Curriculum Vitae

SILVIA BURONI

PERSONAL INFORMATION

Born on 06/02/1979 in Castel San Giovanni (PC)
Italian nationality

Contacts
Department of Biology and Biotechnology "Lazzaro Spallanzani" - University of Pavia
Via Ferrata, 9
27100 Pavia
Tel.: +39 0382 985574
Fax: + 39 0382 987917
E-mail: silvia.buroni@unipv.it
ORCID: https://orcid.org/0000-0002-6979-2275

EDUCATION AND TRAINING

January 2007 PhD in Genetic and Biomolecular Sciences, University of Pavia.
2006 Diploma from the "Advanced School of Integrated Training (SAFI)" of the University Institute of Higher Studies (IUSS) of Pavia.
November 2003 Qualified as a Biologist, University of Pavia.
July 2003 Degree in Biological Sciences, University of Pavia (110/110 cum laude).
July 1998 Scientific high school diploma, Liceo Scientifico "A. Volta" – Castel San Giovanni (PC).

ACADEMIC POSITION

● 1 December 2021 – present Associate Professor, competition sector 05/I2 Microbiology, SSD: BIO/19, University of Pavia.
● 19 February 2024 – present Coordinator of the Master's Degree in Experimental and Applied Biology, University of Pavia.
● 1 December 2018 – 30 November 2021 Fixed-term Researcher – B, SSD: BIO/19, University of Pavia.
● 5 June 2023 Achievement of the National Scientific Qualification for the role of First Level Professor (competition sector 05/I2 Microbiology, SSD: BIO/19).

PREVIOUS PROFESSIONAL EXPERIENCE

● 2018 Research Fellow, Department of Biology and Biotechnology, University of Pavia, SSD BIO/19. Title: "Characterization of new compounds active against *Burkholderia cenocepacia*" (Supervisor: Prof. G. Riccardi).
● 2011-2017 Research Fellow, Department of Biology and Biotechnology, University of Pavia, SSD BIO/19. Title: "Heterologous production of the enzyme decaprenyl-phosphoryl-epimerase of mycobacteria for drug design and development of a new diagnostic kit" and subsequent integration "Heterologous production of proteins of *Mycobacterium tuberculosis* and cystic fibrosis pathogens, as therapeutic targets" (Supervisor: Prof. G. Riccardi).
● 2006-2011 Research Fellow, Department of Genetics and Microbiology, University of Pavia, SSD BIO/19. Title: "New medicines for tuberculosis" (Supervisor: Prof. G. Riccardi).

● June-August 2007 Visiting Scientist at the Laboratory of Microbiology and Immunology, University of Western Ontario, London Ontario (Canada) (Supervisor: Prof. M. Valvano).
● 2003-2006 Scholarship for PhD in Genetic and Biomolecular Sciences, Department of Genetics and Microbiology, University of Pavia, SSD BIO/19. Title: "Regulation of the *Mycobacterium smegmatis* efflux pump LfrA by its repressor LfrR" (Supervisor: Prof. E. De Rossi).

BUSINESS INTERRUPTIONS

10 November 2011-19 April 2012: Mandatory maternity leave.

SCIENTIFIC SOCIETIES

Since 2024 Member of the College of Biologists of Italian Universities (CBUI).
Since 2023 Member of the European Cystic Fibrosis Society (ECFS).
Since 2007 Member of the Italian Society of Microbiology and Microbial Biotechnology (SIMGBM).

TEACHING ACTIVITIES IN ITALY AND ABROAD

PhD Courses

From October 2021 Member of the Teaching Board of the Doctoral Course in Biomolecular Sciences and Biotechnology, University Institute of Higher Studies (IUSS) of Pavia.

A.A. 2020-21 Member of the Teaching Board of the Doctoral Course in Genetics, Molecular and Cellular Biology, University of Pavia.

A.A. 2019-20 Member of the Board of Proponents of the Doctoral Course in Genetics, Molecular and Cellular Biology, University of Pavia.

Teaching Activity

A.A. 2022-24
(15 CFU) Teaching of Molecular Microbiology (6 CFU, in English) – Master's Degree Course in Molecular Biology and Genetics, University of Pavia.
Teaching of Microbiology (1 CFU) – Degree Course in Dietetics (qualifying the healthcare profession of dietician), University of Pavia.
Teaching of Molecular Microbiology (6 CFU) – Master's Degree Course in Experimental and Applied Biology, University of Pavia.
Teaching of General Microbiology (2 CFU) – Three-year Degree Course in Biotechnology, University of Pavia.
Lesson for the II level University Master in Advanced Microbiological Diagnostics "Burkholderia cenocepacia: antibiotic resistance and therapeutic strategies" (2 hours).
I level in Advanced Microbiological Diagnostics "*Burkholderia cenocepacia*: antibiotic resistance and therapeutic strategies" (2 hours).

A.A. 2020-21
(9 CFU) Teaching of Molecular Microbiology (3 CFU, in English) – Master's Degree Course in Molecular Biology and Genetics, University of Pavia.
Teaching of Microbiological Analysis (3 CFU) - Master's Degree Course in Experimental and Applied Biology, University of Pavia.

Integrated Laboratory Teaching of Molecular Biotechnology, Microbiology Module (3 CFU) - Three-year Degree Course in Biotechnology, University of Pavia.
Lesson for the II level University Master in Advanced Microbiological Diagnostics "*Burkholderia cenocepacia*: antibiotic resistance and therapeutic strategies" (2 hours).

A.A. 2019-20
(10 CFU) Teaching of Molecular Microbiology (3 CFU, in English) – Master's Degree Course in Molecular Biology and Genetics, University of Pavia.
Teaching of Microbiological Analysis (4 CFU) - Master's Degree Course in Experimental and Applied Biology, University of Pavia.
Integrated Laboratory Teaching of Molecular Biotechnology, Microbiology Module (3 CFU) - Three-year Degree Course in Biotechnology, University of Pavia.

A.A. 2018-19
(6 CFU) Teaching of Molecular Microbiology (3 CFU, in English) – Master's Degree Course in Molecular Biology and Genetics, University of Pavia.
Experimental Biology Laboratory Teaching, Microbiology Module (3 CFU) - Three-year Degree Course in Biotechnology, University of Pavia.

A.A. 2015-18
(3 CFU) Contract professor for teaching Experimental Biology Laboratory, Microbiology Module (3 CFU) - Three-year Degree Course in Biotechnology, University of Pavia.

12-15/9/2016 Lecturer for the "International summer school: molecular and physiological regulation of medical and environmental microbial biofilms", University of Leuven (Belgium). Lesson title: "New antivirulence compounds affecting *Burkholderia cenocepacia* quorum sensing and biofilm".

Integrative Teaching Activities

2009-2015 Subject Expert, SSD BIO/19, University of Pavia.

2006-2008 Assignment for carrying out educational seminars for the "General Microbiology and Laboratory" course, three-year degree course in Biotechnology, University of Pavia.

2002-2013 Tutoring activity for the "General Microbiology" course, three-year degree course in Biotechnology, University of Pavia.

Since 2004, supervisor of students of the three-year degree courses in Biotechnology and Biological Sciences and the master's degree in Experimental and Applied Biology, Molecular Biology and Genetics, Industrial Biotechnology, Advanced Biotechnology and Doctoral Courses of the University of Pavia for the preparation of experimental and compilation theses.

RESEARCH ACTIVITY

1) New therapeutic approaches against ESKAPE bacteria
Countering antibiotic resistance is high on the public health agenda and new antibacterial drugs are urgently needed. The main objective of the present project is the identification, characterization and preclinical evaluation of new antibacterial drugs active against multidrug-resistant ESKAPE pathogens. The project aims to characterize two recently identified antibacterial agents that are primarily active against Gram-positive bacteria and to identify new molecules active against Gram-negative bacteria that may interfere with cell envelope homeostasis or cell division.

2) Study of bacterial persistence

Bacterial persistence (the ability of some cells to survive antimicrobial treatments and subsequently resume growth despite being genotypically identical to susceptible cells) currently represents a major concern in the fight against microbial infections.

The emergence of persisters is debated, but it has recently been shown that there is a relationship between ploidy (the number of genomic equivalents possessed by cells during their cell cycle) and the size of the persister subpopulation. Ploidy represents a well-known heterogeneous trait that has been explored primarily in *Escherichia coli*. The frequency of persistent cells can be reduced by first manipulating the ploidy of the cells and then treating them with the antibiotic. In this project, *E. coli* and other pathogens will be studied with the help of flow cytometry and mathematical models to understand the general properties in the relationship of persistence with growth/metabolic state. These models, once applied to in vivo data, will allow the expected degree of persistence to be quantified, allowing the application of personalized treatments. In this This way it will be possible to tune the antibiotic therapy based on the growth rate and metabolic state of the pathogen population in order to maximize its effectiveness.

3) Identification of new drugs and new therapeutic targets for *Burkholderia cenocepacia*

The development of new drugs remains of fundamental importance for the treatment of lung infections such as those affecting patients with Cystic Fibrosis (CF). *Burkholderia cenocepacia* is a Gram-negative opportunistic pathogen that infects the airways of CF patients. Eradication of this infection is complicated by the intrinsic resistance of this microorganism to several antibiotics.

Current research involves the synthesis of new molecules effective against *B. cenocepacia*. We discovered that a pyridine compound (11026103) and a benzothiadiazole compound (10126109 or C109) are very active in vitro and we identified a resistance mechanism, which is based on extrusion by two transporters belonging to the RND family (Scoffone et al., 2014. Antimicrob Agents Chemother. 58: 2415-17; Scoffone et al., 2015. Front. Microbiol. 6: 815). C109 is active against clinical isolates and other members of the *B. cepacia* complex (Bcc), as well as other Gram-negative and -positive bacteria (Trespidi et al., submitted for publication to Pathogens). We identified its mechanism of action, which is based on the inhibition of the activity of the cell division protein FtsZ, in collaboration with Prof. S. Cardona (University of Manitoba, Winnipeg, Canada; Hogan et al., 2018 (Antimicrob Agents Chemother. 62: e01231-18).

In collaboration with Dr. V. Makarov (Russian Academy of Sciences, Moscow, Russia) we have characterized over 50 derivatives of C109 (Chiarelli et al., 2020. Front. Microbiol. 11: 562). Furthermore, an inhalable formulation of this compound was developed in collaboration with Prof. F. Ungaro (University of Naples; Costabile et al., 2020. Nanomedicine 23: 102113).

The characterization of the B. cenocepacia dividedome (Trespidi et al., 2020. Antibiotics (Basel). 9: 841) will allow the identification of other therapeutic targets useful for the development of new active molecules against this pathogen.

We are currently focusing on a new molecule, designed by Dr. Makarov, capable of inhibiting the host-pathogen interaction: we are characterizing its activity against several CF pathogens, including *Pseudomonas aeruginosa* and *B. cenocepacia*.

Another approach to combat multi-drug-resistant infections is the characterization of antivirulence compounds, which do not favor the emergence of resistant strains as they do not affect the viability of the bacterium. In this context we therefore focused on the quorum sensing enzymes of B. cenocepacia, a cellular communication mechanism that controls the expression of several virulence-related genes. The two enzymes CepI and DfsA were obtained in recombinant form and, for the latter, the crystallographic structure was solved (Spadaro et al., 2016. Biochemistry 55: 3241-50), which will allow the design of ad hoc inhibitors. An activity assay was also developed that allowed the screening of potential inhibitors, leading to the characterization of diketopiperazine compounds active

in vitro against CepI, which are able to drastically reduce the virulence of the bacteria in an in vivo model of *Caenorhabditis elegans* (Scoffone et al., 2016. Sci. Rep. 6: 32487).

4) Development of a vaccine against *Burkholderia cenocepacia*
In collaboration with Dr. M. Pizza and Dr. M. Scarselli (GlaxoSmithKline, Siena) we carried out a bioinformatic analysis, applying the Reverse Vaccinology technique, to identify potential candidate antigens for the development of a vaccine against *B. cenocepacia* (Scoffone et al., 2020. Trends Microbiol. 28: 315-326). This study, for which a funding request has been made to the Cystic Fibrosis Foundation (USA), aims to characterize candidate antigens through the evaluation of their role in virulence and host-pathogen interaction in the *Galleria mellonella* animal model and, subsequently, in CF mice in collaboration with Prof. Amal Amer (Ohio State University, USA). Our goal is to identify at least one candidate antigen with immunogenic potential that will be used for the development of a vaccine against *B. cenocepacia* to improve the lives of CF patients.

SPEAKER BY INVITATION TO THE FOLLOWING CONFERENCES

1. 47th European Cystic Fibrosis Conference, Glasgow (UK), 5-8 June 2024. New drug for inhibition of *Pseudomonas aeruginosa* adhesion to the airway epithelia.
2. Seminar at the Almo Collegio Borromeo in Pavia, 5 May 2022. Antibiotic resistance: how to fight it?
3. XXXIII SIMGBM Congress, Florence (Italy), 19-22 June 2019. A new molecular strategy to find drug targets in *Burkholder ia cenocepacia*.
4. Series of Seminars on Antibiotic Resistance, Institut Pasteur, Paris (France), 18 September 2019. Different strategies to overcome *Burkholderia cenocepacia* drug resistance.
5. 5th Workshop on Bacterial and Fungal Biofilms, Ghent (Belgium), 30 April 2019. Novel approaches to target quorum sensing in *Burkholderia cenocepacia* (opening lecture).
6. 41st European Cystic Fibrosis Conference, Belgrade (Serbia), 6-9 June 2018. Efflux pumps and resistance mechanisms in cystic fibrosis pathogens.
7. Developing Antibiotic Alternatives - A discussion of new approaches to overcoming antimicrobial resistance, online conference, 8-10 November 2016. New perspectives to fight *Burkholderia cenocepacia,* a very dangerous cystic fibrosis pathogen.
8. 11th More Medicine for Tuberculosis Consortium Meeting, Pavia (Italy), 11-12 January 2016. New medicines for *Burkholderia cenocepacia*: a neglected infection in cystic fibrosis patients. Barry Furr memorial lecture.

ORGANIZATION OF CONFERENCES

• From June 2023 Member of the Scientific Commission for the organization of the European Cystic Fibrosis Congress (2024-2026), Microbiology sessions.
• May 2024 Organizer of the International *Burkholderia cepacia* Working Group Annual Meeting in Pavia.

SPEAKER ON SELECTION AT THE FOLLOWING CONFERENCES

1. Second Joint Conference of the Departments of Biology and Biotechnology, Molecular Medicine and Institute of Molecular Genetics CNR, Pavia (Italy), 20-22 June 2018. Buroni S., Chiarelli L. R., Scoffone V. C., Trespidi G., Sammartino J. C., De Rossi E., Pasca M. R., Riccardi G. New compounds and new approaches to fight infectious diseases.
2. International *Burkholderia cepacia* Working Group-21st Annual Meeting, Dublin (Ireland), 2-5 May 2018. Scoffone V., Chiarelli L., Fumagalli M., Forneris F., Trespidi G., Stelitano G., Makarov

V., Riccardi G., Buroni S. Deciphering the mechanism of action of Diketopiperazine inhibitors of the *Burkholderia cenocepacia* quorum sensing synthase CepI.
3. First Joint Conference of the Departments of Biology and Biotechnology, Molecular Medicine and the CNR Institute of Molecular Genetics, Pavia (Italy), 14-15 February 2017. Buroni S., Scoffone V., Chiarelli L., De Rossi E., Riccardi G. New approaches to fight *Burkholderia cenocepacia*, a very dangerous Cystic Fibrosis pathogen.
4. International *Burkholderia cepacia* Working Group-20th Annual Meeting, Columbus (Ohio, USA), 27-30 April 2016. Buroni S., Brackman G., Scoffone V.C., Chiarelli L.R., Azzalin A., Israyilova A., Makarov V., Coenye T., Riccardi G. New antivirulence compounds affecting *Burkholderia cenocepacia* quorum sensing in vitro and in vivo.
5. International *Burkholderia cepacia* Working Group-20th Annual Meeting, Columbus (Ohio, USA), 27-30 April 2016. Buroni S., Gislason A.S., Scoffone V.C., Stietz M.S., Chiarelli L.R., Azzalin A., Makarov V., Cardona S.T., Riccardi G. A new promising bactericidal compound against *Burkholderia cenocepacia*.
6. International *Burkholderia cepacia* Working Group-18th Annual Meeting, Nimes (France), 9-12 April 2014. Buroni S., Scoffone V.C., Spadaro F., Makarov V., Riccardi G. New drugs and new targets to fight Burkholderia cenocepacia .
7. International *Burkholderia cepacia* Working Group-15th Annual Meeting, Prague (Czech Republic), 13-16 April 2011. Buroni S., Bazzini S., Udine C., Sass A., Pasca M.R., Longo F., Emiliani G., Fondi M., Perrin E., Decorosi F., Viti C., Giovannetti L., Leoni L., Fani R., Mahenthiralingam E., De Rossi E., Riccardi G. The role of RND efflux transporters in *Burkholderia cenocepacia* life.
8. Cortona Procarioti 2010, Cortona (AR), 14-15 April 2010. Buroni S., Manina G., Pasca M.R., Ribeiro A.L., Degiacomi G., De Rossi E., Riccardi G. Decaprenylphosphoryl-β-D-ribose 2'-epimerase from *Mycobacterium tuberculosis* is a magic drug target. Award for best presentation.
9. XXVIII SIMGBM Congress. Chiostro San Nicolò, Spoleto, 11-13 June 2009. Manina G., Bellinzoni M., Pasca M.R., Mikusova K., Milano A., Makarov V., Buroni S., Ribeiro A.L., Lucarelli A.P., De Rossi E., Cole S.T., Alzari P.M., Riccardi G. Role in benzothiazinone resistance of nitroreductase NfnB of *Mycobacterium smegmatis*.
10. 9th FISV Congress. Riva del Garda (TN), 26-29 September 2007. Buroni S., Manina G., Riccardi G., and De Rossi E. Identification of the cellular target of the potential antitubercular drug BM 212.
11. Second Conference on New Frontiers in Microbiology and Infection. Villars-sur-Ollon (Switzerland), 8-12 October 2006. Buroni S., Manina G., Guglierame P., Pasca M.R., Riccardi G., and De Rossi E. LfrR is a repressor that regulates expression of the efflux pump LfrA in *Mycobacterium smegmatis*.

AWARDS

● Article selected as one of the most cited articles of the International Journal of Molecular Science of 2019: Scoffone VC, Trespidi G, Chiarelli LR, Barbieri G, Buroni S§. (2019) Quorum sensing as antivirulence target in cystic fibrosis pathogens. Into you rnational Journal of Molecular Science 13: pii: E1838.
● Grant for participation in the 4th Congress of European Microbiologists FEMS 2011, Geneva (Switzerland), 2011.
● Selected by Fondazione Cariplo among the 10 Italians out of 600 participants at the 60th Meeting of Nobel Laureates, Lindau (Germany), 2010.
● Award for best oral presentation: Cortona Procarioti, Cortona (AR), 2010.
● Award for the results obtained within the project "New Medicines for Tuberculosis, II annual report FPVI, Manchester (UK), 2010.
● Award for best poster: XXXIX AMCLI National Congress, Rimini, 2010.
● Article cited by Nature Medicines (15: 1349) as one of the 10 "key articles" published in 2009: Makarov V. et al., 2009. Science 324:801-804.

● Article highlighted by Science Translational Medicine (4:150fs33): Neres J. et al., 2012. Science Translational Medicine 4: 150ra121.
● Grant for participation in the International B. cepacia Working Group meeting, Ca' Tron, Roncade (TV), 2008.

RESEARCH FUNDING

● 30 November 2023-29 November 2025: PRIN 2022-PNRR: Ministry of University and Research – coPI of the project "EXPLORE - EXploiting pathogens PLOidy to fight drug REsistance: towards a precision medicine approach", (€83,686 /2 years) .
● September 2023-August 2026: Italian Foundation for Research on Cystic Fibrosis – PI of the project ""Targeting cell division by a Virtual Screening approach to find new drugs against Pseudomonas aeruginosa and Staphylococcus aureus", (200,000 €/3 years).
● April 2022-March 2025: PRIN 2020 Ministry of University and Research – co-PI of the project "Escaping the ESKAPEs: integrated pipelines for new antibacterial drugs", (€276,000/3 years).
● March 2021: Contract for research activities with the American company Arrevus Inc. to study the effect of pH variation on the activity of fusidic acid against *Burkholderia cenocepacia* (1900 USD).
● January 2021 – present: participant in the FWO Biofilm community project (W000921N).
● October 2019 – April 2024: PI of the Atomwise Award (A19-086) for the project: "Identification of small molecule inhibitors of FtsZ".
● November 2017 – December 2020: PI of the peer-reviewed Blue Sky Research Grant Project (BSR1718555) of the University of Pavia. Title: "*Burkholderia cenocepacia* divisome as a new target to hit a rare cystic fibrosis pathogen" (€85,000).

PARTICIPATION IN NATIONAL AND INTERNATIONAL PROJECTS

● 30 November 2023 - 29 November 2025: PRIN 2022-PNRR: Ministry of University and Research – coPI of the project "EXPLORE - EXploiting pathogens PLOidy to fight drug REsistance: towards a precision medicine approach".
● Collaborations: Prof. M. Fondi (University of Florence) and Prof. M. Brilli (Milan State University).
● April 2022-March 2025: PRIN 2021 Ministry of University and Research – co-PI of the project "Escaping the ESKAPEs: integrated pipelines for new antibacterial drugs".
Collaborations: Prof. F. Imperi (Roma Tre University), Dr. A. Coluccia (La Sapienza University, Rome), Dr. Paola Sperandeo (Milan State University), Dr. M. Fondi (University of Florence).
● January 2021 – present: Member of the FWO Biofilm community (W000921N).
Collaborations: Prof. T. Coenye, Ghent University (Belgium), Prof. P. Van Dijck, University of Leuven (Belgium), Prof. P. Cos, University of Antwerp (Belgium).
● October 2019 – April 2022: Atomwise Award (A19-086) for the project: "Identification of small molecule inhibitors of FtsZ".
● November 2017 – December 2020: PI of the project "Burkholderia cenocepacia dividedome as a new target to hit a rare cystic fibrosis pathogen". Blue Sky Research, University of Pavia.
Collaborations: Dr. G. Manina, Institut Pasteur (Paris, France); Prof. F. Forneris, University of Pavia.
● April 2017 – December 2019: Participant in the project "New inhalable compounds against the CF pathogen Burkholderia cenocepacia". Cystic Fibrosis Foundation 2017 (PI: Prof. G. Riccardi).
Collaborations: Dr. V. Makarov, Bakh Institute of Biochemistry Moscow (Russia), Prof. F. Ungaro, University of Naples (Italy); Dr. A. Bragonzi, San Raffaele Hospital, Milan (Italy); Prof. S.T. Cardona, Manitoba University (Winnipeg, Canada); Prof. F. Forneris, University of Pavia.
● September 2015 - August 2017: Participant in the project "Inhalable formulations of new molecules effective against Burkholderia cenocepacia: from in vitro to in vivo applications". Foundation for Research on Cystic Fibrosis 2015 (PI: Prof. G. Riccardi).

Collaborations: Prof. T. Coenye, Gent University (Belgium), Dr. V. Makarov, Bakh Institute of Biochemistry Moscow (Russia), Prof. F. Ungaro, University of Naples (Italy); Dr. A. Bragonzi, San Raffaele Hospital, Milan (Italy).

● September 2012 - August 2014: Participant in the project "A very promising drug against Burkholderia cenocepacia". Foundation for Research on Cystic Fibrosis 2012 (PI: Prof. G. Riccardi).
Collaborations: Prof. R. Fani, University of Florence (Italy); Prof. T. Coenye, Ghent University (Belgium); Dr. V. Makarov, Bakh Institute of Biochemistry Moscow (Russia).

● September 2009 – August 2011: Participant in the project "The role of RND transporters in Burkholderia cenocepacia life by microarray analysis". Foundation for Research on Cystic Fibrosis 2009. (PI: Prof. G. Riccardi).
Collaborations: Dr. E. Mahenthiralingam, Cardiff University (UK); Prof. R. Fani, University of Florence (Italy); Prof. T. Coenye, Ghent University (Belgium); Prof. L. Leoni, University of Roma Tre (Italy).

● September 2006 – August 2008: Participant in the project "The role of RND drug efflux transporters in the intrinsic antibiotic resistance of *Burkholderia cenocepacia*". Cystic Fibrosis Research Foundation 2006 (PI: Prof. G. Riccardi).
Collaborations: Prof. M.A. Valvano, Queen's University Belfast (UK); Dr. V. Venturi, ICGEB Trieste (Italy).

● February 2006 – January 2008: participant in the project "Development of new anti-tuberculosis drugs, evaluation of their antimycobacterial activity and identification of the cellular target". PRIN 2005 (Coordinator: Prof. M. Botta, PI: Prof. E. De Rossi)
Collaborations: Prof. M. Botta, University of Siena; Prof. M. Biava, La Sapienza University of Rome; Prof. A. De Logu, University of Cagliari.

● January 2006 – December 2010: Participant in the project "New medicines for tuberculosis" (NM4TB). FP6-2004-LIFESCIHEALTH-5 (Coordinator: Prof. S. Cole; PI: Prof. G. Riccardi).
Collaborations: Prof. S.T. Cole, EPFL Lausanne (Switzerland); Dr. V. Makarov, Bakh Institute of Biochemistry Moscow (Russia); Prof. K. Mikusova, Comenius University Bratislava (Slovakia); Prof. P. Butcher, University of London (UK).

● September 2004 – August 2006: Participant in the project "Antimicrobial resistance in *Burkholderia cepacia* complex from Cystic Fibrosis patients: identification, characterization and role of efflux transporters in intrinsic and acquired drug resistance". Foundation for Research on Cystic Fibrosis 2004 (PI: Prof. G. Riccardi).
Collaborations: Dr. P. Arrigo, National Research Council (CNR) Genoa (Italy).

REFEREE AND EDITORIAL BOARD ACTIVITIES

● Member of the Editorial Board of the journals "Frontiers in Microbiology" and "EC Pulmonology and Respiratory Medicine".

● Guest associate editor for Research Topics:

- "Burkholderia spp.-Transmission, Pathogenesis, Host-pathogen interaction, Prevention and Treatment" for Frontiers in Microbiology;
- "Evolutionary and Genomic Microbiology" for the journals Frontiers in Genetics and Frontiers in Microbiology;
- "Insights into New Strategies to Combat Biofilms" for Frontiers in Microbiology.

● Referee for the following international journals: Antimicrobial Agents and Chemotherapy; Critical Reviews in Microbiology; Journal of Antimicrobial Chemotherapy; Frontiers in Microbiology; BMC Microbiology; Future Microbiology; Antibiotics; Pathogens; Journal of Medical Microbiology; Microbial Drug Resistance; Current Microbiology; PLoS ONE; International Journal of Medicine and Medicinal Sciences.

● Referee for The Scientific Grant Agency of the Ministry of Education, Science, Research and Sport of the Slovak Republic (MESRaSSR) and of the Slovak Academy of Sciences (SAS) 2023.

● Member of the Commission for admission to the XXXV cycle of the PhD in Biomolecular Sciences and Biotechnology at the IUSS of Pavia.
● Referee for the "Israeli Ministry of Science, Technology and Space" to evaluate projects within the “Resistant pathogens 2017” call.
● Member of the commission for the evaluation of the best poster at the conference: “The disciples of Adriano Buzzati-Traverso: Molecular Genetics between University and CNR”, University of Pavia, Italy (2011).

PUBLICATIONS

Author of 60 peer-reviewed articles, 5 book chapters, and more than 70 conference papers.
He is first author of 11 articles (*) and corresponding author of 19 articles (§).

Bibliometric indicators (calculated on 19-3-24)
Scopus: H-index=24; Total citations =2410.

Updated list: https://orcid.org/0000-0002-6979-2275

Pavia, 10-4-2024

Prof.ssa Silvia Buroni