Franco Pattarino

Personal Data

Born in Torino (I), 1958, 20 October
Lives in Novara (I)
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Curriculum vitae et studiorum

Graduated in Chimica e Tecnologie Farmaceutiche on 1985, 15 November, at Pharmacy Faculty - Università degli Studi di Torino

University career

1998-	Adjunct Professor, Università del Piemonte Orientale
1990-1998	Researcher, Università degli Studi di Torino
1986-1990	Felloship, Università degli Studi di Torino

University positions

2008-2014	Director, Scuola di Specializzazione in Farmacia Ospedaliera, Università del Piemonte Orientale

Main fields of interest

1. Solid pharmaceutical dosage forms
2. Advanced drug delivery systems
3. Microparticles
4. Nanostructured systems
5. Freeze drying
6. Pharmaceutical preformulation and formulation

Current issues of research

1. **Formulation of solid modified release (microparticles and nanoparticles)**

The project has as its goal the development of solid formulations containing drugs belonging to II and IV BCS classes. The use of materials which improve the physicochemical characteristics of the active allows to create therapeutic systems consisting of micro/nanometric size units capable of releasing the drug in a controlled and predictable way.

2. **Studies on the process for the production of innovative solid forms**

There are many technological processes used in the production of advanced pharmaceutical forms: this study is aimed to evaluate the effects of the process operative conditions on the biopharmaceutical characteristics of the product and to optimize them in view of further improvement of the dosage form performances.

3. **Polymorphism of drugs and excipients: impact on the pharmaceutical and technological properties of dosage forms**

The geometric structure of active principal ingredients and excipients has a significant impact on the quality of medicines. The evaluation of their crystalline form and of their transformation kinetics is a fundamental step of the formulation study and development of solid dosage forms. By spectroscopic and thermal investigations, it is studied the behavior of polymorphs is studied in the presence of formulation components, and strategies to limit / prevent polymorphic transformations are proposed.

4. **Freeze-drying of biotech products**

Unlike synthetic drugs, the biotechnological drugs show a limited stability, partially due to the non-optimal conditions of medicinal product manufacturing. Freeze drying is a process often used for these active molecules, that requires particular processing conditions, as well as particular procedures able to limit or prevent the denaturation/ degradation of biotechnological product. The aim of the work is the development of formulations containing biotechnological derivatives and the identification of freeze drying conditions which ensure high quality and effectiveness of the medicine.

TOP FIVE PAPERS

1. Andrea Foglio Bonda, Maurizio Rinaldi, Lorena Segale, Luca Palugan, Matteo Cerea, Carlo Vecchio, Franco Pattarino. Nanonized itraconazole powders for extemporary oral suspensions: role of formulation components studied by a mixture design. Eur. J. Pharm. Sci, 83 (2016) 175–183, doi: 10.1016/j.ejps.2015.12.030
2. Franco Pattarino, Ruggero Bettini, Andrea Foglio Bonda, Andrea Della Bella, Lorella Giovannelli. Polymorphism and kinetic behavior of binary mixtures of triglycerides. Int. J. Pharm., 2014, 473 (1‑2), 87-94
3. Beatrice Albertini, Nadia Passerini, Franco Pattarino, Lorenzo Rodriguez. New spray congealing atomizer for the microencapulation of highly concentrated solid and liquid substances. Eur. J. Pharm. Biopharm., 2008, 69, 348–357.
4. Paolo Mannina, Lorena Segale, Lorella Giovannelli, Andrea Foglio Bonda, Franco Pattarino. Self-emulsifying excipient platform for improving technological properties of alginate–hydroxypropylcellulose pellets. Int. J. Pharm., 499 (2016) 74–80
5. Baldi, Giancarlo; Gasco, Maria R.; Pattarino, Franco. Statistical procedures for optimizing the freeze-drying of a model drug in tert-butyl alcohol-water mixtures. European Journal of Pharmaceutics and Biopharmaceutics (1994), 40(3), 138-41.