

PERSONAL INFORMATION Francesca Selmin

POSITION Associate Professor
Department of Pharmaceutical Sciences - Università degli Studi di Milano

WORK EXPERIENCE

from 2018 **Associate Professor**
Department of Pharmaceutical Sciences - Università degli Studi di Milano
[Business or sector](#) Pharmaceutical Technology and regulatory affairs

2006 **Visiting scientist**
College of Pharmacy - University of Kentucky (KY, USA)
[Business or sector](#) Pharmaceutical Technology and regulatory affairs

2005-2018 **Assistant professor and research fellows**
Department of Pharmaceutical Sciences - Università degli Studi di Milano
[Business or sector](#) Pharmaceutical Technology and regulatory affairs

2004-2005 **Post-doc**
Institute of Medicinal Chemistry - Università degli Studi di Milano
[Business or sector](#) Pharmaceutical Technology and regulatory affairs

2003-2004 **Visiting scientist**
College of Pharmacy - University of Kentucky (KY, USA)
[Business or sector](#) Pharmaceutical Technology and regulatory affairs

EDUCATION AND TRAINING

2004 **PhD in "Chimica del Farmaco"**
Institute of Medicinal Chemistry - Università degli Studi di Milano

2001 **Degree in Industrial Pharmacy**
Università degli Studi di Milano

PERSONAL SKILLS

Teaching Pharmaceutical technology and Legislation of biotechnological medicinal products

Research interest(s) The main fields of research deal with the design of (A) parenteral and (B) transmucosal drug delivery systems. In details:
(A) The research activity deals with the manipulation of biodegradable polymers by grafting anti-oxidants and on the upcycle of natural biopolymers derived from wool keratin and silk fibroins to design micro- and nanoparticle. The research activities are also focused on the issues related to drying using lyophilization and spray-drying.
(B) The research in this field aims to develop mucoadhesive dosage forms, orodispersible films and oral lyophilizate in the attempt to improve the pre-gastric absorption of some drugs and to comply the unmet needs of subpopulations of patients.

ADDITIONAL INFORMATION

Publications Author or co-author of more than 60 publications on peer review journals; presenter of more than 100 contributions to international meetings.

ANNEXES

List of publication of the last five years (2013-2019)

Personal information

I authorize the handling of personal information in this curriculum, according to D.Lgs n. 196/03 and following modifications and Regulations EU 679/2016 (General Regulations concerning Data Protection or GRDP) and art. 7 of University Regulations concerning protection of personal information.

I authorize, according to D.lgs 14/03/2013 n. 33 concerning transparency, in case of conferment of the position and of the fellowship, the publication of this curriculum in the web site of Università degli Studi di Milano in the section "Amministrazione trasparente", "Consulenti e collaboratori".

Annex 1 - List of publication of the last five years (2013-2019)

1. Cilurzo F, Gennari C.G.M., Selmin F, Musazzi U.M., Rumio C, Minghetti P. A novel oromucosal prolonged release mucoadhesive suspension by one step spray coagulation method. *Current Drug Delivery*, 10(3), 251-260, 2013.
2. Cilurzo F, Selmin F, Aluigi A., Bellosta S. Regenerated keratin proteins as potential biomaterial for drug delivery. *Polymers for Advanced Technologies*, 24(11), 1025-1028, 2013.
3. Cilurzo F, Gennari C.G.M., Selmin F, Franzé S., Musazzi U.M., Minghetti P. On the characterization of medicated plasters containing NSAIDs according to novel indications of USP and EMA: adhesive properties and in vitro skin permeation studies. *Drug Development and Industrial Pharmacy*, 41(2), 183-189, 2013.
4. Cilurzo F, Minghetti P, Gennari C.G.M., Casiraghi A., Selmin F, Montanari L. Formulation study of a transdermal patch containing propranolol by design of experiments. *Drug Development and Industrial Pharmacy*, 40(1), 17-22, 2014.
5. Cilurzo F, Vistoli G., Selmin F, Gennari C., Musazzi U., Franzé S., Lo Monte M., Minghetti P. An insight into the skin penetration enhancement mechanism of N-methylpyrrolidone. *Molecular Pharmaceutics*, 11(3), 1014–1021, 2014.
6. Cilurzo F, Vistoli G., Gennari C.G.M., Selmin F, Gardoni F, Franzé S., Campisi M., Minghetti P. The role of the conformational profile of polysaccharides on skin penetration: the case of hyaluronan and its sulfates. *Chemistry & Biodiversity*, 11, 551-561, 2014.
7. Selmin F, Gennari C.G.M., Minghetti P, Marotta L.A., Viviani B., Vagdama P, Montanari L., Cilurzo F. Enhanced hydration stability of Bombyx mori silk fibroin/PEG 600 composites for tissue engineering. *Polymer for Advanced Technologies*, 25(5), 532–538, 2014.
8. Cilurzo F, Selmin F, Gennari C.G.M., Montanari L., Minghetti P. Application of methyl methacrylate copolymers to the development of transdermal or loco-regional drug delivery systems. *Expert Opinion on Drug Delivery*, 11(7), 1-13, 2014.
9. Tonetti C., Aluigi A., Selmin F, Cilurzo F., Mazzuchetti G. Removal of Cu(II) ions from water using thermally-treated horn–hoof powder as biosorbent. *Desalination and Water Treatment*, 55, 1105–1115, 2015.
10. Selmin F, Franceschini I., Cupone I.E., Minghetti P, Cilurzo F. Aminoacids as non-traditional plasticizers of maltodextrins fast dissolving films. *Carbohydrate Polymers*, 115, 613–616, 2015.
11. Selmin F, Puoci F, Parisi O.I., Franzé S., Musazzi U.M., Cilurzo F. Caffeic Acid-PLGA Conjugate to design protein drug delivery systems stable to irradiation. *Journal of functional biomaterials*, 6(1), 1-13, 2015.
12. Cilurzo F, Casiraghi A., Selmin F, Minghetti P. Supersaturation as a tool for skin penetration enhancement. *Current pharmaceutical design*, 21(20), 2733-2744, 2015.
13. Tolva V., Mazzola S., Zerbi P., Casana R., Albertini M., Calvillo L., Selmin F, Cilurzo F. A successful experimental model for intimal hyperplasia prevention using a resveratrol eluting balloon. *Journal of Vascular Surgery*, 63(3), 788–794, 2016.
14. Franceschini I., Selmin F, Pagani S., Minghetti P, Cilurzo F. Nanofiller for the mechanical reinforcement of maltodextrins orodispersible films. *Carbohydrate Polymers*, 136, 676-681, 2016.
15. Russo E., Selmin F, Baldassari S., Gennari C.G.M., Caviglioli G., Cilurzo F, Minghetti P, Parodi B. A focus on mucoadhesive polymers and their application in buccal dosage forms. *Journal of Drug Delivery Science and Technology*, 32, 113–125, 2016.
16. Altomare A., Regazzoni L., Paredes Parra X.M., Selmin F, Rumio C., Carini M., Aldini G., Set-up and application of an analytical approach for the quality control of purified colostrum as food supplement. *Journal of Chromatography B*, 1028, 130-144, 2016.
17. Gennari C.G.M., Selmin F, Ortenzi M.A., Franzé S., Musazzi U.M., Casiraghi A., Minghetti P, Cilurzo F. In situ film forming fibroin gel intended for cutaneous administration. *International Journal of Pharmaceutics*, 511(1): 296–302, 2016.
18. Musazzi U.M, Santini B., Selmin F, Marini V., Corsi F, Allevi R., Ferretti A.M., Prosperi D., Cilurzo F, Colombo M., Minghetti P. Impact of semi-solid formulations on skin penetration of iron oxide nanoparticles. *Journal of Nanobiotechnology*, 15(14): 1-10, 2017.
19. Casiraghi A., Franzé S., Selmin F, Dazio V., Minghetti P. Investigation of the effect of different emulsifiers on the transdermal delivery of EGCG entrapped in a polymeric micelle system. *Planta medica*, 83: 405-411, 2017.
20. Selmin F, Magri G., Gennari C.G.M., Marchianò S., Ferri N., Pellegrino S. Development of poly (lactide-co-glycolide) nanoparticles functionalized with a mitochondrial penetrating peptide. *Journal of Peptide Science*. 23(2): 182-188. 2017.

21. Gennari C.G.M., Selmin F., Franzè S., Musazzi U.M., Quaroni G.M.G., Casiraghi A., Cilurzo F. A glimpse in critical attributes to design cutaneous film forming systems based on ammonium methacrylate. *Journal of Drug Delivery Science and Technology*. 41: 157-163. 2017.
22. Casagrande S., Tiribuzi R., Casseti E., Selmin F., Gervasi G., Barberini L., Freddolini M., Ricci M., Schoubben A., Cerulli G., Blasi P. Biodegradable composite porous poly (dl-lactide-co-glycolide) scaffold supports mesenchymal stem cell differentiation and calcium phosphate deposition. *Artificial Cells, Nanomedicine and Biotechnology*. 21, 2-11, 2017
23. Cilurzo F., Musazzi U.M., Franzè S., Selmin F., Minghetti P. Orodispersible dosage forms: biopharmaceutical improvements and regulatory requirements. *Drug Discovery Today* 23(2) 251-259, 2018.
24. Musazzi U.M., Selmin F., Franzè S., Gennari C.G.M., Rocco P., Minghetti P., Cilurzo F. Poly(methyl methacrylate) salt as film forming material to design orodispersible films. *European Journal of Pharmaceutical Sciences*, 115, 37-42, 2018.
25. Garipova V., Gennari C., Selmin F., Cilurzo F., Moustafine R. Mucoadhesive interpolyelectrolyte complexes for the buccal delivery of clobetasol. *Polymers*, 10(1), 85, 2018.
26. Galliera E., Ragone V., Marazzi M.G., Selmin F., Banci L., Romanelli M.M.C. Vitamin E-stabilized UHMWPE: Biological response on human osteoblasts to wear debris. *Clinica Chimica Acta*, 486: 18-25, 2018.
27. Franzè S., Selmin F., Samaritani E., Minghetti P., Cilurzo F. Lyophilization of Liposomal Formulations: Still Necessary, Still Challenging. *Pharmaceutics*, 10(3), 139, 2018.
28. Musazzi U.M., Selmin F., Orteni M.A., Khalid G.M., Franzè S., Minghetti P. Personalized orodispersible films by hot melt ram extrusion 3D printing. *International Journal of Pharmaceutics*, 551(1-2), 52-59, 2018.
29. Magri G., Franzè S., Musazzi U.M., Selmin F., Cilurzo F. Maltodextrins as drying auxiliary agent for the preparation of easily resuspendable nanoparticles. *Journal of Drug Delivery Science and Technology* 50, 181-187, 2019.
30. Gennari C.G.M., Selmin F., Minghetti P., Cilurzo F. Medicated foams and film forming dosage forms as tools to improve the thermodynamic activity of drugs to be administered through the skin. *Current Drug Delivery* 2019.
31. Magri G., Franzè S., Musazzi U.M., Selmin F., Cilurzo F. Data on spray-drying processing to optimize the yield of materials sensitive to heat and moisture content. *Data in brief* 2019 (online version available)
32. Aluigi A., Barbalinardo M., Sotgiu G., Zamboni R., Nocchetti M., Donnadio A., Corticelli F., Valle F., Gennari C.G.M., Selmin F., Posati T., Giuri D. Nano-hybrid electrospun non-wovens made of wool keratin and hydrotalcites as potential bio-active wound dressing. *Nanoscale* 2019 (online version available)
33. Magri G., Selmin F., Cilurzo F., Fotaki N. Biorelevant release testing of biodegradable microspheres intended for intra-articular administration. *European Journal of Pharmaceutics and Biopharmaceutics*. 2019 (accepted for publication)