PROF. VALERIA AMBROGI

She had got degrees in Pharmacy (University of Perugia) in 1983, summa cum laude and in Biological Science in 1987.
She obtained her Ph.D. graduation in Drug Chemistry in 1991.
From 2005 she is Associate Professor at the Department of Chemistry and Technology of Drugs, Faculty of Pharmacy (now Department of Pharmaceutical Science) of the University of Perugia, Italy. She got habilitation as Full Professor (2012) in 03/D2 Drug technology, socioeconomics and regulations.
She has been member of the Evaluation Unit of Perugia University for 2017-2021 and she was Department Delegate for the Job Placement (2017-2020). She is Member of the Brain Storming Group of University of Perugia from 2020.
She is member of the Scientific Council of European Materials Research Society.

RESEARCH FIELDS

A. Use of inorganic matrices (ordered mesoporous silicates such as MCM-41 and SBA-15, hydrotalcites, montmorillonite, calcium carbonate) for modified drug release and for oral administration of water poorly soluble drugs owning to II and IV classes of the Biopharmaceutical Classification System
B. Inorganic matrices for improving effectiveness and safety of unstable drugs and cosmetic ingredients
C. Dental composites for release of biologically active agents (fluoride, chlorhexidine)
D. Preparation of inorgano-organic composite materials for advanced wound dressings with antimicrobial and antibiofilm activities
E. Inorganic nanoparticles preparation and formulation for medical devices and bone scaffold.

She is co-author of more than one hundred and forty papers published in national and international journals and 1 book chapter.

SCIENTIFIC COLLABORATIONS

- CNR, Institute of Nanostructured Materials, Rome (Italy)
- Dipartimento di Chimica, Biologia e Biotecnologie, Università di Perugia
- Dipartimento di Scienze agrarie, alimentari ed ambientali, Università di Perugia
- UOC Chirurgia Odontostomatologica, George Eastman, Roma, Italy

Publications (from 2009)

1) Effect of gliclazide immobilization into layered double hydroxide on drug release
Valeria Ambrogi , Luana Perioli, Valeria Ciarnelli, Morena Nocchetti, Carlo Rossi, *Eur. J. Pharm. Biopharm.,* 73, 285-291, 2009.
2) Formulation studies of benzydamine mucoadhesive formulations for vaginal administration, Luana Perioli, Valeria Ambrogi, Lorena Venezia, Stefano Giovagnoli, Cinzia Pagano, Carlo Rossi, *Drug Dev. Ind. Pharm*. 35, 369-379, 2009.
3) Utilizzi farmaceutici di MCM-41, Valeria Ambrogi e Luana Perioli, *Notiziario chimico farmaceutico*, 2, 98-103, 2009.
4) Cosmetici ad azione schiarente cutanea: ingredienti funzionali e loro meccanismo d'azione, Valeria Ambrogi e M. Cristina Tiralti, *Kosmetica*, 3, 50-54, 2009.
5) FG90 chitosan as a new polymer for metronidazole mucoadhesive tablets for vaginal administration, Luana Perioli, Valeria Ambrogi, Cinzia Pagano, Stefania Scuota, Carlo Rossi, *Int. J. Pharm.*, 377, 120-127, 2009.
6) Zinco: oligoelementi per la salute della pelle, Valeria Ambrogi, *Kosmetica*, 6, 48-53, 2009.
7) Vitamina B3: importante ingrediente funzionale cosmetico, Valeria Ambrogi *Kosmetica*, 8, 40-43, 2009.
8) Germoglio di grano: proprietà anti-aging in un prodotto fitocosmtico ad elevate attività antiossidante, Valeria Ambrogi, Isabella Calzuola, Anna C. Paolillo, Valeria Marsili, *Natural1*, edizioni GV®, 85, 40-45, 2009.
9) Chlorhexidine MCM-41 mucoadhesive tablets for topical use
Valeria Ambrogi, Luana Perioli, Fabio Marmottini, Massimo Moretti, Elisa Lollini, Carlo Rossi, *J. Pharm. Innovation*, 4, 156-164, 2009.
10) Econazole Nitrate-Loaded MCM-41 for an Antifungal Topical Powder Formulation, Valeria Ambrogi, Luana Perioli, Cinzia Pagano, Fabio Marmottini, Massimo Moretti, Fabiola Mizzi, Carlo Rossi, *J. Pharm. Sci.* 99, 4738-4745, 2010.
11) Zinco e prodotti cosmetici, Valeria Ambrogi, *Kosmetica,* 4, 36-39, 2010.
12) Halloysite: un nuovo carrier per la veicolazione di molecole biologicamente attive

Valeria Ambrogi, *Notiziario Chimico Farmaceutico*, 86-89, ottobre 2010.
13) New solid mucoadhesive systems for benzydamine vaginal administration, Luana Perioli, Valeria Ambrogi, Cinzia Pagano, Elena Massetti, Carlo Rossi, *Colloids and Surfaces B: Biointerfaces,* 84, 413-420, 2011.
14) Effects of hydrotalcite-like nanostructured compounds on biopharmaceutical properties and release of BCS class II drugs: The case of flurbiprofen, Luana Perioli, Valeria Ambrogi, Laura Di Nauta, Morena Nocchetti, Carlo Rossi, *Appl. Clay Sci*., 51, 407-413, 2011.
15) Impieghi cosmetici degli idrossiacidi, Valeria Ambrogi, *Kosmetica*, 2, 68-72, 2011
16) Preformulation studies on host–guest composites for oral administration of BCS class IV drugs: HTlc and furosemide, Luana Perioli, Valeria Ambrogi, Morena Nocchetti, Michele Sisani, Cinzia Pagano, *Appl. Clay Sci.* 53, 696–703, 2011.
17) L'acido urocanico: un cromoforo cutaneo naturale da cui dobbiamo proteggerci Valeria Ambrogi, *Kosmetica*, 6, 50-52, 2011.
18) Prodotti cosmetici autoconservanti, Valeria Ambrogi, *Kosmetica*, 7, 32-36, 2011
19) Il trattamento cosmetico dell'alitosi, Valeria Ambrogi, *Kosmetica*, 8, 46-48, 2011.
20) MCM-41 for furosemide dissolution improvement, Valeria Ambrogi, Luana Perioli, Cinzia Pagano, Loredana Latterini, Fabio Marmottini, Maurizo Ricci, Carlo Rossi, *Micropor. Mesopor. Mater.*, 147, 343–349, 2012.
21) Immobilization of kojic acid in ZnAl-hydrotalcite like compounds, Valeria Ambrogi, Luana Perioli, Morena Nocchetti, Loredana Latterini, Cinzia Pagano, Elena Massetti, Carlo Rossi, *J. Phys. Chem. Solids* 73, 94–98, 2012.
22) Use of SBA-15 for furosemide oral delivery enhancement, Valeria Ambrogi, Luana Perioli, Cinzia Pagano, Fabio Marmottini, Anna Sagnella, Carlo Rossi, Maurizio Ricci *Eur. J. Pharm. Sci.* 46, 43–48, 2012.
23) Effetti delle radiazioni infrarosse sulla pelle, Valeria Ambrogi, *Kosmetica*, 4, 42-45, 2012.
24) Coloranti: meccanismo, sicurezza e nuove proposte, Valeria Ambrogi, *Kosmetica*, 5, 34-38, 2012.
25) Trattamento: prodotti di origine vegetale, Valeria Ambrogi, *Kosmetica*, 5, 38-41, 2012.
26) Impiego cosmetico dell'olio di argan ed altri prodotti dell'Argania spinosa, Valeria Ambrogi, *Kosmetica*, 32-35, settembre 2012.
27) Fisiologia della pelle del neonato e suo sviluppo durante i primi anni, Valeria Ambrogi, *Kosmetica*, 42-45, dicembre 2012.
28) Prodotti di origine vegetale nella prevenzione e nel trattamento dell'invecchiamento, Valeria Ambrogi, *Kosmetica*, 40-42, ottobre 2012.
29) Il cosmetico maschile come risposta alle caratteristiche della pelle dell'uomo Valeria Ambrogi, *Kosmetica*, 32-35, novembre 2012.
30) Montmorillonite as an agent for drug photostability, Valeria Ambrogi, Loredana Latterini, Morena Nocchetti, Cinzia Pagano, Maurizio Ricci*, J. Mater. Chem.*, 22, 22743-22749, 2012.
31) Mesoporous Silicate MCM-41 as a Particulate Carrier for Octyl Methoxycinnamate: Sunscreen Release and Photostability, Valeria Ambrogi, Loredana

Latterini, Fabio Marmottini, Cinzia Pagano, Maurizio Ricci*, J. Pharm. Sci*., 102, 1468-1475, 2013.

32) Ag/AgCl nanoparticle decorated layered double hydroxides: synthesis, characterization and antimicrobial properties, Morena Nocchetti, Anna Donnadio, Valeria Ambrogi, Paola Andreani, Maria Bastianini, Donatella Pietrella and Lordana Latterini, *J. Mater. Chem*. B, 1, 2383-2393, 2013.

33) Amorphous carbamazepine stabilization by the mesoporous silicate SBA-15 Valeria Ambrogi, Fabio Marmottini, Cinzia Pagano, *Micropr. Mesopor. Mat*., 177, 1-7, 2013.

34) Oxybenzone Entrapped in Mesoporous Silicate MCM-41, Valeria Ambrogi, Loredana Latterini, Fabio Marmottini, Maria Cristina Tiralti, Maurizio Ricci, *J. Pharm. Innov.,* 8, 212–217, 2013.

35) Materiali inorganici mesoporosi. Agenti bioattivi, Valeria Ambrogi, *Notiziario Chimico Farmaceutico,* 2013.

36) Efficacia e sicurezza del filtro UV-A Butylmethoxydibenzoylmethane, Valeria Ambrogi, *Kosmetica,* maggio, 36-39, 2013.

37) Sostanze odorose di sintesi, Valeria Ambrogi, *Laboratorio 2000*, marzo, 40-43, 2014.

38) Metilxantine: attivi per il trattamento della cellulite, Valeria Ambrogi, *Kosmetica*, 5, giugno, 38-41, 2014.

39) Chitosan films containing mesoporous SBA-15 supported silver nanoparticles for wound dressing, Valeria Ambrogi, Anna Donnadio, Federica Alunni Proietti, Stefano Giovagnoli, Donatella Pietrella, Fabio Marmottini, and Maurizio Ricci, *J. Mater. Chem. B*, 2, 6054–6063, 2014.

40) Promethazine−Montmorillonite Inclusion Complex To Enhance Drug Photostability, Valeria Ambrogi, Morena Nocchetti, and Loredana Latterini, *Langmuir*, 30, 14612−14620, 2014.

41) Formulazione degli smalti per unghie e nuove proposte, Valeria Ambrogi *Kosmetica*, 3, aprile, 48-51, 2015.

42) Filtri solari: recenti sviluppi, Valeria Ambrogi, *Kosmetica*,4, maggio, 46-49, 2015

43) Chlorhexidine-loaded functionalized mesoporous MCM-41 poly(methylmethacrylate) based composites with Candida antibiofilm activity Valeria Ambrogi, Donatella Pietrella, Fabio Marmottini, Francesco Riva, M. Cristina Tiralti, Maurizio Ricci, *RSC Adv.,* 5,84827–84835, 2015.

44) Ordered mesoporous silicates MCM-41 and SBA-15 as matrices for improving dissolution rate of poorly water soluble drugs , Valeria Ambrogi
In Comprehensive Guide of Mesoporous Materials, Properties and development, 1-18 pp, Mahmood Aliofkhazraei, Nova Science Publisher, New York, 2015.

45) Carboxymethylcellulose films containing chlorhexidine–zirconium phosphate nanoparticles: antibiofilm activity and cytotoxicity, Anna Donnadio, Valeria Ambrogi, Donatella Pietrella, Monica Pica, Giulia Sorrentino, Mario Casciola, *RSC Adv*., 6, 46249–46257, 2016.

46) Montmorillonite–chitosan–chlorhexidine composite films with antibiofilm activity and improved cytotoxicity for wound dressing, V. Ambrogi, D. Pietrella, M. Nocchetti, S. Casagrande, V. Moretti, S. De Marco, M. Ricci, *J. Colloid. Interface Sci.*, 491, 265–272, 2017.

47) Triplet-triplet annihilation based upconversion in silica matrices,
Giuseppina Massaro, Pier Luigi Gentili, Valeria Ambrogi, Morena Nocchetti, Fabio Marmottini, Fausto Ortica, Loredana Latterini, M*icropor. Mesopor. Mat.* 246, 120-129, 2017.
48) La melatonina: dalle funzioni cutanee all'impiego cosmetico, Valeria Ambrogi, *Kosmetica*, 6, settembre, 38-42, 2017
49) Mesoporous silica materials: From physico-chemical properties to enhanced dissolution of poorly water-soluble drugs, A. Maleki, H. Kettiger, A. Schoubben, J. M. Rosenholm, V. Ambrogi, M. Hamidi, *J. Controll. Release*, 262, 329-347, 2017.
50) Dental composite with chlorhexidine loaded MCM-41: surface characteristics, drug release and anti-biofilm activity, D. Pietrella, F. Marmottini, G. Padeletti, G. Montesperelli, S. Kaciulis, E. Vici, L. Cerri, V. Ambrogi, *ACS Biomater. Sci. Eng.*, 4, 4144−4153, 2018.
51) Trattamento di superficie dei pigmenti, V. Ambrogi, *Kosmetica*, 8, 40-44, 2018.
52) Sviluppo, produzione e controllo di una nuova formulazione di mascara
V. Ambrogi, S. Giovagnoli, M. Manzione, M. Gobbino, G. Settimi, *Kosmetica*, 2, 58-64, 2019.
53) I fitosomi come carrier per la formulazione di cosmeceutici, V. Ambrogi
Kosmetica 3, 30-34, 2019
54) Chitosan composite microparticles: A promising gastroadhesive system for taxifolin, F.C. Stenger Moura, L. Perioli, C. Pagano, R. Vivani, V. Ambrogi, T.M. Bresolin, M. Ricci, A. Schoubben *Carbohydrate Polymers* 218, 343–354, 2019
55) Halloysite-Doped Zinc Oxide for Enhanced Sunscreening Performance, C. Aguzzi, A. Donnadio, G. Quaglia, L. Latterini, C. Viseras, V. Ambrogi, *ACS Applied Nano Materials*, 2, 6575-6584, 2019.
56) Nanostructured zinc oxide on silica surface: Preparation, physicochemical characterization and antimicrobial activity. A. Donnadio, G. Cardinali, L. Latterini, L. Roscini, V. Ambrogi, *Materials Science and Engineering C, Biomimetic Materials, Sensors and Systems* 104, 109977, 2019.
57) Dentifrici e loro caratteristiche, V.Ambrogi, Kosmetica, 6, 38-43, 2020.
58) Dentifrici con azione specifica: agenti sbiancanti e per denti sensibili, V. Ambrogi, Kosmetica, 8, 34-40, 2020.
59) Biocompatible alginate silica supported silver nanoparticles composite films for wound dressing with antibiofilm activity. V. Ambrogi, D. Pietrella, A. Donnadio, L. Latterini, A. Di Michele, I. Luffarelli, M. Ricci. *Materials Science and Engineering C,* 112, 110863-110868, 2020.
60) Layered double hydroxides intercalated with fluoride and methacrylate anions as multifunctional filler of acrylic resins for dental composites, M. Bini, V. Ambrogi, A. Donnadio, A. Di Michele, P. Ricci, M. Nocchetti, *Appl. Clay Sci*. 197, 105796, 2020.
61) Use of calcium carbonate as an excipient for release of poorly water soluble drugs: The case of carbamazepine, A. Donnadio, C. Corneli, P. Ricci, M. Bini, V. Ambrogi, *Int. J. Pharm.* 589, 119860, 2020.

62) Bioinspired Reactive Interfaces Based on Layered Double Hydroxides-Zn Rich Hydroxyapatite with Antibacterial Activity, A. Donnadio, M. Bini, C. Centracchio, M. Mattarelli, S. Caponi, V. Ambrogi, D. Pietrella, A. Di Michele, R. Vivani, M. Nocchetti, *ACS Biomater. Sci. Eng.* 7, 4, 1361–1373, 2021.

63) PVC grafted zinc oxide nanoparticles as inhospitable surface to microbes
A. Donnadio, Roscini, L., Di Michele, A., Corazzini, V., Cardinali, G., Ambrogi, V. *Materials Science & Engineering C,* 128, 112290, 2021.

64) Hydroxyapatite Functionalized Calcium Carbonate Composites with Ag Nanoparticles: An Integrated Characterization Study
Eleonora Bolli, Saulius Kaciulis, Alessio Mezzi, Valeria Ambrogi, Morena Nocchetti, Loredana Latterini, Alessandro Di Michele, Giuseppina Padeletti, *Nanomaterials* 2021, 11, 2263, 2021.

65) Solid state photoreduction of silver on mesoporous silica to enhance antifungal activity, Giulia Quaglia, Valeria Ambrogi, Donatella Pietrella, Morena Nocchetti, Loredana Latterini, *Nanomaterials*, 11, 2340, 2021.

66) Silver@Hydroxyapatite functionalized calcium carbonate composites: characterization, antibacterial and antibiofilm activities and cytotoxicity
Valeria Ambrogi, Giulia Quaglia, Donatella Pietrella, Morena Nocchetti,
Alessandro Di Michele, Eleonora Bolli, Saulius Kaciulis, Alessio Mezzi, Giuseppina Padeletti, Loredana Latterini, *Appl. Surf. Sci.* 586, 152760, 2022.