

## PERSONAL INFORMATION

## BICE CONTI



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Sex **Female** | 23/10/1957 | Nationality **Italian**

## WORK EXPERIENCE

- 2007 – current **Full professor SSD CHIM09** (Applied pharmaceutical chemistry and technology) at the Department of Drug Sciences of the University of Pavia, Italy.
- 2017 – current **Co-Coordinator of EMJMD Nanomed** (European Master Joint Master Degree Nanomedicine for Drug Delivery), University of Paris (France), Pavia (Italy), Patras (Greece), Angers (France).
- 2017 - current **Member of committee of the PhD course** in "Biomolecular Sciences and Biotechnology" IUSS, Pavia Italy
- 2011 - 2016 **Member of scientific Committee** of Interuniversity Consortium TEFARCO INNOVA.
- 2009 – 2019 **Dean of Pharmacy and Medicinal Chemistry and Pharmaceutical Technology** (LM13) MSc courses of the University of Pavia.
- 2004 - 2010 **Coordinator of II level Master Course** in Pharmaceutical Technology and regulatory activities, at the University of Pavia, Italy.
- 2002 – 2016 **Member of committee of the PhD course** "Chemistry and Pharmaceutical Technology", Department of Drug Sciences, University of Pavia, Italy.
- 2002 – 2004 **Member of the Italian Ministry of Health** committee for the release of marketing authorization of veterinary products.
- 1995 – 2006 **Associate Professor SSD CHIM09** (Applied pharmaceutical chemistry and technology), Department of Pharmaceutical Chemistry, University of Pavia, Italy
- 1992 – 1995 **Associate Professor SSD CHIM09** (Applied pharmaceutical chemistry and technology), Department of Pharmaceutical Sciences, University of Catania, Italy
- 1987 – 1988 **Visiting scientist** at College of Pharmacy, University of Kentucky, Lexington, KY, USA
- 1984 – 1991 **Assistant professor SSD CHIM09** (Applied pharmaceutical chemistry and technology) at the Department of Drug Sciences of the University of Pavia, Italy
- 2008 – current **Teaching** to Medical and Pharmaceutical Biotechnology master courses of the University of Pavia
- 2017 - current **Teaching** to Chemical and Pharmaceutical Sciences and Industrial Innovation PhD course of the University of Pavia
- 2012 – 2016 **Teaching** to Chemistry and Pharmaceutical Technology PhD course of the University of Pavia.
- 2001 – 2012 **Teaching** to Pharmacy master courses of the University of Pavia.
- 1992 – 1995 **Teaching** to Medicinal Chemistry and Pharmaceutical Technology master courses of the University of Catania.
- 1995 - current **Teaching** to Medicinal Chemistry and Pharmaceutical Technology master courses of the University of Pavia.

## EDUCATION AND TRAINING

- 1981 – 1984 **Post graduate specialization** degree in Industrial Pharmacy at the University of Pavia, Italy. (EQF level 8)
- 1981 **Qualified pharmacist**
- 1976 - 1981 **Degree in Medicinal Chemistry** and Pharmaceutical Technology at the University of Pavia, Italy (EQF level 7)

List of principal subjects covered or skills acquired

Pharmaceutical sciences, biopharmaceutics, pharmaceutical technology, applied pharmaceutical chemistry, regulatory affairs, polymer science applied to pharmaceuticals, industrial pharmacy.

**WORK ACTIVITIES****Statement of scientific research topics and activity**

I am deeply involved for several years in drug delivery formulation studies, namely pharmaceutical nanotechnology, also combining drug delivery with tissue regeneration purposes. My scientific research involves design, preparation, characterization, validation of conceptually innovative micro-nano-systems to improve stability and bioavailability of drugs, local and targeted drug delivery. My 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 project **NANOREMEDI** H2020 HORIZON-MSCA-2021-DN-01, proposal # 101072645) to optimize and target antibacterial therapy. Studies focused on AMR reduction in surgical bacterial infections have been addressed. Particular focus has also been addressed to emerging manufacturing techniques for nanoparticles and scaffolds such as microfluidics and electrospinning. I collaborate with Italian and foreign academics, companies and hospitals.

I am currently involved in PNNR PE13 INF-ACT project and "Immunohub" project granted by Italian Health Dept..

**Organizational and management activities**

- 2022** **Member of Organizing and Scientific committee** of NANOMED Workshop" FROM BIOTECHNOLOGY TO NANOBIOTECHNOLOGY AND VACCINES", Pavia, 11- 13 July 2022. <https://www.nanomed2022.it/> The workshop is connected to EMJMD NANOMED
- 2022** **Organizing** EMJMD NANOMED summer school "Design of pre-clinical and clinical trials with nano-drug delivery systems, and critical assessment of the trial results", Pavia, 4<sup>th</sup> – 11<sup>th</sup> July 2022.
- 2018** **Member of organizing committee** of 18th National School for Doctorate in Pharmaceutical Technology "INNOVATION IN LOCAL DRUG DELIVERY", Como, 25- 27 September 2018. The doctorate school was sponsored by CARIPLO ( grant scuole alta formazione).
- 2016 – 2020** **Founder and Board of Directors member** of Polymerix Ltd, academic spin-off of the University of Pavia, PTS, Viale Taramelli 1, 27100 Pavia, Italy. Annula budget 40000 €
- 2015 – current** **Member of the scientific committees** of annual Simposio AFI, from 55<sup>th</sup> to 61<sup>th</sup> (2022) Edition
- 2014 – 2016** **President of Controlled Release Society** Italian Chapter (CRS IT Chpt)
- 2014** **Member of organizing and scientific** committee of annual thematic workshop of CRS Italian Chpt, "Drug delivery systems: pharmacokinetic challenges and targeting strategies", Florence 6 – 8 November 2014
- 2014** **Member of scientific committee** of 14<sup>th</sup> National School for Doctorate in Pharmaceutical Technology "STRATEGIE PER IL RILASCIO E DIREZIONAMENTO DI FARMACI AL SNC", Rende, 24- 26 September 2014. The doctorate school was sponsored by ADRITELF.
- 2013** **Member of organizing and scientific** committee of annual thematic workshop of CRS Italian Chpt, "Design and industrial development of advanced drug delivery systems", Pavia, 21 – 23 November 2013.
- 2013 – 2016** **Member of steering board and secretary of ADRITELF** (Associazione Italiana Docenti Ricercatori Tecnologia e Legislazione Farmaceutica)
- 2008 – current** **Member of Controlled Release Society** Italian Chapter (CRS IT Chpt) and member of steering board
- 2009 - 2015** **Member of Controlled Release Society**
- 2008 – current** **Member of AFI scientifica** (Associazione Farmaceutici Industria).
- 2008 – current** Member of working party on Advanced therapies and biotechnological pharmaceutical products of AFI
- 2008 - current** **Member of ADRITELF** (Associazione Italiana Docenti Ricercatori Tecnologia e Legislazione Farmaceutica)
- 2002 - 2004** Member of the committee for Marketing Authorization of Veterinary Medicinal Products of the Italian Health Department.

**Editorial activity****Current**

**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>

**Current**

**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>

**Current**

**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).

**2020 - 2021**

**Guest editor of** *International Journal of Molecular Sciences* (MDPI Publishing,ISSN 1422-0067) Special Issue "Challenges, Opportunities and Innovation in Local Drug Delivery".

**2022 – 2023**

**Guest editor of** *Pharmaceutics* (MDPI Publishing,ISSN: 1999-4923) Special Issue "Electrospun Fibers: Advancement in Drug Delivery, Control Release, and Tissue Regeneration".

**2009 - current**

**Abstract reviewer** for CRS Annual International meetings.

**Invited presentations****(Last 3 years)**

Virtual Pharm Sci Conference  
**2021, 7-9 September 2021**

APS PharmSci Meeting, Emerging Technologies Focus Group, B. Conti Department of Drug Sciences, University of Pavia, "Microfluidics as emerging technique in manufacturing polymer nanoparticles" 9 September 2021, 14.45 – 15.30.

105° Congresso Nazionale SIO  
(Società Italiana di  
Otorinolaringologia e Chirurgia  
Cervico Facciale  
**Napoli 16 – 19 Maggio 2018**

RELAZIONE UFFICIALE "Patologia infettiva emergente e riemergente in ORL", B.Conti, Department of Drug Sciences, University of Pavia, "WHAT IS THE FUTURE FOR ANTIBIOTIC TREATMENT? Antibiotic Treatment and Nanomedicine. 16 May, 16 – 16.20.

Joint meeting EPNOE (European  
Polysaccharides network of  
excellence) and CRS (Controlled  
Release Society) It Chpt  
**Rome, 14 June 2018**

B.Conti Department of Drug Sciences, University of Pavia, "Polysaccharides-based NANO drug delivery systems".

## Grants (Last 10 years)

- 2022 - 2026** **NANOREMEDI - 101072645** - GAP-101072645 H2020 HORIZON-MSCA-2021-DN-01, proposal # 101072645  
 Proposal Title: Functional Nanoscaffolds for Regenerative Medicine. Amount granted to the research unit 518000 €.  
 The overall goal of the project is design, preparation , characterization and validation of conceptually innovative peptide based nanomaterials for regenerative medicine applications. .The project will tackle three highly relevant cases studies: i) tissue engineered vascular grafts to replace damaged peripheral arteries; ii) stem cell based regenerative medicine for bone and cartilage repair; iii) **facing with implantation failure; the last addressed to overcome bacterial severe infections.**
- 2017 – 2020** **Project Ricerca Corrente 2017** grant #12835 “An hybrid approach to the repair of esophageal defects: from bio scaffolds engineering to in vivo validation in the porcine model” IRCCS Policlinico S.Matteo. Pavia, Italy, B.Conti research unit P.I., M.Benazzo project P.I.. Amount granted: 158000 €
- 2021 - 2023** **Project Ricerca Corrente 2021**, grant #08053921, "3D-Hybrid Engineered Tubular Bioscaffold for Esophageal Tissue Regeneration: from in vitro to in vivo validation " IRCCS Policlinico S.Matteo Pavia, Italy, , B.Conti research unit P.I., M.Benazzo project P.I.. Amount granted 150000 €  
 Both "Ricerca Corrente projects" are aimed to esophageal regeneration in order to satisfy an unmet medical need rising when esophageal partial resection is required, due to different pathologies. Design and development of tubular biodegradable biocompatible nanofibrous scaffolds obtained combining 3D printing and Electrospinning is investigated. In order to reduce postoperative inflammation and avoid infections, loading of Anti-inflammatory and antibiotic drugs in the polymeric scaffolds is investigated. The scaffolds will be engineered with mesenchymal stem and *in vivo* tested in an animal model.  
 Relevance to PE13: investigation on a nanofibrous drug delivery system with both regenerative and antibacterial properties.
- 2020 – 2022** **Project Hub Regione Lombardia** “Digital Smart Fluidics” DSF, B. Conti research unit member. F.Auricchio P.I.. Amount granted 2000000 €  
 The part of project developed by B.Conti research unit aims to investigate a cutting edge technology such as microfluidics focused on manufacturing polymer nanoparticulate drug delivery systems. A prototype apparatus has been developed and will be patented. Relevance to PE13: innovation in nanoparticulae drug delivery systems manufacturing technology.
- 2011 – 2012** **Research project** “Development of biodegradable implantable polymer system for prolonged release of ivermectin” granted from CEVA-Vetem, Agrate Brianza, Italia. B. Conti project P.I.. Amount granted 30000 €.  
 The project aimed to design and developed biodegradable and biocompatible microparticulate drug delivery systems loaded with Ivermectin and intended for subcutaneous administration in small animals. The microparticulate drug delivery systems ensured prolonged activity of the antiparasitic drug for 6 months, without induced inflammation.  
 Relevance to PE13: investigation of a microparticulate drug delivery system with antiparasitic activity able to improve antiparasitic therapy in dogs.
- 2011 -2012** **.Research project** “Injectable in situ forming composite gel for bone tissue regeneration” granted from Geistlich Pharma AG, Root-Längenbold, Svizzera. B. Conti project P.I.. Amount granted 30000 €.  
 The project aimed to design and developed biodegradable and biocompatible scaffolds for bone regeneration, including biopolymers of natural origin such as chitosan. Loading of antibacterial drugs such as was preliminary investigated. Relevance to PE13: investigation on biopolymers also including antibacterial properties and delivery of antibacterial drugs.

## Patents

### **3D-PATTERNED FIBER MATERIAL FOR THE TOPICAL DELIVERY OF NUCLEIC ACID AND THE PROCESS FOR ITS PREPARATION.** R.Dorati, B.Conti, I.Genta PCT/IB2020/059267.

Relevance to PE13: the patented manufacturing technology permits to obtain nanofibrous matrices with peculiar 3D patterned geometries exerting superior properties in terms of their interaction of biological media and tissue regeneration. The nanofibrous electrospun matrices can be loaded with antibacterial drugs, and improve local antibiotic delivery and their efficacy, reducing antimicrobial resistance.

**METODO PER LA PRODUZIONE DI UN TESSUTO A MEMORIA DI FORMA E USI RELATIVI.** Bice Conti, Ida Genta, Rossella Dorati, Marco Benazzo, Silvia Pisani, Maria Antonietta Avanzini. Italian patent No. 102021000019256 submitted 20/07/2021.

Relevance to PE13: the patented electrospun shape memory nanofibrous engineered tissue (SMET) is able to change its configuration and revert to its original shape in response to specific external stimuli (temperature). SMET can be used in those cases in which invasive surgery is required to reach tissues or parts of organs. Thanks to its specific property of being applied in a rolled-up form (space saver) and then unrolling, once inserted into the human body, SMET can be used to repair damaged tissue areas of different sizes, and/or to deliver a drug locally at the site of action. These includes, but are not limited to intraocular, intrapleural, intrauterine and trans-nasal-sphenoid surgery.

## PERSONAL SKILLS

Mother tongue(s)	Italian
Other language(s)	English C1
Job-related skills	Team working ability, team coordination ability
Digital skills	Use digital devices, communication applications, and networks to access and manage information
Other skills	Knowledge and competences on Regulatory framework related to drug products marketing authorization (MA) procedures, CTD, drug product quality evaluation (CTD, module 3). Know how in biopolymer science applied to the pharmaceutical field.

## ADDITIONAL INFORMATION

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**Publications** total number of publications in peer-review journals: **179**  
total number of citations: **4237**  
H index (Scopus): **37**. <https://www.scopus.com/authid/detail.uri?authorId=7005621694>  
Scopus Author ID: 7005621694  
Bice Conti ORCID: <https://orcid.org/0000-0002-0034-2815>

According to law 679/2016 of the Regulation of the European Parliament of 27th April 2016, I hereby express my consent to process and use my data provided in this CV.

Pavia, 12-01-2023

Bice Conti

