

CV Roberta Cavalli

Roberta Cavalli, PhD in Pharmaceutical Sciences, is Full Professor of Pharmaceutical Technology, Dipartimento di Scienza e Tecnologia del Farmaco - Università degli Studi di Torino.

RC is the coordinator of the Pharmaceutical Chemistry and Technology degree since 2017

RC is the coordinator of the PhD program in Pharmaceutical and Biomolecular Sciences since 2020.

Research activity

Roberta Cavalli has a multi-year experience in the design and development of either conventional or nanotechnology-based pharmaceutical formulations, as well as their *in vitro* and *in vivo* characterization

Much research focused the attention on developing novel nanoparticulate formulations to improve the efficacy of a number of therapeutic molecules. The incorporation of a therapeutic agent within a nanoformulation aims at changing the physico-chemical characteristics of the loaded molecule, modifying the pharmacokinetics and the biodistribution, magnifying the effectiveness and decreasing the side effects. RC developed various types of novel nanocarriers consisting of safe components, mainly polymers or lipids, admitted by the regulatory authorities to assure biocompatibility, biodegradability and low cytotoxicity.

A number of studies concerned the fine tuning of nanostructured systems for low soluble drugs to increase their solubility, improve their bioavailability, modify their pharmacokinetics parameters as well as their biodistribution.

Much research was focused on the design of nanobubbles and nanodroplets vesicle-like nanosystems with a core composed by a gas or a vaporizable compound stabilized by a polymer shell. They can be exploited as drug delivery systems and they can be functionalized for targeting specific cells.

Nanosystems for the delivery of nucleic acid have been developed using polymeric compounds

The research of RC paid a great attention on nanocarrier-based formulations for topical applications. Additionally, much experimental research has been focussed on the design and characterization of new nanostructures as potential nanocarriers for antiviral, antifungal and antibacterial drugs. Among them, various studies concerned either novel nanodelivery systems or novel polymers for the treatment of infectious diseases.

Co-author of about 250 full papers in peer-reviewed international journals with impact factor and more than 30 patents. Overall citations > 11000, *H index* 60 (www.scopus.com).