

**Bice Conti, MSc Pharmaceutical Chemistry and Technology, post graduate specialization Industrial Pharmacy.**



**CURRENT POSITION**

- Professor of Pharmaceutics, Department of Drug Sciences, University of Pavia, Via Taramelli 12, Pavia, Italy
- Director, Laboratory of Pharmaceutical Technology and Law, University of Pavia, Italy
- Coordinator of Master degree “Industrial Nanobiotechnologies for Pharmaceuticals”, University of Pavia, Italy
- Member of the teaching board of the doctoral course "Biomolecular Sciences and Biotechnology" IUSS, Pavia Italy
- Member of the teaching board of the doctoral course “Chemical and Pharmaceutical Sciences and Industrial Innovation”, University of Pavia, Pavia Italy
- Collaborating Faculty member, Foundation IRCCS Polyclinic San Matteo, Pavia

**WEBSITES**

<https://unipv.unifind.cineca.it/individual?uri=http%3A%2F%2Firis.unipv.it%2Fresource%2Fperson%2F656995>

<https://www.pharmatechlaw.it/home.php>

**ORCID ID** <https://orcid.org/0000-0002-0034-2815>

**SCOPUS Author ID** <https://www.scopus.com/authid/detail.uri?authorId=7005621694>

**Google Scholar:** [https://scholar.google.gr/citations?view\\_op=new\\_articles&hl=en&imq=Conti+Bice#](https://scholar.google.gr/citations?view_op=new_articles&hl=en&imq=Conti+Bice#)

**PubMed:** <https://pubmed.ncbi.nlm.nih.gov/?term=Conti+B>

**PERSONAL**

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**EDUCATION / AFFILIATIONS /POSTS**

- 1976-1981:** School of Pharmacy, **University of Pavia**, GR. *Degree:* master in Pharmaceutical Chemistry and Technology (110/110 cum Laude)
- 1982-1985:** Dept of Pharmaceutical Chemistry, University of Pavia, GR. *Degree:* specialization in Industrial Pharmacy
- 1984-1991:** Lecturer of Pharmaceutics, Dept of Pharmaceutical Chemistry, University of Pavia, Italy.
- 1987-1988:** Visiting professor, College of Pharmacy, University of Kentucky, USA. Laboratory Prof. Patrick P. DeLuca.
- 1992-1995:** Associate professor, Department of Pharmaceutical Sciences, University of Catania, Italy.
- 1995-2006:** Associate professor, Department of Pharmaceutical Sciences, University of Pavia, Italy.
- 2007- 2011:** Full professor, Department of Pharmaceutical Sciences, University of Pavia, Italy.
- 2011- currently:** Full professor, Department of Drug Sciences, University of Pavia, Italy.
- 2021- currently:** Collaborating Faculty member, Foundation IRCCS Polyclinic San Matteo, Pavia .

## RESEARCH ACTIVITIES

- **Nanomedicines:** Design, preparation, characterization, validation of conceptually innovative micro-nano-systems to improve stability and bioavailability of drugs; local drug delivery (i.e. to lungs).
- **Nanomedicines:** investigating nano drug delivery system as carriers of new therapeutic agents to fight emerging infectious disease (on going INFAC project)
- **Combining drug delivery with tissue regeneration purposes:** design and development of nanofibrous polymer scaffolds for soft tissue regeneration (i.e. esophagus, small blood vessels) implemented with anti-infective and anti-inflammatory drugs.
- **Investigating microfluidics** as new cutting edge technology for the manufacturing of polymer nanoparticles and liposomes loaded with antibiotics, anti-inflammatory drugs (DSF Regional/European project).
- **Investigating electrospinning** as technique for the manufacturing of nanofibrous scaffolds with tailored architecture and intended for soft tissue regeneration (i.e. esophagus, blood vessels) and wound healing (on going project Italian Ministry of Health and CARIPLO foundation).
- **Investigating innovative biodegradable and biocompatible polymers** for the design of scaffolds for tissue regeneration. The scientific research exploits innovative and advantageous opportunities offered by polymers focusing, but not exclusively, on biodegradable biocompatible synthetic polymers, i.e. polyesters and derivatives, and new peptide based nanomaterials (on going SMET project and patent, PROTESI-CAM project).
- **Nanotechnology** applied to electroporation technique to improve anticancer therapies in head and neck cancer, with development of an in vitro model (on going project Italian Ministry of Health).

## PARTICIPATION IN RESEARCH PROJECTS-FUNDING

Received 1.5M€ total funding for research, from: (i) European Committee (under FP6, NUTRIDENT, Marie Curie, REMEDI), Regional-co-European (DSF Project), Inter regional, (PROTESICAM project), and other Framework programs), (ii) Competitive national programs: Italian Ministry of Health (Immunohub, Finalized research programs), Italian Ministry of University (PNRR PE13-INFAC), private foundation CARIPLO (circular economy, CUT-TO-PRO project) and. (iii) Industry; Role: OU coordinator and/or participant .

## TEACHING ACTIVITIES

(1991-) *Undergraduate*

Pharmaceutical Technology, Industrial Pharmacy, Preparation of Drug Formulations; Galenic; Innovative NanoFormulations.

(1995-) *Postgraduate*

Pharmaceutical Technology.

## PRIZES-HONORS

**2011:** Best poster prize in 51st AFI Symposium, Rimini, Italy.

**2014 – 2016:** President of Controlled Release Society Italy Chapter

**2016:** Best poster prize in 10<sup>th</sup> AItUN annual meeting, Parma, Italy.

**2020:** Invitation to serve as Guest editor of *International Journal of Molecular Sciences* (MDPI Publishing, ISSN 1422-0067) Special Issue “Challenges, Opportunities and Innovation in Local Drug Delivery”.

**2021:** invitation by CRSC press to publish a chapter within the book Book ISBN: 9781032122717 Catalog # 484775, Emerging Drug Delivery and Biomedical Engineering Technologies: Transforming Therapy.

**2022:** Invitation to serve as Guest editor of *Pharmaceutics* (MDPI Publishing,ISSN: 1999-4923) Special Issue ““Electrospun Fibers: Advancement in Drug Delivery, Control Release, and Tissue Regeneration”

**2022:** Best poster prize in 61st AFI Symposium, Rimin, Italy.

## CONFERENCE ORGANIZATION

**President of Organizing Committee:** AFI workshop “Development of Biotechnological Drugs” University of Pavia (2007); AFI workshop “Biosimilar, challenges and opportunities” Univerisyt of Pavia (2008); AItUN minisymposium “Carbon nanotubes in medicine”, Pavia (2009); 3<sup>rd</sup> biotech workshop “Drug delivery systems for Biotech products”, Pavia (2010); Annual thematic workshop of CRS Italian Chpt, “Design and industrial development of advanced drug delivery systems” (2013); annual thematic workshop of CRS Italian Chpt, “Drug delivery systems: pharmacokinetic challenges and targeting strategies” (2014); 18th National School for Doctorate in Pharmaceutical Technology “INNOVATION IN LOCAL DRUG DELIVERY” (2018), 5th International Workshop on Nanomedicines, FROM BIOTECHNOLOGY TO NANOBIO TECHNOLOGY AND VACCINES ,EMJMD NANOMED, Pavia. July (2022)

**Member of scientific Committee:** “National Congress on Biomaterials” Salice Terme (PV), 15-17 june ( 2009). 3th biotec workshop “Drug delivery systems for biotec products”, Pavia, Italy (2010); 14<sup>th</sup> ADRITELF National School for Doctorate in Pharmaceutical Technology “Strategies for site specific release of drugs to central nervous system”, Rende, CZ, Italy (2014). AFI annual Symposium, from 53<sup>th</sup> to 63<sup>th</sup> (2014 - 2024) Edition; ECM (Education Course in Medicine, 2006 – 2015);

## PROFESSIONAL AFFILIATIONS

- AAPS (American Association of Pharm. Scientists) until 2019
- Controlled Release Society (CRS), President of Controlled Release Society Italy Chapter (2014 – 2016)
- SITELF (former ADRITELF, Italian Society of Pharmaceutical Technology and Legislation)
- AFI (Pharmaceutical Industry Association)

## PROFESSIONAL ACTIVITIES

### **Editorial activities:**

Member of editorial committee of: “Journal of Drug Delivery Sciences and Technology (JDDST),” (Elsevier Publishing). <https://www.scimagojr.com/journalsearch.php?q=22204&tip=sid>

Member of editorial committee of: “International Journal of Molecular Science” (MDPI Publishing) (ISSN 1422-0067; CODEN: IJMCFK; ISSN 1661-6596 for printed edition). <https://www.scimagojr.com/journalsearch.php?q=25879&tip=sid>

Member of editorial committee of: “Recent Patents on Drug Delivery & Formulation” (Bentham Science publishing). <https://www.scimagojr.com/journalsearch.php?q=11500153306&tip=sid>

Reviewer for: Journal of Controlled Release, AAPS Pharmaceutical Science and Technology, Pharmaceutics, Material Sciences and Engineering C, Reactive and Functional Polymers, International Journal of Pharmaceutics, International Journal of Molecular Sciences (IJMS), Journal of Drug Delivery Science and Technology (JDDST).

### **Research Evaluation Activities:**

Research proposal Evaluation for Italian Ministry of University (MUR, 2010 - ); Research proposal Evaluation for Regional projects (2022 -); Mid term regional projects evaluation (2023 - ).

### **National Committee activities:**

Member of > judging commissions for the national public competition for qualifications and exams for positions full tenured professor (1997 – ); Member of the Italian Ministry of Health committee for the release of marketing authorization of veterinary products (2002 – 2004). Member of scientific Committee of Interuniversity Consortium TEFARCO INNOVA (2011 – 2016).

### **University committees (UNIPV, UNICT, UNIPA):**

Member of teaching board of PhD course in “Technology of biologically active substances” University of Palermo and Catania, Italy (1992 – 1996); Member of the doctoral course committee "Chemistry and Pharmaceutical Technology", Department of Drug Sciences, University of Pavia, Italy (2002 – 2016); Coordinator of II level master degree in “Pharmaceutical Technology and Regulatory Aspects” (2003 – 2010); member of scientific committee of Center for Health Technology (CHT), university of Pavia (2008 -); Dean of Pharmacy and Pharmaceutical Chemistry and Technology (Industrial Pharmacy) MSc courses of the University of Pavia (2009 – 2019); Member of committee of the PhD course in "Biomolecular Sciences and Biotechnology" IUSS, Pavia Italy; Delegate of the Dept. of Drug Sciences for University students orientation (2019 -); President of the undergraduate studies committee of the school of Pharmacy (2009 – 2017); President of the Internal Evaluation Committee of the Dept. of Drug Sciences (2009 – 2019). Coordinator of master course Industrial Nanobiotechnologies for Pharmaceuticals (2022 - ); Member of the teaching board of doctoral course in "Chemical and Pharmaceutical Sciences and Industrial Innovation", Department of Chemistry, University of Pavia, Italy (2023 – );

### **PATENTS**

*3 National and/or European*

### **PUBLICATIONS (GENERAL)**

187 papers peer-reviewed journals, 4 chapters in books (or series), about 200 Abstracts in proceeding of National & International conferences, 2 PCT applications plus 1 Italian patent. Participation in about 100 International conferences/workshops;

**Invited speaker** in National and International scientific meetings/workshops/conferences.

### **METRICS**

**Scopus** 187 cited documents: **Citations:** 4980; **h-index:** 39

### **10 REPRESENTATIVE PUBLICATIONS**

1. Colonna C., Dorati R., Conti B., Caliceti P., Genta I., Sub-unit vaccine against *S. aureus*-mediated infections: Set-up of nano-sized polymeric adjuvant, *International Journal of Pharmaceutics*, 452, 1–2, 2013, 390-401, <https://doi.org/10.1016/j.ijpharm.2013.05.037>. [IF 5.07]
2. Colzani B., Speranza G., Dorati R., Conti B., Modena T., Bruni G., Zagato E., Vermeulen L., Dakwar G.R., Braeckmans K., Genta I., Design of smart GE11-PLGA/PEG-PLGA blend nanoparticulate platforms for parenteral administration of hydrophilic macromolecular drugs: synthesis, preparation and in vitro/ex vivo characterization, *International Journal of Pharmaceutics*, 511, 2, 2016, 1112-1123, <https://doi.org/10.1016/j.ijpharm.2016.08.011>. [IF 4.06]
3. Dorati R., Pisani S., Maffei G., Conti B.\*, Modena T., Chiesa E., Bruni G., Musazzi, U.M. Genta I., Study on hydrophilicity and degradability of chitosan/poly(lactide-co-polycaprolactone) nanofibre blend electrospun membrane, *Carbohydrate Polymers*, 199, 2018, 150-160, <https://doi.org/10.1016/j.carbpol.2018.06.050>. [IF 6.04]
4. Dorati R., DeTrizio A., Spalla M., Migliavacca R., Pagani L., Pisani S., Chiesa E., Conti, B.\*, Modena, T., Genta I., Gentamicin Sulfate PEG-PLGA/PLGA-H Nanoparticles: Screening Design and Antimicrobial Effect Evaluation toward Clinic Bacterial Isolates. *Nanomaterials* 2018, 8, 37. <https://doi.org/10.3390/nano8010037> [IF 4.25]
5. Chiesa E., Riva F., Dorati R., Greco A., Ricci S., Pisani S., Patrini M., Modena T., Conti B., Genta I., On-

Chip Synthesis of Hyaluronic Acid-Based Nanoparticles for Selective Inhibition of CD44+ Human Mesenchymal Stem Cell Proliferation. *Pharmaceutics* 2020, 12, 260. <https://doi.org/10.3390/pharmaceutics12030260> [IF 5.40]

6. Pisani S., Dorati R., Genta I., Benazzo M., Conti B.\*, Prina Mello A.\*, A study focused on macrophages modulation induced by the Polymeric Electrospun Matrices (EL-Ms) for application in tissue regeneration: In vitro proof of concept, *International Journal of Pharmaceutics*, 603, 2021, 120712, <https://doi.org/10.1016/j.ijpharm.2021.120712>. [IF 6.51]
7. Chiesa E., Greco A., Riva F., Dorati R., Conti B., Modena T., Genta I. CD44-Targeted Carriers: The Role of Molecular Weight of Hyaluronic Acid in the Uptake of Hyaluronic Acid-Based Nanoparticles. *Pharmaceutics* 2022, 15, 103. <https://doi.org/10.3390/ph15010103> [IF 4.66]
8. Pisani S., Calcaterra V., Croce S., Dorati R., Bruni G., Genta I., Avanzini A., Benazzo M., Pelizzo G., Conti B.\*, Shape memory engineered scaffold (SMES) for potential repair of neural tube defects, *Reactive and Functional Polymers*, 173, 2022, 105223, <https://doi.org/10.1016/j.reactfunctpolym.2022.105223> [IF 4.966]
9. Rosalia M., Grisoli P., Dorati R., Chiesa E., Pisani S., Bruni G., Genta I., Conti B.\* Influence of Electrospun Fibre Secondary Morphology on Antibiotic Release Kinetic and Its Impact on Antimicrobial Efficacy. *Int. J. Mol. Sci.* 2023, 24, 12108. <https://doi.org/10.3390/ijms241512108> [IF 5.6]
10. Pisani S., Di Martino D., Cerri, S., Genta I., Dorati R., Bertino G., Benazzo M., Conti B.\* Investigation and Comparison of Active and Passive Encapsulation Methods for Loading Proteins into Liposomes. *Int. J. Mol. Sci.* 2023, 24, 13542. <https://doi.org/10.3390/ijms241713542> [IF 5.6]

#### **CHAPTERS IN BOOKS-BOOK SERIES**

3 Chapters in Books or book series

#### **INVITED PRESENTATIONS**

10 INVITED PRESENTATIONS (Invited, Keynote and Plenary speaker) in International Conferences and Workshops,

#### **MENTORING -MAJOR CONTRIBUTIONS TO THE EARLY CAREERS OF RESEARCHERS**

##### **I have mentored/supervised:**

- >150 completed master thesis in Pharmacy, Pharmaceutical chemistry and Technology, Medical and Pharmaceutical Biotechnology
- 25 II level Master Theses in Pharmaceutical technology and Regulatory Aspects (and 37 running are currently running)
- 6 PhDs (and 1 is currently running)
- 4 Post-Doc Researchers (and currently 1)
- I am *currently supervising* 6 experimental master theses in Pharmacy, Pharmaceutical chemistry and Technology, Medical and Pharmaceutical Biotechnology; 7 II level Master students; 1 PhD student and 1 Post-Doc Scientists