MARTINA PASQUA
Curriculum Vitae
ai fini della pubblicazione

Part I – General Information

Full Name	Martina Pasqua
Spoken Languages	Italian, English, French

Part II – NATIONAL SCIENTIFIC QUALIFICATION (ASN)

05/BIOS-15 – MICROBIOLOGY (MICROBIOLOGIA)	30/11/2023 – 30/11/2034	Qualification as **Associate Professor** ("Professore di seconda fascia") in the Italian higher education system, in the call 2021/2023, for the disciplinary field of 05/I2 - MICROBIOLOGY (now GDS Scientific Disciplinary Group 05/BIOS-15 Microbiology according to the national classification DM 639 02-05-2024), SSD BIO/19 Microbiology (now BIOS-15/A according to the national classification DM 639 02-05-2024)

Part III – Education

Type	Year	Institution	Notes (Degree, Experience,…)
Bachelor degree (Laurea triennale)	12/12/2012	Sapienza University of Rome	**Bachelor degree** (110/110 cum laude) in Biological Sciences (L-13), Sapienza University of Rome. Experimental thesis in Microbial Genetics: *Study of the mechanism of action of a Pseudomonas aeruginosa virulence inhibitor*. Supervisor: Professor Francesco Imperi
Master degree (2° level) (Laurea Magistrale)	22/10/2014	Sapienza University of Rome	**Master degree** (110/110 cum laude) in Genetics and Molecular Biology (LM-6), Sapienza University of Rome. Experimental thesis in Microbial Genetics: *Functional characterization of the repressor Fur in Pseudomonas aeruginosa*. Supervisor: Professor Francesco Imperi.
PhD - Doctor Europeus - in Cell and Developmental Biology	23/02/2018	Sapienza University of Rome	**PhD** (Doctor Europeus) (cum laude) in Cell and Developmental Biology, Sapienza University of Rome. PhD thesis in molecular Microbiology: *Expression profile of efflux pumps during intracellular life of Shigella*.

	Supervisor: Professor Bianca Colonna.

Part IV – Appointments

IVa – Academic Appointments (Assegni di Ricerca)

Start	End	Institution	Position
01/11/2023	present	Department of Biology and Biotechnologies "Charles Darwin", Sapienza University of Rome.	Research Associate (**Assegnista di Ricerca**) BIOS-15/A (previously SSD BIO/19 - Microbiology), call n. 33/2022 AR of 04/11/2022, category B -Type II for research activities in the Scientific disciplinary sector BIOS-15/A (Microbiology). Title of the research project: *Regulation of gene expression for antibiotic resistance efflux pumps during the invasive process of Shigella*. The contract is granted by "STOPENTERICS_2010 and PRIN 2017". Scientific supervisor: Prof. Bianca Colonna.
01/11/2022	31/10/2023	Department of Biology and Biotechnologies "Charles Darwin", Sapienza University of Rome.	Research Associate (**Assegnista di Ricerca**) BIOS-15/A (previously BIO/19- Microbiology), call n. 9/2022 AR of 31/03/2022, category B -Type II for research activities in the Scientific Disciplinary Sector BIOS-15/A (Microbiology). Title of the research project: *Development of a system for the selection of Cas9 variants with high discriminating capacity of PAM sequences in E.coli*. The contract was granted by: Holo-GT_ERC-2020. Scientific supervisor: Gianni Prosseda.
01/11/2021	31/10/2022	Department of Biology and Biotechnologies "Charles Darwin", Sapienza University of Rome.	Research Associate (**Assegnista di Ricerca**) BIOS-15/A (previously BIO/19- Microbiology), call n. 05/2021 AR of 19/01/2021, category B -Type II for research activities in the Scientific Disciplinary Sector BIOS-15/A (Microbiology). Title of the research project: *Multiresistant efflux pumps as potential antimicrobial targets in Shigella*. The contract was granted by: PRIN_2017. Scientific supervisor: Prof. Bianca Colonna.
01/11/2020	31/10/2021	Department of Biology and Biotechnologies "Charles Darwin", Sapienza University of Rome.	Research Associate (**Assegnista di Ricerca**) BIOS-15/A (previously BIO/19- Microbiology), call n. 9/2020 AR of 21/04/2020, category B -Type II for research activities in the Scientific Disciplinary Sector BIOS-15/A (Microbiology). Title of the research project: *Colistin resistance in gram-negative bacteria and strategies for restoring its activity in Pseudomonas aeruginosa strains*. The contract was granted by: SAPIENZA PROG MEDI 2019. Scientific

			Supervisor: Prof. Fiorentina Ascenzioni.
01/11/2019	31/10/2020	Department of Biology and Biotechnologies "Charles Darwin", Sapienza University of Rome.	Research Associate (**Assegnista di Ricerca**) BIOS-15/A (previously BIO/19-Microbiology), call n. 08/2019 of 06/5/2019, category B -Type II for research activities in the Scientific Disciplinary Sector BIOS-15/A (Microbiology). Title of the research project: *Functional characterisation of defective mutants in efflux pumps during the Shigella infectious process*. The contract was granted by: SAPIENZA MEDI PROG 2018. Scientific supervisor: Prof. Bianca Colonna.

IVb – Research Appointments abroad or granted by national/international institution

Start	End	Institution	Position
15 May 2022	7 July 2022	The Institute of Scientific and Industrial Research, Osaka University, Osaka, Japan	**Visiting Research Associate** at the laboratory of Prof. Toshihide Okajima, The Institute of Scientific and Industrial Research, Osaka University, Osaka, Japan as part of the Italy-Japan joint project n. PGR07208 funded by the Italian Minister of Foreign Affairs and International Cooperation (MAECI) JP21GR04. Project leader Prof. Bianca Colonna. Host Professor Toshihide Okajima. Research title: *Combination therapies for fighting antibiotic resistant bloodstream infections in cancer patients.*
3 May 2019	23 Oct 2019	Department of Medical Biochemistry and Microbiology, IMBIM, Uppsala University, Sweden	**International visiting scholarship** (Borsa di Perfezionamento all'estero) awarded in 2018 by Sapienza University of Rome (D.R. 1053/2018 Prot. n. 0030665 of 10/04/2018) for 6 months of international research activities at the laboratory of Prof. Mikael Sellin, Department of Medical Biochemistry and Microbiology, IMBIM, Uppsala University, Sweden. Title project: *Dissecting the Shigella Epithelial Cell Invasion Process.*
7 Sept 2016	10 Mar 2017	Laboratoire de Chimie Bactérienne, Institut de Microbiologie de la Méditerranée, CNRS. Marseille, France.	**Visiting PhD student** at the Prof. Frederic Barras laboratory at the Laboratoire de Chimie Bactérienne, Institut de Microbiologie de la Méditerranée, CNRS, Marseille, France, as part of the Erasmus+ program (study mobility agreement n. 2016/620 a.y.2016/2017 agreement 2016-1-IT02-KA103-023205) for 6 months of research. Project title: *Study of the modulation of efflux pumps in response to environmental stimuli in Shigella.*
1 Mar 2018	30 Apr 2019	Institut Pasteur, Paris (FR)	**Research Fellow** at the Department of Biology and Biotechnology "Charles Darwin" of Sapienza University of Rome, in the Molecular Microbiology Laboratory of Prof. Bianca Colonna. Research program: *Understanding the selective benefit of the*

			Shigella genome specific architecture. Granted by a 14 month contract from Institut Pasteur, Paris (France), under the International Project PTR24-16 (Programmes Transervaux de Recherche).
1 Nov 2017	28 Feb 2018	Institut Pasteur Italy – Cenci Bolognetti Foundation.	**Fellowship** (4 months) at the Department of Biology and Biotechnology "C. Darwin", Sapienza University of Rome, in the Molecular Microbiology Laboratory of Prof. Bianca Colonna. Research program: *Defining the contribution of the VirF protein to the regulative circuit and to the genome plasticity of Shigella and enteroinvasive E. coli.* Founded by Institut Pasteur Italy – Fondazione Cenci Bolognetti.

IVc – Other Appointments

Date	Institution	Position
November 2018	Sapienza University of Rome.	National professional habilitation (Abilitazione Nazionale professione Biologi)

Part V – Teaching experience

Va – Teaching tenure

Year	Institution	Course
a.y. 2023/2024	Sapienza University of Rome (IT), Faculty of Mathematical, Physical and Natural Sciences, Master Degree in Cell Biology and Technology (LM-6).	Acting Professor (**Professore a contratto**, call n. 26/2023 of 28/12/2023) of the Master Degree course in Cellular Microbiology and Vaccinology (n. 1014522) (SSD BIOS-15/A, previously BIO/19) (6 ECTS/CFU) for the Master's Degree in Cell Biology and Technology (LM-6), Sapienza University of Rome.

Vb - Other teaching experience (lectures and teaching laboratories)

Year	Institution	Teaching experience
a.y. 2023/2024	Sapienza University of Rome	**Invited Lecturer** for two lectures titled '*Transposon mutagenesis past, present and future approaches*' as part of the Master Degree course in Molecular Microbiology and Microbial Genomics (n. 1035094) (SSD BIOS-15/A, previously BIO/19) for the Master's Degree in Genomic, Industrial and Environmental Biotechnology (LM-8), Faculty of Mathematical, Physical and Natural Sciences, Sapienza University of Rome. Course holder: Prof. Bianca Colonna.
a.y. 2022/2023	Sapienza University of Rome	**Invited Lecturer** for two lectures titled "*The efflux pumps in the host-pathogen interaction*" as part of the Master Degree course in Cellular Microbiology and Vaccinology (n. 1014522) (SSD

		BIOS-15/A, previously BIO/19) for the Master's Degree in Cell Biology and Technology (LM-6), Faculty of Mathematical, Physical and Natural Sciences, Sapienza University of Rome. Course holder: Prof. Maria Lina Bernardini.
a.y. 2022/2023	Sapienza University of Rome	**Invited Lecturer** for two lectures titled "*Microbiota: the white side of animal health*" as part of the Master Degree course in Environmental Microbiology (n. 10589403) (SSD BIOS-15/A, previously BIO/19) for the Master's Degree in Ecobiology (LM-6), Faculty of Mathematical, Physical and Natural Sciences, Sapienza University of Rome. Course holder: Prof. Bianca Colonna.
a.y. 2022/2023	Sapienza University of Rome	**Invited Lecturer** for two lectures titled '*Transposon mutagenesis past, present and future approaches*' as part of the Master Degree course in Molecular Microbiology and Microbial Genomics (n. 1035094) (SSD BIOS-15/A, previously BIO/19) for the Master's Degree in Genomic, Industrial and Environmental Biotechnology (LM-8), Faculty of Mathematical, Physical and Natural Sciences, Sapienza University of Rome. Course holder: Prof. Bianca Colonna.
a.y. 2022/2023	Sapienza University of Rome	**Laboratory Assistant** (preparation and execution of teaching laboratories) for the Bachelor degree course in Microbiology and Virology Course (n. 1022934) (SSD BIOS-15/A, previously BIO/19). Bachelor Degree in Biological Sciences (L-13). Faculty of Mathematical, Physical and Natural Sciences, Sapienza University of Rome. Course holder: Prof. Bianca Colonna. January 2023.
a.y. 2021/2022	Sapienza University of Rome	**Invited Lecturer** for two lectures with the topic "*Microbiota: the white side of animal health*" as part of the master degree course in Environmental Microbiology (n. 10589403) (SSD BIOS-15/A, previously BIO/19) for the Master's Degree in Ecobiology (LM-6), Faculty of Mathematical, Physical and Natural Sciences, Sapienza University of Rome. Course holder: Prof. Bianca Colonna.
a.y. 2021/2022	Sapienza University of Rome	**Invited Lecturer** for two lectures titled '*Transposon mutagenesis past, present and future approaches*', as part of the master degree course in Molecular Microbiology and Microbial Genomics (n. 1035094) (SSD BIOS-15/A, previously BIO/19) for the Master's Degree in Genomic, Industrial and Environmental Biotechnology (LM-8), Faculty of Mathematical, Physical and Natural Sciences, Sapienza University of Rome. Course holder: Prof. Bianca Colonna.
a.y. 2021/2022	Sapienza University of Rome	**Laboratory Assistant** (preparation and execution of teaching laboratories) for the bachelor degree course in Microbiology and Virology Course (n. 1022934) (SSD BIOS-15/A, previously BIO/19).

		Bachelor Degree in Biological Sciences (L-13). Faculty of Mathematical, Physical and Natural Sciences, Sapienza University of Rome. Course holder: Prof. Bianca Colonna. January 2022.
a.y. 2020/2021	Sapienza University of Rome	**Invited Lecturer** for two lectures titled '*Transposon mutagenesis past, present and future approaches*' as part of the master degree course in Molecular Microbiology and Microbial Genomics (n. 1035094) (SSD BIOS-15/A, previously BIO/19) for the Master's Degree in Genomic, Industrial and Environmental Biotechnology (LM-8), Faculty of Mathematical, Physical and Natural Sciences, Sapienza University of Rome. Course holder: Prof. Bianca Colonna.
a.y. 2020/2021	Sapienza University of Rome	**Laboratory Assistant** (preparation and execution of teaching laboratories) for the bachelor degree course in Microbiology and Virology Course (n. 1022934) (SSD BIOS-15/A, previously BIO/19). Bachelor Degree in Biological Sciences (L-13). Faculty of Mathematical, Physical and Natural Sciences, Sapienza University of Rome. Course holder: Prof. Bianca Colonna. January 2021.
a.y. 2019/2020	Sapienza University of Rome	**Laboratory Assistant** (preparation and execution of teaching laboratories) for the bachelor degree course in Microbiology (n. 1049256) (SSD BIOS-15/A, previously BIO/19). Bachelor Degree in Bioinformatics (L-2). Faculty of Mathematical, Physical and Natural Sciences, Sapienza University of Rome. Course holder: Prof. Gianni Prosseda. December 2019.
a.y. 2019/2020	Sapienza University of Rome	**Laboratory Assistant** (preparation and execution of teaching laboratories) for the bachelor degree course in Microbiology and Virology Course (n. 1022934) (SSD BIOS-15/A, previously BIO/19). Bachelor Degree in Biological Sciences (L-13). Faculty of Mathematical, Physical and Natural Sciences, Sapienza University of Rome. Course holder: Prof. Bianca Colonna. January 2020.
a.y. 2019/2020	Sapienza University of Rome	**Invited Lecturer** for two lectures titled '*Transposon mutagenesis past, present and future approaches*', as part of the master degree course in Molecular Microbiology and Microbial Genomics (n. 1035094) (SSD BIOS-15/A, previously BIO/19) for the Master's Degree in Genomic, Industrial and Environmental Biotechnology (LM-8), Faculty of Mathematical, Physical and Natural Sciences, Sapienza University of Rome. Course holder: Prof. Bianca Colonna.
a.y. 2018/2019	Sapienza University of Rome	**Laboratory Assistant** (preparation and execution of teaching laboratories) for the bachelor degree course in General Microbiology, Microbial Biotechnology and Elements of Medical Microbiology (n. 1023907) (SSD BIOS-15/A, previously BIO/19). Bachelor Degree in Biotechnology (L-2). Faculty of Mathematical,

		Physical and Natural Sciences, Sapienza University of Rome. Course holder: Prof. Gianni Prosseda. December 2018.
a.y. 2018/2019	Sapienza University of Rome	**Laboratory Assistant** (preparation and execution of teaching laboratories) for the bachelor degree course in Microbiology and Virology Course (n. 1022934) (SSD BIOS-15/A, previously BIO/19). Bachelor Degree in Biological Sciences (L-13). Faculty of Mathematical, Physical and Natural Sciences, Sapienza University of Rome. Course holder: Prof. Bianca Colonna. January 2019.

Vc - Science outreach (attività di terza missione)

Year	Institution	Teaching experience
a.y. 2018/2019	Institut Pasteur Italy – Cenci Bolognetti Foundation.	**Teaching assistant** (speaker) for the Pasteur Institute Italy - Cenci Bolognetti Foundation as part of the Scientific Disclosure Project for High Schools (Italian and foreign). Subject of the teaching and laboratory experience: 'DNA fingerprint' and 'DNA in a bottle'.
a.y. 2018/2019	Seraphicum School Complex, Via del Serafico 3 Rome	Cycle of two lessons in English as **lecturer** on the topic 'The Biology and the study of cells' and 'the DNA' to the lower secondary school (age: 11-12) as part of the CLIL (Content and Language Integrated Learning) Project.
a.y. 2018/2019	Seraphicum School Complex, Via del Serafico 3 Rome	Cycle of two lessons in English as **lecturer** on the topic of 'the DNA' and 'Studying our DNA in more detail...' to the lower secondary school (age: 12-13) as part of the CLIL (Content and Language Integrated Learning) Project.
a.y. 2018/2019	Istituto Comprensivo Via Frignani, Roma	**Lecturer** to the fourth grade primary school class students (age: 9-10) as part of the Project 'MUSIS: us children teachers of science. Title of the lecture: 'A journey inside the cell and into the world of microorganisms'

Vd - Mentoring and supervising

Year	Institution	Description
2024 - present	Sapienza University of Rome	Thesis Supervisor (**Relatore interno**) of Giuseppe Di Cosimo, Master's student in Cell Biology and Technology, Sapienza University of Rome
2024 - present	Sapienza University of Rome	Thesis Supervisor (**Relatore interno**) of Martina Paganelli, Master's student in Cell Biology and Technology, Sapienza University of Rome
2023 - 2024	Sapienza University of Rome	Thesis Supervisor (**Relatore**) of Eva Furet, Master student in Cell Biology and Technology, Sapienza University of Rome. Thesis title: *Defining the role of Two Component Systems in the control of multidrug efflux pumps in Shigella flexneri*. Joint degree project with Aix- Marseille University, France.

2023	Alma Mater Studiorum – University of Bologna	**Doctoral thesis reviewer** (Revisore di tesi di dottorato) of Federico D'Agostino, PhD in Cellular and Molecular Biology, Alma Mater Studiorum – University of Bologna (XXXV Ciclo). Thesis title: *Characterization of RNase Y in H. pylori: a non-essential enzyme involved in the processing of cag-PAI non coding RNA 1 (CncR1) sRNA*. Supervisor: Prof. Vincenzo Scarlato; Co-supervisor: Prof. Davide Roncarati.
2022 - 2023	Sapienza University of Rome	Thesis Co-supervisor (**Correlatore**) of Francesco Zanzi, Master student in Genomic, Industrial and Environmental Biotechnology, Sapienza University of Rome. Thesis title: *Role of the RND efflux pumps of Shigella flexneri during host cell invasion*. Co-supervisor: Prof. Bianca Colonna
2021 - 2022	Sapienza University of Rome	Thesis Co-supervisor (**Correlatore**) of Aude Beranger, Master student in Cell Biology and Technology, Sapienza University of Rome. Thesis title: *Regulation of Multidrug Resistant efflux pumps in response to intracellular stimuli in Shigella*. Joint degree project with Aix- Marseille University, France. Co-supervisor: Prof. Bianca Colonna

Part VI – Institutional Activity

2024 – present	Sapienza University of Rome	Member of the commission for the final examination of the master's degree in Cell biology and technology (LM-6), Sapienza University of Rome.
2022 – present	Sapienza University of Rome	Member of the Young Researchers Committee of the Department of Biology and Biotechnologies 'Charles Darwin', Sapienza University of Rome.
2020 – present	Sapienza University of Rome	Member of the examination committee as expert (cultore della materia) for Microbiology and Virology Course (n. 1022934) (SSD BIOS-15/A) A-L channel. Bachelor Degree in Biological Sciences (L-13). Faculty of Mathematical, Physical and Natural Sciences, Sapienza University of Rome. Holder of the course: Prof. Bianca Colonna.
2020 – present	Sapienza University of Rome	Member of the examination committee as expert (cultore della materia) for Microbiology and Virology Course (n. 1022934) (SSD BIOS-15/A) M-Z channel. Bachelor Degree in Biological Sciences (L-13). Faculty of Mathematical, Physical and Natural Sciences, Sapienza University of Rome. Course holder: Prof. Gianni Prosseda.
2020 – present	Sapienza University of Rome	Member of the examination committee as expert (cultore della materia) for Environmental Microbiology (n. 10589403) (SSD BIOS-15/A,

		previously BIO/19) for the Master's Degree in Ecobiology (LM-6), Faculty of Mathematical, Physical and Natural Sciences, Sapienza University of Rome. Course holder: Prof. Bianca Colonna.
2021 – present	Sapienza University of Rome	Representative of the Research Associates (*Assegnisti di Ricerca*) and PhD Students in the Council of the Department of Biology and Biotechnologies "Charles Darwin", Sapienza University of Rome.
Settembre 2022	Sapienza University of Rome	Member of the junior internal board during the Advisory Board's site visit to the Department of Biology and Biotechnologies "Charles Darwin", Sapienza University of Rome.

Part VII – National and International Collaborations

Professor/Insitution	Title of the project	Role in the project
Prof. Jean-François Collet. De Duve Institute, Université catholique de Louvain, Brussels, Belgium.	Investigation of the role of lipocalin Blc in the intracellular survival of Adherent Invasive *E. coli* (AIEC)	Principal Investigator for Sapienza University of Rome
Prof. Laurent Aussel. Aix-Marseille University, CNRS, Laboratoire de Chimie Bactérienne, Institut de Microbiologie de la Méditerranée, Marseille, France.	Optimization of reporter systems to monitor intracellular oxidative stress during infection of invasive bacteria	Principal Investigator for Sapienza University of Rome
Prof. Yoko Eguchi. Department of Science and Technology on Food Safety, Faculty of Biology-Oriented Science and Technology, Kindai University, Wakayama, Japan.	Study of the antivirulent effect of Two Component Systems inhibitors against pathogenic bacteria	Principal Investigator for Sapienza University of Rome
Prof. Cecilia Ambrosi. Laboratory of Microbiology of Chronic-Neurodegenerative Diseases, IRCCS San Raffaele Roma, Rome, Italy.	Study of the oxidative stress defence of *Acinetobacter baumannii* during the infection of macrophages	Principal Investigator for Sapienza University of Rome
Prof. Sarah Dubrac. Institut Pasteur, Paris, France.	Role of Fe-S clusters biogenesis systems in *Shigella* virulence	Main scientist for Sapienza University of Rome (in collaboration with Prof. Gianni Prosseda, PI for Sapienza University of Rome)
Dr. Emanuela Camera. Laboratory of Cutaneous	Quantification of labelled polyamines released into the cytoplasm of host cells	Main scientist for Sapienza University of Rome (in

Physiopathology and Integrated Center of Metabolomics Research, San Gallicano Dermatological Institute, IRCCS, Rome, Italy.	during *Shigella* infection	collaboration with Prof. Gianni Prosseda, PI for Sapienza University of Rome)
Prof. Michele De Luca. Centre for Regenerative Medicine "Stefano Ferrari," University of Modena and Reggio Emilia, Modena, Italy	Selection of Cas9 variants able to discriminate between two different PAM sequence, varying for a single nucleotide, using a bacterial screening method based on antibiotic selection	Main scientist for Sapienza University of Rome (in collaboration with Prof. Gianni Prosseda, PI for Sapienza University of Rome)

Part VIII - Awards and Honors

Year	Title
2021	**Naicons Award** 2021 for the best original work in the field of 'General Microbiology and Microbial Biotechnology' to work: Pasqua M, Grossi M, Scinicariello S, Aussel L, Barras F, Colonna B, Prosseda G. *The MFS efflux pump EmrKY contributes to the survival of Shigella within macrophages*. Sci Rep. 2019 Feb 27;9(1):2906. doi: 10.1038/s41598-019-39749-3
2018	International visiting scholarship (**Borsa di perfezionamento all'estero**) for 6 months of research abroad at the laboratory of Prof. Mikael Sellin, Department of Medical Biochemistry and Microbiology. IMBIM, Uppsala University, Sweden, granted by Sapienza University of Rome (
2018	**Trends in Microbiology Award** (Cell Press) for best poster: Pasqua M, Grossi M, Scinicariello S, Aussel L, Barras F, Prosseda G, Colonna B. *Discovering the role of efflux pumps in the interplay between Shigella and the host cells*. 5th Young Microbiologist Symposium on Microbe Signalling, Organisation and Pathogenesis. Belfast, August 27-28, 2018.
2018	**FEMS** travel grant "Early Career Scientist" for attending the congress: Challenges and new concepts in antibiotics research. Institut Pasteur, Paris, France, March 19-21, 2018.
2017	**FEMS** travel grant "Early Career Scientist" for attending the congress: 7th FEMS Congress of European Microbiologists 2017, Valencia, Spain, July 9-13, 2017.
2016	**Erasmus + grant** during PhD for 6 months of research at the laboratory of Prof. Barras, Aix-Marseille University, Laboratoire de Chimie Bactérienne, Institut de Microbiologie de la Méditerranée, CNRS, Marseille, France.

Part IX - Membership

Year	Society
2015 - present	Member of the Italian Society of General Microbiology and Microbial Biotechnology (**SIMGBM** Società Italiana di Microbiologia Generale e Biotecnologie Microbiche)

Part X - Funding Information

Xa - Grants as **PI**-principal investigator

Year	Title	Program	Grant value
2022 - 2023	*Study of the role of the AcrAB efflux pump in the mechanisms of pathogenesis of Shigella flexneri and Adherent Invasive Escherichia coli*.	Progetto **Avvio alla Ricerca**-Type 2 – 2022. Sapienza University of Rome. Scientific responsible: Martina Pasqua. **PI** as Research Associate.	
2021 - 2022	*Analysis of regulation of the MacAB efflux pump in Shigella*	Progetto **Avvio alla Ricerca**-Type 2 – 2021. Sapienza University of Rome. Scientific responsible: Martina Pasqua. **PI** as Research Associate.	
2017 - 2018	*Expression profile of efflux pumps during the intracellular life of Shigella*	Progetto **Avvio alla Ricerca**-Type 1 – 2017. Sapienza University of Rome. Scientific responsible: Martina Pasqua. **PI** as PhD student and research fellow.	

Xb - Participation in research projects (**I**-investigator)

Year	Title	Program	Grant value
2019 - 2023	*Combination therapies for fighting antibiotic resistant bloodstream infections in cancer patients*	Italy-Japan joint project n. PGR07208 funded by the Italian Minister of Foreign Affairs and International Cooperation (MAECI) JP21GR04. Italian project leader: Prof. Bianca Colonna (Sapienza University of Rome, Rome, Italy). Japanese project leader: Prof. Ryutaro Utsumi (The Institute of Scientific and Industrial Research, Osaka University, Osaka, Japan). **I** as Research Associate.	
2021 – 2025	*Development of a system for the selection of Cas9 variants with high discriminating capacity of PAM sequences in E. coli* as part of the Holo-GT main project "Custom-designed gene editing of induced epidermal stem cells for gene therapy of genetic diseases of squamous epithelia"	ERC Advanced Grant Holo-GT (n. 101019289). Partnership with University of Modena. PI for University of Modena: Prof. De Luca. PI for Sapienza University of Rome: Prof. Gianni Prosseda. Project title: "Custom-designed gene editing of induced epidermal stem cells	

		for gene therapy of genetic diseases of squamous epithelia". **I** as Research Associate.
2024 - 2025	*Iron-Sulfur Clusters Biogenesis Polymorphism and Virulence in Shigella*	Investigator as Research Associate to the International Project PTR619-23 - Programmes Transervaux de Recherche. Institut Pasteur, Paris (France). PI for Sapienza University of Rome: Prof. Gianni Prosseda. **I** as Research Associate.
2016 - 2017	*Understanding the selective benefit of the Shigella genome architecture*	International Project PTR24-16 - Programmes Transervaux de Recherche. Institut Pasteur, Paris (France). PI for Sapienza University of Rome: Prof. Bianca Colonna. **I** as PhD student and research fellow.
2017 - 2020	*Next generation antibacterials: new targets for old drugs and new drugs for old targets*	Progetti di ricerca di Rilevante Interesse Nazionale (PRIN 2017-20177J5Y3P). PI for Sapienza University of Rome: Prof. Bianca Colonna. **I** as Research Associate.
2016 - 2017	*Analysis of the role of SCFAs in virulence expression in Shigella*	Sapienza Project (Progetti Ateneo medi) (n. RM116154CAD4C118) as PhD student. PI for Sapienza University of Rome: Prof. Gianni Prosseda. **I** as PhD student.

Part XI - Reviewing and editing activities

2021-present	**Review Editor** on the Editorial Board of Infectious Agents and Disease (specialty section of Frontiers in Medicine, Frontiers in Public Health and Frontiers in Microbiology)
2020-present	**Reviewer** for the following journals:
	Frontiers in Microbiology
	Genes
	Microorganisms
	International Journal of Molecular Sciences

Part XII – Research Activities

Keywords	Brief Description
Efflux pumps	Throughout my academic career, my scientific interests have mainly focused on the strategies adopted by bacterial pathogens to interact with host cells. Since my early years of research (bachelor's and then master's theses), I have been involved in the study of the molecular mechanisms underlying virulence control in
Polyamines	
Virulence regulation	
Host-pathogen	

interaction Pathogenic *Escherichia coli* *Acinetobacter baumanii*	*Pseudomonas aeruginosa*, focusing particularly on virulence expression in response to iron availability. These early research activities resulted in the publication of two papers (number XVII and XIX in the complete list of publications). Later, during my PhD, I started a new line of research in the laboratory of Professor Bianca Colonna and Professor Gianni Prosseda focusing on the study of the molecular mechanisms adopted by bacterial pathogens to survive inside the host cells using human pathogenic *Escherichia coli* as model systems. In particular, since then, I have been investigating the emerging role of efflux pumps (EP), membrane transport systems usually associated with multidrug resistance phenotypes, as relevant players in host-pathogen interactions and as new determinants of pathogenicity. The first study in this field led to the identification of the pivotal role of EmrKY EP in the *Shigella* invasion process of macrophages (n. XV in the complete list of publications). The study of the role of efflux pumps has been a major part of the projects I have carried out as a research associate (assegnista di ricerca) during these years. It has also been extended to various transport systems, such as AcrAB EP (n. V in the complete list of publications), and different enteropathogens, such as Adherent Invasive *E. coli* (n. VII and XIII in the complete list of publications) and Enteroaggregative *E. coli* (paper in preparation). This intriguing topic also allowed us to start an international collaboration with Professor Utsumi, Eguchi and Okajima's groups (Japan) experts in two-component systems, on the signalling pathways and potential inhibitors controlling virulence determinants in pathogenic bacteria (n. I and VIII in the complete list of publications). Since I have acquired substantial knowledge of bacterial transport systems and I have developed skills in the manipulation of pathogenic *E. coli* strains and tumour cell lines (epithelial and macrophage cells) to study host-pathogen interactions, I would like to continue this line of research in the future. Furthermore, the experience abroad in the Prof. Sellin's laboratory (Sweden) allowed me to deepen the understanding of infection biology as I learn how to manipulate intestinal organoids, which represent a valid and physiological model for studying host-enteropathogen interaction (publication under review). During these years as research associate, I have also participated, under the supervision of Prof. Gianni Prosseda, to the characterization of regulatory mechanisms of virulence determinants in *Shigella* with the future aim to design antivirulence compounds (n. III and VI in the complete list of publications). In addition, the interest and expertise acquired in recent years in the field of *Shigella* communication and invasion strategies with host cells has allowed me to develop a line of research on the bacterial metabolism of polyamines as important immunomodulators used by the pathogen to drive the inflammasome response and induce pyroptosis of macrophages, contributing to the successful infection strategy. We observed that bacterial release of putrescine into the cytoplasm of infected macrophages is functional for *Shigella*-induced cell death prior to full invasion of the intestinal epithelium (paper in preparation). This pioneering finding has raised many challenging questions about the key role of polyamines in the host-pathogen interactions, which I hope to answer in the coming years. I plan to continue this study through state-of-the-art microscopy techniques, such as time-lapse microscopy, which will not only allow me to acquire further scientific skills, but also make an important contribution to the development of the field of host-pathogen interaction. Lastly, I firmly believe that academic research cannot be separated from national and international collaborations with other research groups. For this reason, in recent years, I have contributed to studies focused on virulence mechanisms of the human pathogen *Acinetobacter baumannii* in collaboration with Dr. Cecilia Ambrosi (publication under review), on the multidrug resistance strategies of *Staphylococcus aureus* in collaboration with Dr. Enea Di Domenico (n. IX in the complete list of publications), and on the investigation of the role of bacterial lipocalin in the intracellular survival of Adherent Invasive *E. coli* (AIEC) in collaboration with Prof. Collet, which I intend

to continue in the future.

Part XIII – Publications

XIIIa – Summary of Scientific Achievements

Product type	Number	Data Base	Start	End
Papers [international]	19	Scopus (access date August 12th 2024)	2015	2024

Product type	Number	Data Base
Total Impact factor (IF)	74,63	Journal of Citation Report JCR (access date August 12th 2024)
Mean IF/publication	3,927	Journal of Citation Report JCR (access date August 12th 2024)
Total Citations	405	Scopus (access date August 12th 2024)
Average Citations per Product	21,31	Scopus (access date August 12th 2024)
Hirsch (H) index	12	Scopus (access date August 12th 2024)
Normalized H index*	1,33	Scopus (access date August 12th 2024)
Documents in top citation percentiles (Percent of documents in the top 25% most cited documents worldwide)	68,4% (13 documents)	Scopus (access date August 12th 2024)

*****H index divided by the academic seniority (2015-2024 = 9 years).

WEBSITES:
https://www.scopus.com/authid/detail.uri?authorId=56823486700#

XIIIb – Selected Publications (12 publications from 2015 to 2024)
List of the publications selected for the evaluation.
Journal IF= Impact Factor of the year of publication (Journal of Citation Report JCR, access date 12/08/2024); Cit= Citation number (SCOPUS, access date 12/08/2024); *Corresponding author.

1- Trirocco R, **Pasqua M**, Tramonti A, Colonna B, Paiardini A, Prosseda G. Diffusible signal factors (DSFs) bind and repress VirF, the leading virulence activator of *Shigella flexneri*. Sci Rep. 2023; 13(1):13170. doi: 10.1038/s41598-023-40023-w. **IF_{2023}: 3.8; Cit: 2.**

2- Trirocco R, **Pasqua M**, Tramonti A, Grossi M, Colonna B, Paiardini A, Prosseda G. Fatty Acids Abolish *Shigella* Virulence by Inhibiting Its Master Regulator, VirF. Microbiol Spectr. 2023; 11(3):e0077823. doi: 10.1128/spectrum.00778-23. **IF_{2023}: 3.7; Cit: 3.**

3- Coluccia M, Béranger A, Trirocco R, Fanelli G, Zanzi F, Colonna B, Grossi M, Prosseda G, **Pasqua M***. Role of the MDR Efflux Pump AcrAB in Epithelial Cell Invasion by *Shigella flexneri*. Biomolecules. 2023; 13(5):823. doi: 10.3390/biom13050823. **IF_{2023}: 4.8; Cit: 3.**

4- Fanelli G, **Pasqua M**, Prosseda G, Grossi M, Colonna B. AcrAB efflux pump impacts on the survival of adherent-invasive *Escherichia coli* strain LF82 inside macrophages. Sci Rep. 2023; 13(1):2692. doi: 10.1038/s41598-023-29817-0. **IF_{2023}: 3.8; Cit: 8.**

5- **Pasqua M**, Bonaccorsi di Patti MC, Fanelli G, Utsumi R, Eguchi Y, Trirocco R, Prosseda G, Grossi M, Colonna B. Host - Bacterial Pathogen Communication: The Wily Role of the Multidrug Efflux Pumps of the MFS Family. Front Mol Biosci. 2021; 8:723274. doi: 10.3389/fmolb.2021.723274. **IF_{2021}: 6.113; Cit: 28.**

6- **Pasqua M**, Zennaro A, Trirocco R, Fanelli G, Micheli G, Grossi M, Colonna B, Prosseda G. Modulation of OMV Production by the Lysis Module of the DLP12 Defective Prophage of *Escherichia coli* K12. Microorganisms. 2021; 9(2):369. doi: 10.3390/microorganisms9020369. **IF_{2021}: 4.926; Cit: 13.**

7- Fanelli G, **Pasqua M**, Colonna B, Prosseda G, Grossi M. Expression Profile of Multidrug Resistance Efflux Pumps During Intracellular Life of Adherent-Invasive *Escherichia coli* Strain LF82. Front Microbiol. 2020; 11:1935. doi: 10.3389/fmicb.2020.01935. **IF_{2020}: 5.640; Cit: 13.**

8- **Pasqua M**, Grossi M, Zennaro A, Fanelli G, Micheli G, Barras F, Colonna B, Prosseda G. The Varied Role of Efflux Pumps of the MFS Family in the Interplay of Bacteria with Animal and Plant Cells. Microorganisms. 2019; 7(9):285.doi: 10.3390/microorganisms7090285. **IF_{2019}: 4.152; Cit: 68.**

9- **Pasqua M**, Grossi M, Scinicariello S, Aussel L, Barras F, Colonna B, Prosseda G. The MFS efflux pump EmrKY contributes to the survival of *Shigella* within macrophages. Sci Rep. 2019; 9(1):2906. doi: 10.1038/s41598-019-39749-3. Erratum in: Sci Rep. 2019 May 22;9(1):7912. doi: 10.1038/s41598-019-44357-2. **IF_{2019}: 3.998; Cit: 36** *(+2 in Erratum doi: 10.1038/s41598-019-44357-2).*

10- **Pasqua M**, Michelacci V, Di Martino ML, Tozzoli R, Grossi M, Colonna B, Morabito S, Prosseda G. The Intriguing Evolutionary Journey of Enteroinvasive *E. coli* (EIEC) toward Pathogenicity. Front Microbiol. 2017; 8:2390. doi: 10.3389/fmicb.2017.02390. **IF_{2017}: 4.019; Cit: 63.**

11- **Pasqua M**, Visaggio D, Lo Sciuto A, Genah S, Banin E, Visca P, Imperi F. Ferric Uptake Regulator Fur Is Conditionally Essential in *Pseudomonas aeruginosa*. J Bacteriol. 2017; 199(22):e00472-17. doi: 10.1128/JB.00472-17. **IF_{2017}: 3.219; Cit: 55.**

12- Visaggio D, **Pasqua M**, Bonchi C, Kaever V, Visca P, Imperi F. Cell aggregation promotes pyoverdine-dependent iron uptake and virulence in *Pseudomonas aeruginosa*. Front Microbiol. 2015; 6:902. doi: 10.3389/fmicb.2015.00902. **IF_{2015}: 4.165; Cit: 37.**

XIIIc – Complete list of Publications

Journal IF= Impact Factor of the year of publication (Journal of Citation Report JCR access date 12/08/2024); Citation number on SCOPUS (access date 12/08/2024) *Corresponding author

I. Ishikawa T, Eguchi Y, Igarashi M, Okajima T, Mita K, Yamasaki Y, Sumikura K, Okumura T, Tabuchi Y, Hayashi C, **Pasqua M**, Coluccia M, Prosseda G, Colonna B, Kohayakawa C, Tani A, Haruta J, Utsumi R. Synthesis and biochemical characterization of naphthoquinone derivatives targeting bacterial histidine kinases. J Antibiot (Tokyo). 2024; 77(8):522-532. doi: 10.1038/s41429-024-00726-2. **IF_{2023}: 2.1. Cit: 0.**

II. Perruzza L, Zagaglia C, Vitiello L, Sarshar M, Strati F, **Pasqua M**, Grassi F, Nicoletti M, Palamara AT, Ambrosi C, Scribano D. The *Shigella flexneri* virulence factor apyrase is released inside eukaryotic cells to hijack host cell fate. Microbiol Spectr. 2023;11(6):e0077523. doi: 10.1128/spectrum.00775-23. **IF_{2023}: 3.7. Cit: 0.**

III. Trirocco R, **Pasqua M**, Tramonti A, Colonna B, Paiardini A, Prosseda G. Diffusible signal factors (DSFs) bind and repress VirF, the leading virulence activator of *Shigella flexneri*. Sci Rep. 2023; 13(1):13170. doi: 10.1038/s41598-023-40023-w. **IF_{2023}: 3.8. Cit: 2.**

IV. Cavallo I, Oliva A, Pages R, Sivori F, Truglio M, Fabrizio G, **Pasqua M**, Pimpinelli F, Di Domenico EG. *Acinetobacter baumannii* in the critically ill: complex infections get complicated. Front Microbiol. 2023; 14:1196774. doi: 10.3389/fmicb.2023.1196774. **IF_{2023}: 4. Cit: 24.**

V. Coluccia M, Béranger A, Trirocco R, Fanelli G, Zanzi F, Colonna B, Grossi M, Prosseda G, **Pasqua M***. Role of the MDR Efflux Pump AcrAB in Epithelial Cell Invasion by *Shigella flexneri*. Biomolecules. 2023; 13(5):823. doi: 10.3390/biom13050823. **IF_{2023}: 4.8. Cit: 3.**

VI. Trirocco R, **Pasqua M**, Tramonti A, Grossi M, Colonna B, Paiardini A, Prosseda G. Fatty Acids Abolish *Shigella* Virulence by Inhibiting Its Master Regulator, VirF. Microbiol Spectr. 2023; 11(3):e0077823. doi: 10.1128/spectrum.00778-23. **IF_{2023}: 3.7. Cit: 3.**

VII. Fanelli G, **Pasqua M**, Prosseda G, Grossi M, Colonna B. AcrAB efflux pump impacts on the survival of adherent-invasive *Escherichia coli* strain LF82 inside macrophages. Sci Rep. 2023; 13(1):2692. doi: 10.1038/s41598-023-29817-0. **IF_{2023}: 3.8. Cit: 8.**

VIII. **Pasqua M**, Coluccia M, Eguchi Y, Okajima T, Grossi M, Prosseda G, Utsumi R, Colonna B. Roles of Two-Component Signal Transduction Systems in *Shigella* Virulence. Biomolecules. 2022; 12(9):1321. doi: 10.3390/biom12091321. **IF_{2022}: 5.5. Cit: 14.**

IX. Sivori F, Cavallo I, Kovacs D, Guembe M, Sperduti I, Truglio M, **Pasqua M**, Prignano G, Mastrofrancesco A, Toma L, Pimpinelli F, Morrone A, Ensoli F, Di Domenico EG. Role of Extracellular DNA in Dalbavancin Activity against Methicillin-Resistant *Staphylococcus aureus* (MRSA) Biofilms in Patients with Skin and Soft Tissue Infections. Microbiol Spectr. 2022. 13:e0035122. doi: 10.1128/spectrum.00351-22. **IF_{2022}: 3.7. Cit: 21.**

X. Lo Sciuto A, Spinnato MC, **Pasqua M**, Imperi F. Generation of Stable and Unmarked Conditional Mutants in *Pseudomonas aeruginosa*. In Paola Sperandeo (ed.). Lipopolysaccharide Transport. Methods Mol Biol. 2022. 2548: 21-35, ISBN: 978-1-0716-2580-4, ISSN: 1064-3745, doi: 10.1007/978-1-0716-2581-1_2. **Cit: 3.**

XI. **Pasqua M**, Bonaccorsi di Patti MC, Fanelli G, Utsumi R, Eguchi Y, Trirocco R, Prosseda G, Grossi M, Colonna B. Host - Bacterial Pathogen Communication: The Wily Role of the Multidrug Efflux Pumps of the MFS Family. Front Mol Biosci. 2021. 26;8:723274. doi: 10.3389/fmolb.2021.723274. **IF_{2021}: 6.113. Cit: 28.**

XII. **Pasqua M**, Zennaro A, Trirocco R, Fanelli G, Micheli G, Grossi M, Colonna B, Prosseda G. Modulation of OMV Production by the Lysis Module of the DLP12 Defective Prophage of

Escherichia coli K12. Microorganisms. 2021; 9: 369. doi: 10.3390/microorganisms9020369. **IF_{2021}: 4.926. Cit: 13.**

XIII. Fanelli G, **Pasqua M**, Colonna B, Prosseda G, Grossi M. Expression Profile of Multidrug Resistance Efflux Pumps During Intracellular Life of Adherent-Invasive *Escherichia coli* Strain LF82. Front Microbiol. 2020; 11:1935. doi: 10.3389/fmicb.2020.01935. **IF_{2020}: 5.640. Cit: 13.**

XIV. **Pasqua M**, Grossi M, Zennaro A, Fanelli G, Micheli G, Barras F, Colonna B, Prosseda G. The Varied Role of Efflux Pumps of the MFS Family in the Interplay of Bacteria with Animal and Plant Cells. Microorganisms. 2019; 7: 285. doi:10.3390/microorganisms7090285. **IF_{2019}: 4.152. Cit: 68.**

XV. **Pasqua M**, Grossi M, Scinicariello S, Aussel L, Barras F, Colonna B, Prosseda G. The MFS efflux pump EmrKY contributes to the survival of *Shigella* within macrophages. Sci Rep. 2019; 9:7912. doi: 10.1038/s41598-019-44357-2. **IF_{2019}: 3.998. Cit: 36** *(+2 in Erratum doi: 10.1038/s41598-019-44357-2*).

XVI. **Pasqua M**, Michelacci V, Di Martino ML, Tozzoli R, Grossi M, Colonna B,Morabito S, Prosseda G. The Intriguing Evolutionary Journey of Enteroinvasive *E. coli* (EIEC) toward Pathogenicity. Front Microbiol. 2017; 8:2390. doi: 10.3389/fmicb.2017.02390. **IF_{2017}: 4.019. Cit: 63.**

XVII. **Pasqua M**, Visaggio D, Lo Sciuto A, Genah S, Banin E, Visca P, Imperi F. Ferric Uptake Regulator Fur Is Conditionally Essential in *Pseudomonas aeruginosa*. J Bacteriol. 2017; 199. pii: e00472-17. doi: 10.1128/JB.00472-17. **IF_{2017}: 3.219. Cit: 55.**

XVIII. Leuzzi A, Grossi M, Di Martino ML, **Pasqua M**, Micheli G, Colonna B, Prosseda G. Role of the SRRz/Rz(1) lambdoid lysis cassette in the pathoadaptive evolution of *Shigella*. Int J Med Microbiol. 2017; 307:268-275. doi: 10.1016/j.ijmm.2017.03.002. **IF_{2017}: 3.298. Cit: 12.**

XIX. Visaggio D, **Pasqua M**, Bonchi C, Kaever V, Visca P, Imperi F. Cell aggregation promotes pyoverdine-dependent iron uptake and virulence in *Pseudomonas aeruginosa*. Front Microbiol. 2015; 6:902. doi: 10.3389/fmicb.2015.00902. **IF_{2015}: 4.165. Cit: 37.**

XIIId –Publications submitted and in preparation

*Corresponding author

- Scribano D, **Pasqua M**, Limongi D, Nencioni L, Palamara AT, Ambrosi C. The periplasmic protein HslJ is the first-line of defense against oxidative stress in *Acinetobacter baumannii*. Biological research, BMC Biological research. Under review. Manuscript number: BRES-D-24-00284.

- Di Martino ML, Jenniches L, Bhetwal A, Eriksson J, Lopes A, Ntokaki A, **Pasqua M**, Sundbom M, Skogar M, Graf W, Webb DL, Hellström P, Mateus A, Barquist L, Sellin M. A Scalable Gut Epithelial Organoid Model Reveals the Genome-Wide Colonization Landscape of a Human Restricted Pathogen. Nature genetics. Under review. Manuscript number: NG-A66137.

- Coluccia M, Martorana A, Roncarati D, Bonaccorsi MC, Polissi A, Colonna B, Grossi M, Prosseda G, **Pasqua M***. YjbX, a chromosomal encoded VirK-like protein of *S. flexneri* contribute to host response and membrane permeability. In preparation.

- **Pasqua M**, Trirocco R, Grossi M, Camera E, Bottillo G, Colonna B, Prosseda G. *Shigella*'s induction of pyroptosis is supported by bacterial putrescine release in infected macrophages. In preparation.

- Trirocco R, **Pasqua M**, Colonna B, Prosseda G. PGRP4 propels the *Shigella* invasion of the epithelial cells by promoting the *virF* gene expression. In preparation.

- Laudazzi M, Sivori F, Altieri L, Schifano E, Uccelletti D, Di Domenico E, Colonna B, **Pasqua M***. Deciphering the role of multidrug efflux pumps in the virulence of Enteroaggregative *Escherichia coli*. In preparation.

Part XIV - TALKS/POSTERS at CONFERENCES and SYMPOSIA

XIVa - Selected speaker at national and international congresses

- **2023 "Inside out" BBCD meeting**, seminars dedicated to the young community of Department of Biology and Biotechnology "Charles Darwin" (BBCD), Sapienza University of Rome, in the framework of an initiative called "Inside out BBCD". 11 May 2023.
  Oral presentation: Discovering the role of efflux pumps in the host-pathogen interaction.

- **2022 Invited speaker** at the webinar organised by the Italian Society of Microbiology (SIM) on **Bacterial Cell Surface Components in Host-Microbe Interactions**. 12 December 2022.
  Oral presentation: The intriguing role of multidrug resistance efflux pumps in the bacterial survival within the host.

- **2022 Invited speaker** by Prof. Yoko Eguchi at **Kindai University**, Wakayama, Japan. 15 June 2022.
  Lecture: Involvement of efflux pumps in the virulence of invasive bacteria.

- **2022 Invited speaker** by Prof. Toshihide Okajima at **Osaka University**, Osaka, Japan. 22 June 2022.
  Lecture: Involvement of efflux pumps in the virulence of invasive bacteria.

- **2021 Invited speaker** at the online event "**SIMGBM day: future challenges for Microbiologists**" as winner of the Naicons 2021 award. 24 November 2021.
  Oral presentation: The EmrKY contribution to *Shigella* survival within macrophages: a pivotal study to understand efflux pumps importance in host-pathogen interaction.

- **2018 Cortona Procarioti**, Cortona, Italy. 17-19 May 2018.
  Oral presentation: Characterization of EmrKY, an efflux pump potentially involved in the invasive process of *Shigella*.

- **2017 Microbiology, SIMGBM**, Palermo, Italy. 17-20 September 2017.
  Oral presentation: Understanding the expression profile of efflux pumps during the intracellular life of *Shigella*.

- **2016 Microbiology group meeting**, organised from: Prof. Frederic Barras, Institut de Microbiologie de la Méditerranée, Aix-Marseille Université, Marseille, France, and Prof. Josep Casadesus, University of Seville, Spain. Siviglia, Spain. 10-11 November 2016.
  Oral presentation: Expression profile of efflux pumps during the intracellular life of *Shigella*.

- **2016 Cortona Procarioti**, Cortona, Italy. 12-14 May 2016.
  Oral presentation: Expression profile of efflux pumps during the intracellular life of *Shigella*.

XIVb – Poster at national and international congresses

- **2024 Cortona Procarioti**, Cortona, Italy. 27-29 June 2024.
  Poster: Furet E, Pasqua M, Colonna B. Defining the role of the Two Component Systems PhoQ/PhoP and QseC/QseB in the virulence of *Shigella flexneri*.

- **2023 Microbiology, SIMGBM**, Cagliari, Italy. 21-24 September 2023.

Poster: Pasqua M, Grossi M, Zaza M, Colonna B, Prosseda G. Silencing of *speG*, encoding the spermidine acetyltransferase, contributes to successful *Shigella* infection of macrophages.

- **2022 FISV**, Reggia di Portici, Napoli, Italy. 14-16 September 2022.
  Poster: Pasqua M, Beranger A, Fanelli G, Grossi M, Colonna B. Investigating the relevance of the multidrug resistance efflux pump AcrAB-TolC during the invasive process of *Shigella flexneri*.

- **2022 BacNet**, Sant Feliu de Guixols, Spain, 04-09 September 2022.
  Flash poster presentation: Pasqua M, Fanelli G, Beranger A, Grossi M, Colonna B. The role of AcrAB Multidrug Efflux Pump during the invasive process of *Shigella flexneri* and AIEC.

- **2021 World Microbe Forum**, Online Meeting. 30 June 2021.
  Poster: Pasqua M, Coluccia M, Roncarati D, Scarlato V, Grossi M, Prosseda G, Colonna B. Modulation of efflux pump encoding genes of *Shigella flexneri* in response to environmental stimuli.

- **2019 NDPIA/SFM 2019**, Aronsborg, Bålsta, Sweden. 14-15 October 2019.
  Poster: Pasqua M, Grossi M, Scinicariello S, Aussel L, Barras F, Colonna B, Prosseda G. The EmrKY contribution for *Shigella* intracellular life: a pivotal study for understanding efflux pumps role in *Shigella* invasive process.

- **2018 FISV**, Rome, Italy. 18-21 September 2018.
  Poster: Pasqua M, Franchitti L, Leuzzi A, Colonna B, Prosseda G, Grossi M. *Shigella* modulation of polyamines during the invasion of host cells.

- **2018 5th Young Microbiologist Symposium on Microbe Signalling, Organisation and Pathogenesis**. Belfast, Ireland. 27-28 August 2018.
  Poster: Pasqua M, Grossi M, Scinicariello S, Aussel L, Barras F, Prosseda G, Colonna B. Discovering the role of efflux pumps in the interplay between *Shigella* and the host cells.

- **2018 Challenges and new concepts in antibiotics research**. Institut Pasteur, Paris, France. 19-21 March 2018.
  Poster: Pasqua M, Grossi M, Scinicariello S, Aussel L, Barras F, Prosseda G, Colonna B. Understanding the role of multidrug efflux pumps in *Shigella*.

- **2017 FEMS**, Valencia, Spain. 9-13 July 2017.
  Poster: Pasqua M, Grossi M, Aussel L, BarrasF, Di Martino ML, Prosseda G, Colonna B. Expression profile of EmrKY efflux pumps during *Shigella*'s intracellular life.

- **2016 FISV**, Rome, Italy. 20-23 September 2016.
  Poster: Pasqua M, Di Martino ML, Leuzzi A, Grossi M, Prosseda G, Colonna B. Expression profile of efflux pumps during the intracellular life of *Shigella*.

- **2015 Workshop: Adaptation and communication of bacterial pathogens**, Baeza, Spain. 26-28 October 2015.
  Poster: Pasqua M, Di Martino ML, Leuzzi A, Grossi M, Prosseda G, Colonna B. Expression of efflux pumps during the *Shigella* invasive process.

- **2015 Microbiology, SIMGBM**, Ravenna, Italy. 23-26 September 2015.
  Poster: Pasqua M, Visaggio D, Lo Sciuto A, Visca P, Imperi F. Functional characterization of the repressor Fur in *Pseudomonas aeruginosa*.

Rome, 12/08/2024