biotechnology, Faculdade de Engenharia Química de Lorraine (FAENQUIL), Lorena, SP, Brazil, on "Acid hydrolysis of lignocellulosic materials for the production of substrates for fermentation".

1999 - Departamento de Tecnologia Bioquímico-Farmacêutica University of São Paulo (USP), São Paulo, Brazil, on "Thermodynamic Study of biological processes".

2000 - Departamento de Tecnologia Bioquímico-Farmacêutica University of São Paulo (USP), São Paulo, Brazil, on "Production of microalgae *Spirulina platensis*"

2008 - University of Sydney, Australia, School of Chemical and Biomolecular Engineering "Biomass to Biofuel: Dilute Acid Hydrolysis of Rice Husk".

2009 - University of Sousse, Tunisia, Laboratory of Chemistry, Higher Institute of Agronomy, "Ecophysiological study and valorisation of by-products and extracts of *Vitex agnus castus* in different areas"

2011 - University of Sydney, Australia, School of Chemical and Biomolecular Engineering "An environmentally-friendly extraction technique to recovery valuable compounds from *Vitis vinifera* wastes."

2013 - University of Osijek (Croatia), Josip Strossmayer University Juray. "Extraction of flavonoids from barley grain using high-pressure/high-temperature reactor".

2013 - Massachusetts Institute of Technology, Harvard-MIT Health Sciences & Technology, Cambridge, MA, USA, Khademhosseini Laboratory, "Fabrication of tubular PGS-PCL fortified with t-resveratrol for tissue engineered vascular implantation".

2013 - Université de Lorraine, Nancy (France), Laboratoire d'Ingénierie des Biomolécules, "Nanovectorization of natural antioxidant compounds"

2014 - University of Sydney, Australia, School of Chemical and Biomolecular Engineering "Encapsulation of antioxidants in liposome systems"

2014 - Massachusetts Institute of Technology, Harvard-MIT Health Sciences & Technology, Cambridge, MA, USA, Khademhosseini Laboratory "Development of a drug-laden hydrogel for the management of infected wounds."