

## CV Gabriella Massolini

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Department of Drug Sciences

Responsible of Pharmaceutical Analysis Lab

Professor Gabriella Massolini graduated in Medicinal Chemistry and Pharmaceutical Technology (Faculty of Pharmacy) with honor in 1981 at Pavia University.

1983 Researcher at Pavia University

1998 Associated Professor

2007 Full Professor of Pharmaceutical Analysis at Pavia University.

### Teaching responsibilities

Pharmaceutical Analysis since 1998; Medicinal Chemistry from 2014 to 2021, (post-graduate level): Master in Pharmaceutical Analysis since 2018 and Masters in Preformulation and Pharmaceutical Development, since 2002.

In 1990, six months visiting scientist at Bradford University (UK) and one year (1992) associated professor at McGill University in Montreal (Canada) working on immobilized albumins for the determination of proteins binding. Invited professor at Tbilisi University (Georgia, 2007) and at Ecole Nationale Supérieure de Chimie et de Physique de Bordeaux (2001 Laboratoire d'Analyse Chimique par Reconnaissance moléculaire) (France)

### Institutional activities

- From 2002 Prof. Massolini is one of the members of the PhD Teaching Council in "Scienze Chimiche e Farmaceutiche e Innovazione industriale" and from 2007 to 2015 she was the director of the PhD School.
- Director of the National PhD School in Pharmaceutical Analysis (Summer School in Pharmaceutical Analysis) 2004-2007.
- 2004-2009 member of the National Council of "Divisione di Chimica Farmaceutica" of the Italian Chemical Society.
- She has been a member of many scientific committees of national and international symposia (PBA, RDPA). In 2003 and 2011 she was co-Chairman of the international meeting "Recent Developments in Pharmaceutical Analysis" .
- She is Editor of Chromatographia since 2006 and referee of important scientific journals such as J. Chrom A, Anal. Chemistry, Analytical and Bioanal. Chemistry.
- From November 2011 to October 2018 she was Director of the Department of Drug Sciences of Pavia University. Until 2022 Member of the board of the Cluster in Life Sciences.
- Member of the board of directors at Pavia University.

### Research activities

She has taken part in Inter-University National Research Projects as investigator (PRIN, FIRB, Regional Grants)

Bibliometric parameters: 140 scientific articles, H index 32, citation 3344 (Scopus, updated 31-1-2024)

### List of publications

<https://www.scopus.com/authid/detail.uri?authorId=7004232052>

Invited speaker at international congresses (HPLC, PBA, MSB) and seminars.

## RESEARCH FIELDS

- Development of innovative approaches in the field of affinity chromatography coupled to mass spectrometry for the identification of biologically active molecules and for the characterization of new targets. In these studies both membrane receptors (P2Y1, GPR17, A2A) and nuclear receptors (PPARs) have been considered.
- Development of stationary phases based on immobilized proteins/enzymes: the novel protein-based HPLC stationary phases have been used as chiral selectors and as biochemical probes for the determination of stereoselective ligand-protein binding interactions, ligand-ligand interactions and for the determination of binding constants.
- Exploitation of immobilized enzymes as bioreactors for the on-line digestion of proteins and for the in flow-synthesis of biologically active molecules.
- Development of analytical platforms (SEC, HILIC, RP, CEX LC-UV/MS) for the characterization of therapeutic proteins (neoglycovaccins against tuberculosis, mAb, therapeutic enzymes) and new on-line HPLC-MS systems for the digestion/purification/identification of proteins obtained by recombinant methods.
- Preparation of a variety of porous polymers, generally known as polyHIPEs using high internal phase emulsions (HIPEs) as templates for the porous structure. The functionalized polyHIPEs can be used for enzyme immobilization, chromatography, sample preparation (molecular imprinting polymers, MIP).