

PIETRO GRISOLI



Università di Pavia, Dipartimento di Scienze del Farmaco, Nuovo Polo Didattico,
Viale Taramelli 12, 27100 Pavia, (pietro.grisoli@unipv.it).

CURRICULUM VITAE

RUOLO: Ricercatore confermato (MED/07 Microbiologia e Microbiologia Clinica), Professore Aggregato di Microbiologia.

Luogo e data di nascita: Pavia, 24/07/1969.

Titolo accademico: Laurea in Chimica e Tecnologia Farmaceutiche, Università degli Studi di Pavia (1998).

ATTIVITA' UNIVERSITARIA:

- Tecnico laureato presso la Facoltà di Farmacia dell'Università di Pavia (1999-2008).
- Ricercatore non confermato (MED/07) presso la Facoltà di Farmacia di Pavia dal 2008.
- Ricercatore confermato (MED/07) presso la Facoltà di Farmacia di Pavia dal 2012.
- Professore Aggregato dal 2012.

ATTIVITÀ DIDATTICA

- Incaricato per affidamento dell'insegnamento di Microbiologia con Fondamenti d'Igiene (8 CFU) per il corso di laurea in Chimica e Tecnologia Farmaceutiche, Università di Pavia (dal 2024).
- Incaricato per affidamento dell'insegnamento di Microbiologia (Galeno-Ippocrate (12 CFU), per il corso di laurea in Farmacia, Università di Pavia (dal 2024).
- Incaricato per affidamento dell'insegnamento di Resistenza agli Antibiotici (3 CFU) per il corso di laurea in Farmacia e Chimica e Tecnologia Farmaceutiche, Università di Pavia (dal 2011).

-Incaricato per affidamento del corso di Microbiologia (Galeno-Ippocrate (12 CFU), insegnamento di Microbiologia e Igiene) per il corso di laurea in Farmacia, Università di Pavia (dal 2013 al 2023).

-Incaricato per affidamento dell'insegnamento di Microbiologia Farmaceutica (8 CFU) per il corso di laurea in Chimica e Tecnologia Farmaceutiche, Università di Pavia (dal 2009 al 2023).

-Incaricato per affidamento dell'insegnamento di Resistenza Antibiotica (2 CFU) per il corso di laurea in Farmacia e Chimica e Tecnologia Farmaceutiche, Università di Pavia (dal 2009 al 2011).

-

ALTRE ATTIVITÀ DIDATTICHE/ORGANIZZATIVE

1) Docente presso la Scuola di Specializzazione in Microbiologia e Virologia della Facoltà di Medicina dell'Università di Pavia (dal 2009 al 2018).

2) Membro del Comitato Scientifico del Centro Interdipartimentale di Etnobiofarmacia dell'Università di Pavia e docente del Master Universitario di II livello in "Etnobiofarmacia".

3) Membro della Società Italiana di Microbiologia Farmaceutica (SIMiF).

PREMI

Best paper award for the outstanding paper "Comparison of functional and biological properties of chitosan and hyaluronic acid, to be used for the treatment of mucositis in cancer patients". Journal of Drug Delivery Science and Technology, 21(3): 241-247 (2011).

LINEE DI RICERCA E PROGETTI FINANZIATI

Valutazione dei fattori di rischio microbiologici, allergologici e chimici negli ambienti di lavoro.

-Valutazione dell'attività antimicrobica di rimedi utilizzati nella medicina tradizionale e popolare.

-Sistemi per il rilascio controllato sito-specifico di composti ad attività antimicrobica.

-Superfici vetrose ad azione antimicrobica basata sul rilascio modulato e controllato di cationi metallici: (Fondazione Cariplo 2007) (Responsabile scientifico: Prof. Piersandro Pallavicini - Dipartimento di Chimica - Università degli Studi di Pavia).

-“Nanorods (NR) e nanoparticelle asimmetriche (NPA) d'oro ricoperte di polimero biocompatibile con funzioni leganti per molecole e ioni metallici: azione antimicrobica, farmacologica e termica attivata da irraggiamento nel vicino IR.” (Fondazione Cariplo 2010) (Responsabile scientifico: Prof. Piersandro Pallavicini - Dipartimento di Chimica - Università degli Studi di Pavia).

N. totale pubblicazioni: 73 pubblicazioni in extenso, **3** capitoli di libri, **60** comunicazioni a congressi, H index (**29**), n. citazioni (**2832**).

PUBBLICAZIONI (2012-2024)

1. Grisoli P., Rodolfi M., Chiara T., Zonta L. A., and Dacarro C. *Evaluation of microbiological air quality and of microclimate in university classrooms*. Environmental Monitoring and Assessment, 184 (7), pp 4171-4180 (2012).
2. Giacomo Dacarro, Lucia Cucca, Pietro Grisoli, Piersandro Pallavicini, Maddalena Patrini, Angelo Taglietti. *Monolayers of polyethylenimine on flat glass: a versatile platform for cations coordination and nanoparticles grafting in the preparation of antibacterial surfaces*. Dalton Transactions, 2012, 41 (8) pp. 2456-2463 (2012).
3. Taglietti, A, Diaz-Fernandez, YA, Amato, E, Cucca, Dacarro, G, Grisoli, P, Necchi, V, Pallavicini, P, Pasotti, L, Patrini, M. *Antibacterial Activity of Glutathione-Coated Silver Nanoparticles against Gram Positive and Gram Negative Bacteria*. Langmuir, 28(21), pp. 8140-8148 (2012).
4. Brusotti G, Cesari I, Gilardoni, G, Tosi, S, Grisoli P, Picco, A.M, Caccialanza G. *Chemical composition and antimicrobial activity of Phyllanthus muellerianus (Kuntze) Excel essential oil*. Journal of Ethnopharmacology, 142 (3), pp 657-662 (2012).
5. Gloria Brusotti, Mohammed Farhad Ibrahima, Alessandra Dentamaro, Gianluca Gilardoni, Solveig Tosi, Pietro Grisoli, Cesare Dacarro, Maria Lidia Guglielminetti, Faiq Hama Saeed Hussain, Gabriele Caccialanza, and Giovanni Vidari. *Chemical Composition and Antimicrobial Activity of the Volatile Fractions from Leaves and Flowers of the Wild Iraqi Kurdish Plant Prangos peucedanifolia Fenzl*. Chemistry and Biodiversity 10 (2) pp 274-280 (2013).
6. I. Cesari, M. Hoerle', C. Simoes-Pire, P. Grisoli, E. F. Queiroz, C. Dacarro, L. Marcourt, P. F. Moundipa, P. A. Carrupt, M. Cuendet, G. Caccialanza, J.L. Wolfender, G. Brusotti. *Anti-inflammatory, antimicrobial and antioxidant activities of Diospyros bipindensis (Gürke) extracts and its main constituents*. Journal of Ethnopharmacology 146 (1), pp 264–270 (2013).
7. Piersandro Pallavicini, Giacomo Dacarro, Pietro Grisoli, Carlo Mangano, Maddalena Patrini, Federica Rigoni, Luigi Sangaletti and Angelo Taglietti. *Coordination chemistry for antibacterial materials: a monolayer of a Cu²⁺ 2,2'-bipyridine complex grafted on a glass surface*. Dalton Transactions 42 (13), pp 4552-4560 (2013).
8. Giuseppina Sandri, Maria Cristina Bonferoni, Francesca D'Autilia, Silvia Rossi, Franca Ferrari, Pietro Grisoli, Milena Sorrenti, Laura Catenacci, Claudia Del Fante, Cesare Perotti, Carla Caramella. *Wound dressings based on silver sulfadiazine solid lipid nanoparticles for tissue repairing*. European Journal of Pharmaceutics and Biopharmaceutics 84 (1), pp 84–90 (2013)
9. Gloria Brusotti, Solveig Tosi, Aldo Tava, Anna M. Picco, Pietro Grisoli, Ilaria Cesari, Gabriele Caccialanza. *Antimicrobial and phytochemical properties of stem bark extracts from Piptadeniastrum africanum (Hook f.) Brenan*. Industrial Crops and Products 43 (1), pp 612– 616 (2013).
10. Taglietti, A., Diaz Fernandez, Y.A., Galinetto, P., Grisoli, P., Milanese, C., Pallavicini, P. *Mixing thiols on the surface of silver nanoparticles: Preserving antibacterial properties while introducing SERS activity* Journal of Nanoparticle Research 15 (11) (2013)
11. Sandri, G., Bonferoni, M.C., Ferrari, F., Rossi, S., Aguzzi, C., Mori, M., Grisoli, P., Caramella, C. *Montmorillonite-chitosan-silver sulfadiazine nanocomposites for topical treatment of chronic skin lesions: In vitro biocompatibility, antibacterial efficacy and gap closure cell motility properties* Carbohydrate Polymers 102 (1) PP. 970 – 977 (2014)

- 12. Cesari, I., Grisoli, P., Paolillo, M., Milanese, C., Massolini, G., Brusotti, G. Isolation and characterization of the alkaloid Nitidine responsible for the traditional use of *Phyllanthus muellerianus* (Kuntze) Excell stem bark against bacterial infections” *Journal of Pharmaceutical and Biomedical Analysis* Volume 87, Pages 218-228. (2014)
- 13. Brusotti, G., Andreola, F., Sferrazza, G., Grisoli, P., Merelli, A., Cuna, F.S.R.D., Calleri, E., Nicotera, G., Pierimarchi, P., Serafino, A. “In vitro evaluation of the wound healing activity of *Drypetes klainei* stem bark extracts” *Journal of Ethnopharmacology* Volume 175, 4, Pages 412-421. (2015)
- 14. Dorati, R., De Trizio, A., Genta, I., Grisoli, P., Merelli, A., Tomasi, C., Conti, B. “An experimental design approach to the preparation of pegylated polylactide-co-glicolide gentamicin loaded microparticles for local antibiotic delivery” *Materials Science and Engineering C* Volume 58, 1, Pages 909-917. (2016)
- 15. D'Agostino, A., Taglietti, A., Grisoli, P., Dacarro, G., Cucca, L., Patrini, M., Pallavicini, P. “Seed mediated growth of silver nanoplates on glass: Exploiting the bimodal antibacterial effect by near IR photo-thermal action and Ag⁺ release” *RSC Advances* Volume 6, Issue 74, Pages 70414-70423. (2016)
- 16. Agnese D'Agostino, Angelo Taglietti, Roberto Desando, Marcella Bini, Maddalena Patrini, Giacomo Dacarro, Lucia Cucca, Piersandro Pallavicini and Pietro Grisoli. Bulk Surfaces Coated with Triangular Silver Nanoplates: Antibacterial Action Based on Silver Release and Photo-Thermal Effect. *Nanomaterials*, 7(1), 7 (2017)
- 17. Tenci, M., Rossi, S., Aguzzi, C., Carazo, E., Sandri, G., Bonferoni, M.C.ab, Grisoli, P., Viseras, C.,
Caramella, C.M.a, Ferrari, F. Carvacrol/clay hybrids loaded into in situ gelling films. *International Journal of Pharmaceutics*, Volume 531, Issue 2, , Pages 676-688 (2017)
- 18. Dacarro, G., Grisoli, P., Borzenkov, M., Milanese, C., Fratini, E., Ferraro, G., Taglietti, A., Pallavicini, P. Self-assembled monolayers of Prussian blue nanoparticles with photothermal effect. *Supramolecular Chemistry*, Volume 29, Issue 11, , Pages 823-833, (2017)
- 19. Pallavicini, P., Bassi, B., Chirico, G., Collini, M., Dacarro, G., Fratini, E., Grisoli, P., Patrini, M., Sironi, L., Taglietti, A., Moritz, M., Sorzabal-Bellido, I., Susarrey-Arce, A., Latter, E., Beckett, A.J., Prior, I.A.g, Raval, R.f, Diaz Fernandez. Modular approach for bimodal antibacterial surfaces combining photo-switchable activity and sustained biocidal release. *Scientific Reports, Open Access*, Volume 7, Issue 1, , Article number 5259, (2017)
- 20. Saporito, F., Sandri, G., Bonferoni, M.C., Rossi, S., Boselli, C., Cornaglia, A.I., Mannucci, B., Grisoli, P., Vignani, B., Ferrari, F. Essential oil-loaded lipid nanoparticles for wound healing. *International Journal of Nanomedicine Open Access*, Volume 13, 2018, Pages 175-186, (2018)
- 21. Grisoli P., ALBERTONI, MARCO, Rodolfi M. (2019). Application of Airborne Microorganism Indexes in Offices, Gyms, and Libraries. *APPLIED SCIENCES*, vol. 9, p. 1-9, ISSN: 2076-3417, doi: 10.3390/app9061101
- 22. García-Villén, Fatima, Faccendini, Angela, Aguzzi, Carola, Cerezo, Pilar, Bonferoni, Maria Cristina, Rossi, Silvia, Grisoli, Pietro, RUGGERI, MARCO, Ferrari, Franca, Sandri, Giuseppina, Viseras, Cesar (2019). Montmorillonite norfloxacin nanocomposite intended for healing of infected

wounds. INTERNATIONAL JOURNAL OF NANOMEDICINE, vol. 14, p. 5051-5060, ISSN: 1178-2013, doi: 10.2147/IJN.S208713

-23. Taglietti, Angelo, Dacarro, Giacomo, Barbieri, Daniele, Cucca, Lucia, Grisoli, Pietro, Patrini, Maddalena, Arciola, Carla Renata, Pallavicini, Piersandro (2019). High Bactericidal Self-Assembled Nano-Monolayer of Silver Sulfadiazine on Hydroxylated Material Surfaces. MATERIALS, vol. 12, ISSN: 1996-1944, doi: 10.3390/ma12172761

-24. Bari E, Ferrarotti I, Di Silvestre D, Grisoli P, Barzon V, Balderacchi A, Torre ML, Rossi R, MAURI, PAOLO, Corsico AG, Perteghella S (2019). Adipose Mesenchymal Extracellular Vesicles as Alpha-1-Antitrypsin Physiological Delivery Systems for Lung Regeneration. CELLS, vol. 23, ISSN: 2073-4409, doi: 10.3390/cells8090965

-25. Rovati, Davide, Albin, Benedetta, Galinetto, Pietro, Grisoli, Pietro, Bassi, Barbara, Pallavicini, Piersandro, Dacarro, Giacomo, Taglietti, Angelo (2019). High Stability Thiol-Coated Gold Nanostars Monolayers with Photo-Thermal Antibacterial Activity and Wettability Control. NANOMATERIALS, vol. 9, ISSN: 2079-4991, doi: 10.3390/nano9091288

-26. Pisani, Silvia, Dorati, Rossella, Chiesa, Enrica, Genta, Ida, Modena, Tiziana, Bruni, Giovanna, Grisoli, Pietro, Conti, Bice (2019). Release Profile of Gentamicin Sulfate from Polylactide-co-Polycaprolactone Electrospun Nanofiber Matrices. PHARMACEUTICS, vol. 11, p. 161-175, ISSN: 1999-4923, doi: 10.3390/pharmaceutics11040161

-27. Vigani B., Faccendini A., Rossi S., Sandri G., Bonferoni M. C., Grisoli P., Ferrari F. (2019). Development of a mucoadhesive in Situ gelling formulation for the delivery of Lactobacillus gasseri into vaginal cavity. PHARMACEUTICS, vol. 11, ISSN: 1999-4923, doi: 10.3390/pharmaceutics11100511

-28. Sandri G., Miele D., Faccendini A., Bonferoni M. C., Rossi S., Grisoli P., Taglietti A., Ruggeri M., Bruni G., Vigani B., Ferrari F. (2019). Chitosan/glycosaminoglycan scaffolds: The role of silver nanoparticles to control microbial infections in wound healing. POLYMERS, vol. 11, ISSN: 2073-4360, doi: 10.3390/polym11071207

-29. Tripodo G, Perteghella S, Grisoli P, Trapani A, Torre ML, Mandracchia D (2019). Drug delivery of rifampicin by natural micelles based on inulin: physicochemical properties, antibacterial activity and human macrophages uptake. EUROPEAN JOURNAL OF PHARMACEUTICS AND BIOPHARMACEUTICS, vol. 136, p. 250-258, ISSN: 0939-6411, doi: 10.1016/j.ejpb.2019.01.022

-30. Faccendini A., Ruggeri M., Miele D., Rossi S., Bonferoni M. C., Aguzzi C., Grisoli P., Viseras C., Vigani B., Sandri G., Ferrari F. (2020). Norfloxacin-loaded electrospun scaffolds: Montmorillonite nanocomposite vs. free drug. PHARMACEUTICS, vol. 12, ISSN: 1999-4923, doi: 10.3390/pharmaceutics12040325

-31. Gargioni C., Borzenkov M., D'alfonso L., Sperandeo P., Polissi A., Cucca L., Dacarro G., Grisoli P., Pallavicini P., D'agostino A., Taglietti A. (2020). Self assembled monolayers of copper sulfide nanoparticles on glass as antibacterial coatings. NANOMATERIALS, vol. 10, ISSN: 2079-4991, doi: 10.3390/nano10020352

-32. Guerini M., Perugini P., Grisoli P. (2020). Evaluation of the effectiveness of NAcetylcysteine (NAC) and N-acetylcysteine-cyclodextrins Multi-Composite in *Pseudomonas aeruginosa* biofilm formation. APPLIED SCIENCES, vol. 10, ISSN: 2076-3417, doi: 10.3390/app10103466

- 33. Bari Elia, Di Silvestre Dario, Mastracci Luca, Grillo Federica, Grisoli Pietro, Marrubini Giorgio, Nardini Marta, Mastrogiacomo Maddalena, Sorlini Marzio, Rossi Rossana, Torre, Mauri Pierluigi, Sesana Giovanni, Perteghella Sara (2020). GMP-compliant sponge-like dressing containing MSC lyo-secretome: proteomic network of healing in a murine wound model. EUROPEAN JOURNAL OF PHARMACEUTICS AND BIOPHARMACEUTICS, vol. 155, p. 37-48, ISSN: 0939-6411, doi: 10.1016/j.ejpb.2020.08.003
- 34. Grisoli P., De Vita L., Milanese C., Taglietti A., Fernandez Y. D., Bouzin M., D'alfonso L., Sironi L., Rossi S., Vigani B., Sperandeo P., Polissi A., Pallavicini P. (2021). Pva films with mixed silver nanoparticles and gold nanostars for intrinsic and photothermal antibacterial action. NANOMATERIALS, vol. 11, ISSN: 2079-4991, doi: 10.3390/nano11061387
- 35. Guerini M., Grisoli P., Pane C., Perugini P. (2021). Microstructured lipid carriers (MLC) based on N-acetylcysteine and chitosan preventing *Pseudomonas aeruginosa* biofilm. INTERNATIONAL JOURNAL OF MOLECULAR SCIENCES, vol. 22, p. 1-22, ISSN: 1661-6596, doi: 10.3390/ijms22020891
- 36. Fiorentini F., Suarato G., Grisoli P., Zych A., Bertorelli R., Athanassiou A. (2021). Plant-based biocomposite films as potential antibacterial patches for skin wound healing. EUROPEAN POLYMER JOURNAL, vol. 150, ISSN: 0014- 3057, doi: 10.1016/j.eurpolymj.2021.110414
- 37. Perugini P., Bonetti M., Guerini M., Musitelli G., Grisoli P. (2021). A New In Vitro Model to Evaluate Anti-Adhesive Effect against Fungal Nail Infections. APPLIED SCIENCES, vol. 11, ISSN: 2076-3417, doi: 10.3390/app11051977
- 38. Toci G., Olgiati F., Pallavicini P., Fernandez Y. D., De Vita L., Dacarro G., Grisoli P., Taglietti A. (2021). Gold Nanostars Embedded in PDMS Films: A Photothermal Material for Antibacterial Applications. Nanomaterials 2021, 11(12), 3252; <https://doi.org/10.3390/nano11123252>
- 39. Rosalia M., Ravipati P., Grisoli P., Dorati R., Genta I., Chiesa E., Bruni G., Conti B. (2021). Tobramycin Supplemented Small-Diameter Vascular Grafts for Local Antibiotic Delivery: A Preliminary Formulation Study. Int. J. Mol. Sci. 2021, 22(24), 13557; <https://doi.org/10.3390/ijms222413557>
- 40. Ibrahim M.F., Robustelli della Cuna F.S., Corti M., Amin M. I. H., Faris P., Grisoli P., Brusotti G. (2022). A chemometric assessment and profiling of the essential oils from Hibiscus sabdariffa L. from Kurdistan, Iraq. Natural Product Research, Formerly Natural Product Letters Volume 36, 2022 - Issue 9 <https://doi.org/10.1080/14786419.2020.1833198>
- 41. La Cognata, S., Armentano, D., Marchesi, N., Grisoli P. Pascale A., Kieffer M., Taglietti A., Davis, A.P., Amendola, V. (2022). A Benzimidazolium-Based Organic Cage with Antimicrobial Activity. Chemistry 2022, 4(3), 855-864; <https://doi.org/10.3390/chemistry4030061>
- 42. Gazzola, V., Grisoli, P., Amendola, V., Dacarro G., Mangano C., Pallavicini P., Poggi A., Rossi S., Vigani B., Vigani, B., Taglietti, A. (2022). A Supramolecular Approach to Antimicrobial Surfaces. Molecules 2022, 27(17), 5731; <https://doi.org/10.3390/molecules27175731>
- 43. Doveri I., Taglietti A., Grisoli, P., Pallavicini, P., Dacarro, G. (2023). Dual mode antibacterial surfaces based on Prussian blue and silver nanoparticles. Dalton Transactions, 52, 452, DOI: 10.1039/d2dt03058f
- 44. Bianchi E., Vigani B., Ruggeri, M., Del Favero E., Ricci, C., Grisoli, P., Ferraretto, A., Rossi, S., Viseras, C., Sandri G (2023). Electrospun Scaffolds Based on Poly(butyl cyanoacrylate) for

Tendon Tissue Engineering International Journal of Molecular Sciences, 2023, 24(4), 3172; <https://doi.org/10.3390/ijms24043172>

-45 Valentino C., Martínez Rodríguez,T.; Borrego-Sánchez A., Hernández Benavides P., Arrebola Vargas F., Paredes J. M., Rossi S, Sainz Díaz C., Sandri G., Grisoli P., Medina Pérez M., Aguzzi, C. (2023). Characterization and Molecular Modelling of Non-Antibiotic Nanohybrids for Wound Healing Purposes. *Pharmaceutics*, 2023, 15(4), 1140; <https://doi.org/10.3390/pharmaceutics15041140>

-46 Ruggeri M., Lenzuni ., Suarato G., Vigani B., Boselli C., Cornaglia A.I., Colombo D., Grisoli P., Ricci C., Del Favero E., Rossi S., Athabassiou A., Sandri G.(2023) Polysaccharide-protein microparticles based-scaffolds to recover soft tissue loss in mild periodontitis. *International Journal of Pharmaceutics*, 2023, 640, 123015; <https://doi.org/10.1016/j.ijpharm.2023.123015>

-47 (2023). 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. *International Journal of Molecular Sciences*, 2023, 24(15), 12108; <https://doi.org/10.3390/ijms241512108>

-48 Nuc Z., Brusotti G., Catenacci L., Grenha A., Pontes J.F., Pinto da Silva J., Rosa da Costa A.M., Moro P., Milanese C., Grisoli P., Sorrenti M., Dobrzycka-Krahel A., Bonferoni M.C., Caramella C.M. (2023) *Pontastacus leptodactylus* (Eschscholtz, 1823) and *Faxonius limosus* (Rafinesque, 1817) as New, Alternative Sources of Chitin and Chitosan. *Water (Switzerland)*, 2023, 15(17), 3024; <https://doi.org/10.3390/w15173024>

-48 Pino P., Vigani B., Valentino C., Ianev D., Ruggeri M., Boselli C., Cornaglia A.I., Grisoli P., Onida B., Bosco F., Sandri G., Rossi S. (2024) Sustainable whey proteins-nanostructured zinc oxide-based films for the treatment of chronic wounds: New insights from biopharmaceutical studies. *International Journal of Biological Macromolecules*, 2024, 263, 130655; <https://doi.org/10.1016/j.ijbiomac.2024.130655>

Pavia 05-06-2024

PIETRO GRISOLI



University of Pavia, Department of Drug Sciences, Nuovo Polo Didattico,
Via Taramelli 12, 27100 Pavia, Italy (pietro.grisoli@unipv.it)

CURRICULUM VITAE

ROLE

Confirmed Researcher, Adjunct Professor of Microbiology.

EDUCATION

Degree in Pharmaceutical Chemistry and Technology, University of Pavia (1998)

RESEARCH AND PROFESSIONAL EXPERIENCE

- Technical assistant at the Faculty of Pharmacy, University of Pavia (1999-2008)
- Unconfirmed researcher (MED/07) at the Faculty of Pharmacy, University of Pavia, since 2008.
- Confirmed researcher (MED/07) at the Department of Drug Sciences, University of Pavia since 2012.
- Adjunct professor (MED/07) at the Department of Drug Sciences, University of Pavia since 2012.

- Prof. Grisoli teaching activity started with the courses of Pharmaceutical Microbiology and Antibiotic Resistance for the degree course in Pharmacy and Chemistry and Pharmaceutical Technology since 2009. Then, in addition with the course Microbiology for the degree course in Pharmacy since 2013.

He is also a member of the teaching staff of post-graduate School in Microbiology and Virology at the Faculty of Medicine, University of Pavia, (since 2009, UNTIL 2018)

Member of the Italian Society of Pharmaceutical Microbiology (SIMiF) since 2008.

RESEARCH FIELDS

- Evaluation of antimicrobial activity of glass surfaces with antimicrobial properties based on the tuned and controlled release of metal cations, in collaboration with Inorganic Nanochemistry Laboratory (inLAB) (Department of Chemistry).
- Evaluation of antimicrobial action of Gold nanorods (NR) and asymmetric nanoparticles (ANP) capped with a biocompatible polymer bearing binding groups for molecules and metal ions, in collaboration with Inorganic Nanochemistry Laboratory (inLAB) (Department of Chemistry).
- Evaluation of antimicrobial activity of medicinal plants and plant extracts used in popular medicine, in collaboration with Pharmaceutical Analysis Laboratory (PAL) (Drug Sciences Department) .
- Study of pharmaceutical dosage forms for controlled release of antimicrobial agents, in collaboration with Biopharmaceutics and Formulation Development Laboratory (Drug Sciences Department).
- Assessment of microbial risk in work environments.
- Study of pharmaceutical dosage forms for controlled release of antimicrobial agents.
- Evaluation of antimicrobial activity of foods against caries and other mouth infections.

FELLOWSHIPS/AWARDS

Best paper award for the outstanding paper "Comparison of functional and biological properties of chitosan and hyaluronic acid, to be used for the treatment of mucositis in cancer patients". Journal of Drug Delivery Science and Technology, 21(3): 241-247 (2011).

FUNDED PROJECTS (last (*number*) years)

CARIPLO 2008 (Proposer: Prof. P. Pallavicini, Department of Chemistry Univ. of Pavia: Antimicrobial action of glass surfaces based on modulated and controlled release of metal cations.

CARIPLO 2010 (Proposer: Prof. P. Pallavicini, Department of Chemistry, Univ. of Pavia: "Gold nanorods (NR) and asymmetric nanoparticles (ANP) capped with a biocompatible polymer bearing binding groups for molecules and metal cations: pharmacological and thermal antimicrobial action activated by near-IR irradiation".

Grisoli's research activity is documented by **73** scientific papers, **60** communications to national and international congresses and **3** book chapters. Total citations **2832**; H-index **29**.

Scientific Publications (2012-2024)

1. Grisoli P., Rodolfi M., Chiara T., Zonta L. A., and Dacarro C. *Evaluation of microbiological air quality and of microclimate in university classrooms*. Environmental Monitoring and Assessment, 184 (7), pp 4171-4180 (2012).
2. Giacomo Dacarro, Lucia Cucca, Pietro Grisoli, Piersandro Pallavicini, Maddalena Patrini, Angelo Taglietti. *Monolayers of polyethylenimine on flat glass: a versatile platform for cations coordination and nanoparticles grafting in the preparation of antibacterial surfaces*. Dalton Transactions, 2012, 41 (8) pp. 2456-2463 (2012).
3. Taglietti, A, Diaz-Fernandez, YA, Amato, E, Cucca, Dacarro, G, Grisoli, P, Necchi, V, Pallavicini, P, Pasotti, L, Patrini, M. *Antibacterial Activity of Glutathione-Coated Silver Nanoparticles against Gram Positive and Gram Negative Bacteria*. Langmuir, 28(21), pp. 8140-8148 (2012).
4. Brusotti G, Cesari I, Gilardoni, G, Tosi, S, Grisoli P, Picco, A.M, Caccialanza G. *Chemical composition and antimicrobial activity of Phyllanthus muellerianus (Kuntze) Excel essential oil*. Journal of Ethnopharmacology, 142 (3), pp 657-662 (2012).
5. Gloria Brusotti, Mohammed Farhad Ibrahima, Alessandra Dentamaro, Gianluca Gilardoni, Solveig Tosi, Pietro Grisoli, Cesare Dacarro, Maria Lidia Guglielminetti, Faiq Hama Saeed Hussain, Gabriele Caccialanza, and Giovanni Vidari. *Chemical Composition and Antimicrobial Activity of the Volatile Fractions from Leaves and Flowers of the Wild Iraqi Kurdish Plant Prangos peucedanifolia Fenzl*. Chemistry and Biodiversity 10 (2) pp 274-280 (2013).
6. I. Cesari, M. Hoerle', C. Simoes-Pire, P. Grisoli, E. F. Queiroz, C. Dacarro, L. Marcourt, P. F. Moundipa, P. A. Carrupt, M. Cuendet, G. Caccialanza, J.L. Wolfender, G. Brusotti. *Anti-inflammatory, antimicrobial and antioxidant activities of Diospyros bipindensis (Gürke) extracts and its main constituents*. Journal of Ethnopharmacology 146 (1), pp 264-270 (2013).
7. Piersandro Pallavicini, Giacomo Dacarro, Pietro Grisoli, Carlo Mangano, Maddalena Patrini, Federica Rigoni, Luigi Sangaletti and Angelo Taglietti. *Coordination chemistry for antibacterial materials: a monolayer of a Cu²⁺ 2,2'-bipyridine complex grafted on a glass surface*. Dalton Transactions 42 (13), pp 4552-4560 (2013).

8. Giuseppina Sandri, Maria Cristina Bonferoni, Francesca D'Autilia, Silvia Rossi, Franca Ferrari, Pietro Grisoli, Milena Sorrenti, Laura Catenacci, Claudia Del Fante, Cesare Perotti, Carla Caramella. *Wound dressings based on silver sulfadiazine solid lipid nanoparticles for tissue repairing*. *European Journal of Pharmaceutics and Biopharmaceutics* 84 (1), pp 84–90 (2013)
9. Gloria Brusotti, Solveig Tosi, Aldo Tava, Anna M. Picco, Pietro Grisoli, Ilaria Cesari, Gabriele Caccialanza. *Antimicrobial and phytochemical properties of stem bark extracts from Piptadeniastrum africanum (Hook f.) Brenan*. *Industrial Crops and Products* 43 (1), pp 612– 616 (2013).
10. Taglietti, A., Diaz Fernandez, Y.A., Galinetto, P., Grisoli, P., Milanese, C., Pallavicini, P. Mixing thiols on the surface of silver nanoparticles: Preserving antibacterial properties while introducing SERS activity *Journal of Nanoparticle Research* 15 (11) (2013)
11. Sandri, G., Bonferoni, M.C., Ferrari, F., Rossi, S., Aguzzi, C., Mori, M., Grisoli, P., Caramella, C. Montmorillonite-chitosan-silver sulfadiazine nanocomposites for topical treatment of chronic skin lesions: In vitro biocompatibility, antibacterial efficacy and gap closure cell motility properties *Carbohydrate Polymers* 102 (1) PP. 970 – 977 (2014)
- 12. Cesari, I., Grisoli, P., Paolillo, M., Milanese, C., Massolini, G., Brusotti, G. Isolation and characterization of the alkaloid Nitidine responsible for the traditional use of *Phyllanthus muellerianus* (Kuntze) Excell stem bark against bacterial infections” *Journal of Pharmaceutical and Biomedical Analysis* Volume 87, Pages 218-228. (2014)
- 13. Brusotti, G., Andreola, F., Sferrazza, G., Grisoli, P., Merelli, A., Cuna, F.S.R.D., Calleri, E., Nicotera, G., Pierimarchi, P., Serafino, A. “In vitro evaluation of the wound healing activity of *Drypetes klainei* stem bark extracts” *Journal of Ethnopharmacology* Volume 175, 4, Pages 412-421. (2015)
- 14. Dorati, R., De Trizio, A., Genta, I., Grisoli, P., Merelli, A., Tomasi, C., Conti, B. “An experimental design approach to the preparation of pegylated polylactide-co-glicolide gentamicin loaded microparticles for local antibiotic delivery” *Materials Science and Engineering C* Volume 58, 1, Pages 909-917. (2016)
- 15. D'Agostino, A., Taglietti, A., Grisoli, P., Dacarro, G., Cucca, L., Patrini, M., Pallavicini, P. “Seed mediated growth of silver nanoplates on glass: Exploiting the bimodal antibacterial effect by near IR photo-thermal action and Ag⁺ release” *RSC Advances* Volume 6, Issue 74, Pages 70414-70423. (2016)
- 16. Agnese D'Agostino, Angelo Taglietti, Roberto Desando, Marcella Bini, Maddalena Patrini, Giacomo Dacarro, Lucia Cucca, Piersandro Pallavicini and Pietro Grisoli. Bulk Surfaces Coated with Triangular Silver Nanoplates: Antibacterial Action Based on Silver Release and Photo-Thermal Effect. *Nanomaterials*, 7(1), 7 (2017)
- 17. Tenci, M., Rossi, S., Aguzzi, C., Carazo, E., Sandri, G., Bonferoni, M.C., Grisoli, P., Viseras, C., Caramella, C.M.a, Ferrari, F. Carvacrol/clay hybrids loaded into in situ gelling films. *International Journal of Pharmaceutics*, Volume 531, Issue 2, , Pages 676-688 (2017)
- 18. Dacarro, G., Grisoli, P., Borzenkov, M., Milanese, C., Fratini, E., Ferraro, G., Taglietti, A., Pallavicini, P. Self-assembled monolayers of Prussian blue nanoparticles with photothermal effect. *Supramolecular Chemistry*, Volume 29, Issue 11, , Pages 823-833, (2017)

- 19. Pallavicini, P., Bassi, B., Chirico, G., Collini, M., Dacarro, G., Fratini, E., Grisoli, P., Patrini, M., Sironi, L., Taglietti, A., Moritz, M., Sorzabal-Bellido, I., Susarrey-Arce, A., Latter, E., Beckett, A.J., Prior, I.A.g, Raval, R.f, Diaz Fernandez. Modular approach for bimodal antibacterial surfaces combining photo-switchable activity and sustained biocidal release. *Scientific Reports, Open Access*, Volume 7, Issue 1, , Article number 5259, (2017)
- 20. Saporito, F., Sandri, G., Bonferoni, M.C., Rossi, S., Boselli, C., Cornaglia, A.I., Mannucci, B., Grisoli, P., Vigani, B., Ferrari, F. Essential oil-loaded lipid nanoparticles for wound healing. *International Journal of NanomedicineOpen Access*, Volume 13, 2018, Pages 175-186, (2018)
21. Grisoli P., ALBERTONI, MARCO, Rodolfi M. (2019). Application of Airborne Microorganism Indexes in Offices, Gyms, and Libraries. *APPLIED SCIENCES*, vol. 9, p. 1-9, ISSN: 2076-3417, doi: 10.3390/app9061101
- 22. García-Villén, Fatima, Faccendini, Angela, Aguzzi, Carola, Cerezo, Pilar, Bonferoni, Maria Cristina, Rossi, Silvia, Grisoli, Pietro, RUGGERI, MARCO, Ferrari, Franca, Sandri, Giuseppina, Viseras, Cesar (2019). Montmorillonite norfloxacin nanocomposite intended for healing of infected wounds. *INTERNATIONAL JOURNAL OF NANOMEDICINE*, vol. 14, p. 5051-5060, ISSN: 1178-2013, doi: 10.2147/IJN.S208713
- 23. Taglietti, Angelo, Dacarro, Giacomo, Barbieri, Daniele, Cucca, Lucia, Grisoli, Pietro, Patrini, Maddalena, Arciola, Carla Renata, Pallavicini, Piersandro (2019). High Bactericidal Self-Assembled Nano-Monolayer of Silver Sulfadiazine on Hydroxylated Material Surfaces. *MATERIALS*, vol. 12, ISSN: 1996-1944, doi: 10.3390/ma12172761
- 24. Bari E, Ferrarotti I, Di Silvestre D, Grisoli P, Barzon V, Balderacchi A, Torre ML, Rossi R, MAURI, PAOLO, Corsico AG, Perteghella S (2019). Adipose Mesenchymal Extracellular Vesicles as Alpha-1-Antitrypsin Physiological Delivery Systems for Lung Regeneration. *CELLS*, vol. 23, ISSN: 2073-4409, doi: 10.3390/cells8090965
- 25. Rovati, Davide, Albini, Benedetta, Galinetto, Pietro, Grisoli, Pietro, Bassi, Barbara, Pallavicini, Piersandro, Dacarro, Giacomo, Taglietti, Angelo (2019). High Stability Thiol-Coated Gold Nanostars Monolayers with Photo-Thermal Antibacterial Activity and Wettability Control. *NANOMATERIALS*, vol. 9, ISSN: 2079-4991, doi: 10.3390/nano9091288
- 26. Pisani, Silvia, Dorati, Rossella, Chiesa, Enrica, Genta, Ida, Modena, Tiziana, Bruni, Giovanna, Grisoli, Pietro, Conti, Bice (2019). Release Profile of Gentamicin Sulfate from Polylactide-co-Polycaprolactone Electrospun Nanofiber Matrices. *PHARMACEUTICS*, vol. 11, p. 161-175, ISSN: 1999- 4923, doi: 10.3390/pharmaceutics11040161
- 27. Vigani B., Faccendini A., Rossi S., Sandri G., Bonferoni M. C., Grisoli P., Ferrari F. (2019). Development of a mucoadhesive in Situ gelling formulation for the delivery of *Lactobacillus gasseri* into vaginal cavity. *PHARMACEUTICS*, vol. 11, ISSN: 1999-4923, doi: 10.3390/pharmaceutics11100511
- 28. Sandri G., Miele D., Faccendini A., Bonferoni M. C., Rossi S., Grisoli P., Taglietti A., Ruggeri M., Bruni G., Vigani B., Ferrari F. (2019). Chitosan/glycosaminoglycan scaffolds: The role of silver nanoparticles to control microbial infections in wound healing. *POLYMERS*, vol. 11, ISSN: 2073-4360, doi: 10.3390/polym11071207
- 29. Tripodo G, Perteghella S, Grisoli P, Trapani A, Torre ML, Mandracchia D (2019). Drug delivery of rifampicin by natural micelles based on inulin: physicochemical properties, antibacterial activity

- and human macrophages uptake. EUROPEAN JOURNAL OF PHARMACEUTICS AND BIOPHARMACEUTICS, vol. 136, p. 250-258, ISSN: 0939-6411, doi: 10.1016/j.ejpb.2019.01.022
- 30. Faccendini A., Ruggeri M., Miele D., Rossi S., Bonferoni M. C., Aguzzi C., Grisoli P., Viseras C., Vigani B., Sandri G., Ferrari F. (2020). Norfloxacin-loaded electrospun scaffolds: Montmorillonite nanocomposite vs. free drug. PHARMACEUTICS, vol. 12, ISSN: 1999-4923, doi: 10.3390/pharmaceutics12040325
- 31. Gargioni C., Borzenkov M., D'alfonso L., Sperandeo P., Polissi A., Cucca L., Dacarro G., Grisoli P., Pallavicini P., D'agostino A., Taglietti A. (2020). Self assembled monolayers of copper sulfide nanoparticles on glass as antibacterial coatings. NANOMATERIALS, vol. 10, ISSN: 2079-4991, doi: 10.3390/nano10020352
- 32. Guerini M., Perugini P., Grisoli P. (2020). Evaluation of the effectiveness of NAcetylcysteine (NAC) and N-acetylcysteine-cyclodextrins Multi-Composite in *Pseudomonas aeruginosa* biofilm formation. APPLIED SCIENCES, vol. 10, ISSN: 2076-3417, doi: 10.3390/app10103466
- 33. Bari Elia, Di Silvestre Dario, Mastracci Luca, Grillo Federica, Grisoli Pietro, Marrubini Giorgio, Nardini Marta, Mastrogiacomo Maddalena, Sorlini Marzio, Rossi Rossana, Torre, Mauri Pierluigi, Sesana Giovanni, Perteghella Sara (2020). GMP-compliant sponge-like dressing containing MSC lyo-secretome: proteomic network of healing in a murine wound model. EUROPEAN JOURNAL OF PHARMACEUTICS AND BIOPHARMACEUTICS, vol. 155, p. 37-48, ISSN: 0939-6411, doi: 10.1016/j.ejpb.2020.08.003
- 34. Grisoli P., De Vita L., Milanese C., Taglietti A., Fernandez Y. D., Bouzin M., D'alfonso L., Sironi L., Rossi S., Vigani B., Sperandeo P., Polissi A., Pallavicini P. (2021). Pva films with mixed silver nanoparticles and gold nanostars for intrinsic and photothermal antibacterial action. NANOMATERIALS, vol. 11, ISSN: 2079-4991, doi: 10.3390/nano11061387
- 35. Guerini M., Grisoli P., Pane C., Perugini P. (2021). Microstructured lipid carriers (MLC) based on N-acetylcysteine and chitosan preventing *Pseudomonas aeruginosa* biofilm. INTERNATIONAL JOURNAL OF MOLECULAR SCIENCES, vol. 22, p. 1-22, ISSN: 1661-6596, doi: 10.3390/ijms22020891
- 36. Fiorentini F., Suarato G., Grisoli P., Zych A., Bertorelli R., Athanassiou A. (2021). Plant-based biocomposite films as potential antibacterial patches for skin wound healing. EUROPEAN POLYMER JOURNAL, vol. 150, ISSN: 0014- 3057, doi: 10.1016/j.eurpolymj.2021.110414
- 37. Perugini P., Bonetti M., Guerini M., Musitelli G., Grisoli P. (2021). A New In Vitro Model to Evaluate Anti-Adhesive Effect against Fungal Nail Infections. APPLIED SCIENCES, vol. 11, ISSN: 2076-3417, doi: 10.3390/app11051977
- 38. Toci G., Olgiati F., Pallavicini P., Fernandez Y. D., De Vita L., Dacarro G., Grisoli P., Taglietti A. (2021). Gold Nanostars Embedded in PDMS Films: A Photothermal Material for Antibacterial Applications. Nanomaterials 2021, 11(12), 3252; <https://doi.org/10.3390/nano11123252>
- 39. Rosalia M., Ravipati P., Grisoli P., Dorati R., Genta I., Chiesa E., Bruni G., Conti B. (2021). Tobramycin Supplemented Small-Diameter Vascular Grafts for Local Antibiotic Delivery: A Preliminary Formulation Study. Int. J. Mol. Sci. 2021, 22(24), 13557; <https://doi.org/10.3390/ijms222413557>
- 40. Ibrahim M.F., Robustelli della Cuna F.S., Corti M., Amin M. I. H., Faris P., Grisoli P., Brusotti G. (2022). A chemometric assessment and profiling of the essential oils from *Hibiscus sabdariffa* L.

from Kurdistan, Iraq. *Natural Product Research, Formerly Natural Product Letters* Volume 36, 2022 - Issue 9 <https://doi.org/10.1080/14786419.2020.1833198>

-41. La Cognata, S., Armentano, D., Marchesi, N., Grisoli P., Pascale A., Kieffer M., Taglietti A., Davis, A.P., Amendola, V. (2022). A Benzimidazolium-Based Organic Cage with Antimicrobial Activity. *Chemistry* 2022, 4(3), 855-864; <https://doi.org/10.3390/chemistry4030061>

-42. Gazzola, V., Grisoli, P., Amendola, V., Dacarro G., Mangano C., Pallavicini P., Poggi A., Rossi S., Vigani B., Vigani, B., Taglietti, A. (2022). A Supramolecular Approach to Antimicrobial Surfaces. *Molecules* 2022, 27(17), 5731; <https://doi.org/10.3390/molecules27175731>

-43. Doveri I., Taglietti A., Grisoli, P., Pallavicini, P., Dacarro, G. (2023). Dual mode antibacterial surfaces based on Prussian blue and silver nanoparticles. *Dalton Transactions*, 52, 452, DOI: 10.1039/d2dt03058f

-44. Bianchi E., Vigani B., Ruggeri, M., Del Favero E., Ricci, C., Grisoli, P., Ferraretto, A., Rossi, S., Viseras, C., Sandri G (2023). Electrospun Scaffolds Based on Poly(butyl cyanoacrylate) for Tendon Tissue Engineering *International Journal of Molecular Sciences*, 2023, 24(4), 3172; <https://doi.org/10.3390/ijms24043172>

-45 Valentino C., Martínez Rodríguez, T.; Borrego-Sánchez A., Hernández Benavides P., Arrebola Vargas F., Paredes J. M., Rossi S, Sainz Díaz C., Sandri G., Grisoli P., Medina Pérez M., Aguzzi, C. (2023). Characterization and Molecular Modelling of Non-Antibiotic Nanohybrids for Wound Healing Purposes. *Pharmaceutics*, 2023, 15(4), 1140; <https://doi.org/10.3390/pharmaceutics15041140>

-46 Ruggeri M., Lenzuni ., Suarato G., Vigani B., Boselli C., Cornaglia A.I., Colombo D., Grisoli P., Ricci C., Del Favero E., Rossi S., Athabassiou A., Sandri G.(2023) Polysaccharide-protein microparticles based-scaffolds to recover soft tissue loss in mild periodontitis. *International Journal of Pharmaceutics*, 2023, 640, 123015; <https://doi.org/10.1016/j.ijpharm.2023.123015>

-47 (2023). 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. *International Journal of Molecular Sciences*, 2023, 24(15), 12108; <https://doi.org/10.3390/ijms241512108>

-48 Nuc Z., Brusotti G., Catenacci L., Grenha A., Pontes J.F., Pinto da Silva J., Rosa da Costa A.M., Moro P., Milanese C., Grisoli P., Sorrenti M., Dobrzycka-Krahel A., Bonferoni M.C., Caramella C.M. (2023) *Pontastacus leptodactylus* (Eschscholtz, 1823) and *Faxonius limosus* (Rafinesque, 1817) as New, Alternative Sources of Chitin and Chitosan. *Water (Switzerland)*, 2023, 15(17), 3024; <https://doi.org/10.3390/w15173024>

-48 Pino P., Vigani B., Valentino C., Ianev D., Ruggeri M., Boselli C., Cornaglia A.I., Grisoli P., Onida B., Bosco F., Sandri G., Rossi S. (2024) Sustainable whey proteins-nanostructured zinc oxide-based films for the treatment of chronic wounds: New insights from biopharmaceutical studies. *International Journal of Biological Macromolecules*, 2024, 263, 130655; <https://doi.org/10.1016/j.ijbiomac.2024.130655>

Pavia 05-06-2024