Curriculum vitae

PERSONAL INFORMATION

# Daniela Scribano PhD

daniela.scribano@uniroma1.it

Skype danielascribano

## WORK EXPERIENCE

01/07/2018–Present **Postdoctoral Research fellow**

Sapienza University of Rome
P.le A. Moro 5, 00185 Rome (Italy)
www.dspmi.uniroma1.it
Research Activity, title: "Identification of new molecules and/or innovative therapeutic strategies targeted at overcoming the antibiotic-resistance of bacteria causing nosocomial infections"

Consulting activity **Corso di formazione a distanza** “Introduzione alla microbiologia con applicazioni pratiche concernenti la prova BFE sulle mascherine chirurgiche secondo la norma EN 14683”. 10,11,21 December 2020

Agenzia delle Dogane e Monopoli
via Mario Carucci, 71, Rome (Italy)
Second edition “Introduzione alla microbiologia con applicazioni pratiche concernenti la prova BFE sulle mascherine chirurgiche secondo la norma EN 14683”. 24-25 Giugno 2021

Advanced training MDI Biological lab – Course on Application of Organoids Technology - Bar Harbor Maine 26/05/2019 – 01/06/2019

May 17, 2019 **Chairwoman** X Seminar “Science for Democracy-Democracy for Science” PhD Day Infectious Diseases, Microbiology and Public Health, ISS, Aula Bovet, Rome

Scientific dissemination activity “Superbatteri, Capirli per combatterli”, booklet for school students, in collaboration with Pasteur Institute of Italy, Cenci Bolognetti Foundation, December 2019

Teaching activity General Microbiology and Clinic course, Degree in Nursing, Sapienza University of Rome, academic years 2019-2020 and 2020-2021.

Teaching activity 2019-Present Assistant teaching activity Microbiology course, Degree in Chemistry and pharmaceutical technologies, Sapienza University of Rome.

Teaching activity 2013-Present Integrative teaching activity Microbiology course, Master's degree in Medicine and Surgery “A”, Sapienza University of Rome

01/05/2018–30/06/2018 **Guest Scientist**

Institute for Research in Biomedicine
Via Vincenzo Vela 6, CH-6500 Bellinzona (Switzerland)
www.irb.usi.ch
Guest Scientist at the Prof. Grassi Research Laboratories.
Research activity: "New animal model to study *Shigella* infection"

02/01/2014–28/02/2018 **Postdoctoral Research fellow**

Sapienza University of Rome
Piazzale A. Moro 5, 00185 Rome (Italy)
www.uniroma1.it
Academic research activity: "Role of *phoN2* gene in the pathogenetic mechanism of

*Shigella flexneri* and the autophagic response".

02/01/2013–31/12/2013 Research fellow

Sapienza University of Rome
Piazzale A. Moro 5, 00185 Rome (Italy)
www.dspmi.uniroma1.it
Academic research activity: "Study of the role of *phoN2* gene in the pathogenetic mechanism of *Shigella flexneri*".

## EDUCATION and TRAINING

02/01/2010–02/01/2012 Research scholarship

Sapienza University of Rome
P.le A. Moro 5, 00185 Rome (Italy)
www.dspmi.uniroma1.it/
Academic research activity: "Study of the role of *ospB-phoN2* operon in the pathogenetic mechanism of *Shigella flexneri*".

01/10/2009–31/10/2012 Doctor of Philosophy (Ph.D)

Roma Tre University
Via Ostiense 159, 00154 Rome (Italy)
www.uniroma3.it/
PhD thesis title "*The role of the* ospB-phoN2 *operon in the mechanism of pathogenicity of* S. flexneri"

11/2011 National qualification for Biologist

Sapienza University of Rome,
P.le A. Moro 5, 00185 Rome (Italy)
www.uniroma1.it

01/10/2006–15/07/2009 Master's degree in Genetic and Molecular Biology 110/110 cum laude

Sapienza University of Rome,
P.le A. Moro 5, 00185 Rome (Italy)
www.uniroma1.it

## PERSONAL SKILLS

Digital skills

Microsoft Office™ tools Window
Browser: Internet Explorer, Firefox, Opera, Chrome
Images analysis tools: Photoshop CS6, ImageJ, Adobe Illustrator, Image View software
Bioinformatics software: BLAST, CLUSTAL, SWISS-MODEL, HHpred,PSORT, LipoP, SecretomeP, SignalP, STRING,
Databases: NCBI, UNIPROT, PHI-base

## Scientific publications

Scientific parameters Scopus 28 Documents
276 Citations
11 *h*-index

WEBSITE RECORDS https://www.scopus.com/authid/detail.uri?authorId=55484822200
https://orcid.org/0000-0002-2901-265X
https://scholar.google.com/citations?user=dRPWDCkAAAAJ&hl=it
https://www.researchgate.net/profile/Daniela_Scribano

## Publications

1. Outer membrane protein A (OmpA): a new player in *Shigella flexneri* protrusion formation and inter-cellular spreading" PLoSOne. 2012 Ambrosi C, Pompili M, **Scribano D**, Zagaglia C, Ripa S, Nicoletti M. **IF 3.730**
2. Polar localization of PhoN2, a periplasmic virulence-associated factor of *Shigella flexneri*, is required for proper IcsA exposition at the old bacterial pole" PLoS One. 2014 **D. Scribano**, A. Petrucca, M. Pompili, C. Ambrosi, E. Bruni, C. Zagaglia, G. Prosseda, L. Nencioni, M. Casalino, F. Polticelli, and M. Nicoletti. **IF 3.234**
3. The *Shigella flexneri* OspB effector: an early immunomodulator" Int J Med Microbiol. 2015 C.Ambrosi, M. Pompili, **D. Scribano**, D. Limongi, A. Petrucca, S. Cannavacciuolo, C. Zagaglia, S. Schippa, M. Grossi, and M. Nicoletti. **IF 3.521**
4. Human polyomavirus JC presence in chronic inflammatory rheumatic diseases patients treated with anti-TNF-α: Evaluation of JC viral loads in urine and plasma samples" Joint Bone Spine. 2015 A. Bellizzi, M. Mischitelli, E. Anzivino, R. Scrivo, D. M. Rodio, **D. Scribano**, F. Cacciotti, S. Cioccolo, S. Delbue, G. Valesini, and V. Pietropaolo. **IF 2.946**
5. Increased prevalence of Human Polyomavirus JC viruria in Chronic Inflammatory Rheumatic Diseases patients in treatment with anti-TNF α: a 18 month follow-up study" Front Microbiol. 2016 D.M. Rodio, E. Anzivino, A. Bellizzi, M. Mischitelli, G. Conte, R. Scrivo, **D. Scribano**, M. Trancassini, G. Valesini, A.T. Palamara, and V. Pietropaolo. **IF 4.076**
6. First case report of invasive pseudoterranoviasis in Italy." Parasitol Int. 2016 Cavallero S, **Scribano D**, and D'Amelio S. **IF 1.744**
7. The *Shigella flexneri* OmpA amino acid residues 188EVQ190 are essential for the interaction with the virulence factor PhoN2" Biochemistry and Biophysics Reports. 2016 **Scribano D**, Damico R, Ambrosi C, Superti F, Marazzato M, Conte MP, Longhi C, Palamara AT, Zagaglia C, and Nicoletti M.
8. Molecular characterization of Extensively Drug-Resistant *Acinetobacter baumannii*: first report of a new sequence type in Italy" JGAR. 2016 C. Ambrosi, M. Aleandri, A. Giordano, **D. Scribano**, M. Marazzato, C. Zagaglia, M.P. Conte and A.T. Palamara. **IF 1.276**
9. T Follicular Helper Cells Promote a Beneficial Gut Ecosystem for Host Metabolic Homeostasis by Sensing Microbiota-Derived Extracellular ATP" Cell Reports. 2017 L. Perruzza, G. Gargari, M. Proietti, B. Fosso, A.M. D'Erchia, C.E. Faliti, T. Rezzonico-Jost, **D. Scribano**, L. Mauri, D. Colombo, G. Pellegrini, A. Moregola, C. Mooser, G. Pesole, M. Nicoletti, G.D. Norata, M.B. Geuking, K.D. McCoy, S. Guglielmetti and F. Grassi. **IF 8.032**
10. Genetic diversity, phylogroup distribution and virulence gene profile of pks positive *Escherichia coli* colonizing human intestinal polyps" Microb Pathog. 2017 Sarshar M, **Scribano D**, Marazzato M, Ambrosi C, Aprea MR, Aleandri M, Pronio A, Longhi C, Nicoletti M, Zagaglia C, Palamara AT, Conte MP. **IF 2.332**
11. *Acinetobacter baumannii* Virulence Traits: A Comparative Study of a Novel Sequence Type with other Italian Endemic International Clones." Front Microbiol. 2017 Ambrosi C, **Scribano D**, Aleandri M, Zagaglia C, Di Francesco L, Putignani L, Palamara AT. **IF 4.019**
12. Efficient propagation of archetype JC polyomavirus in COS-7 cells: evaluation of rearrangements within the NCCR structural organization after transfection" Arch Virol. 2017 C. Prezioso, **D. Scribano**, A. Bellizzi, E. Anzivino, D.M. Rodio, M. Trancassini, A.T. Palamara, V. Pietropaolo. **IF 2.160**
13. COS-7-based model: methodological approach to study John Cunningham virus replication cycle." Virology Journal 2018 C. Prezioso, **D. Scribano**, D.M. Rodio, C. Ambrosi, M. Trancassini, A.T. Palamara, V. Pietropaolo. **IF 2.465**
14. *YERSINIA ENTEROCOLITICA* IN ITALY: A CASE OF SEPTICEMIA AND AORTIC ANEURYSM INFECTION" Frontiers in Microbiology 2017 D. M. Rodio, A. Bressan, **D. Scribano**, C. Ambrosi, R. Tolli, W. Mansour, F. Speziale, G. Antonelli, M. Trancassini and V. Pietropaolo.
15. Cutaneous candidiasis caused by *Candida albicans* in a young non-immunosuppressed patient: an unusual presentation. Int J Immunopathol Pharmacol. 2018 Palese E, Nudo M, Zino G, Devirgiliis V, Carbotti M, Cinelli E, Rodio DM, Bressan A, Prezioso C, Ambrosi C, **Scribano D**, Pietropaolo V, Fioriti D, Panasiti V. **IF 2.117**
16. ATP released by intestinal bacteria limits the generation of protective IgA against enteropathogens. Nature Communication 2019 M. Proietti, L. Perruzza, **D. Scribano**, G. Pellegrini, R. D'Antuono, F. Strati, M. Raffaelli, S. F. Gonzales, M. Thelen, W.D. Hardt, E. Slack, M. Nicoletti, F. Grassi **IF 12.353**
17. Colonic adenomatous polyps drive mucosa-associated *Escherichia coli* phenotypes. Microbes and Infection 2019 C. Ambrosi, M. Sarshar, M. R. Aprea, A. Pompilio, G. Di Bonaventura, F. Strati, A. Pronio, M. Nicoletti, C. Zagaglia, A. T. Palamara, **D. ScribanoIF 2.669**
18. Insights into the Periplasmic Proteins of *Acinetobacter baumannii* AB5075 and the Impact of Imipenem Exposure: A Proteomic Approach. **Scribano D**, Marzano V, Levi Mortera S, Sarshar M, Vernocchi P, Zagaglia C, Putignani L, Palamara AT, Ambrosi C. Int J Mol Sci. 2019 **IF 4.183**

19. A simple, fast and reliable scan-based technique as a novel approach to quantify intracellular bacteria. Sarshar M, **Scribano D**, Tranquilli G, Di Pietro M, Filardo S, Zagaglia C, Sessa R, Palamara AT, Ambrosi C. BMC Microbiol. 2019 **IF 3.287**
20. D-Mannose Treatment neither Affects Uropathogenic Escherichia coli Properties nor Induces Stable FimH Modifications. **Scribano, D**., Sarshar, M., Prezioso, C., Lucarelli, M., Angeloni, A., Zagaglia, C., Palamara, A. T., & Ambrosi, C. Molecules 2020 **IF 3.267**
21. The Global Emergency of Novel Coronavirus (SARS-CoV-2): An Update of the Current Status and Forecasting. Hozhabri, H., Piceci Sparascio, F., Sohrabi, H., Mousavifar, L., Roy, R., **Scribano, D**., De Luca, A., Ambrosi, C., & Sarshar, M. International journal of environmental research and public health 2020 **IF 2.849**
22. Fecal microRNAs as Innovative Biomarkers of Intestinal Diseases and Effective Players in Host-Microbiome Interactions. Sarshar, M., **Scribano, D**., Ambrosi, C., Palamara, A. T., & Masotti, A. Cancers 2020 **IF 6.126**
23. FimH and Anti-Adhesive Therapeutics: A Disarming Strategy Against Uropathogens. Sarshar, M., Behzadi, P., Ambrosi, C., Zagaglia, C., Palamara, A. T., & **D. Scribano**. Antibiotics 2020 **IF 3.893**
24. *Acinetobacter baumannii* targets human carcinoembryonic antigen-related cell adhesion 1 molecules (CEACAMs) for invasion of pneumocytes C. Ambrosi, **D. Scribano**, M. Sarshar, C. Zagaglia, BB. Singer, & AT Palamara 2020 mSystems **IF 6.280**
25. SARS-CoV-2: comparative analysis of different RNA extraction methods C. Ambrosi, C. Prezioso, P. Checconi, **D. Scribano**, M. Sarshar, M. Capannari, C. Tomino, M. Fini, E. Garaci, A.T. Palamara, G. De Chiara, D. Limongi Journal of Virological Methods 2021 **IF 1.786**
26. *Acinetobacter baumannii*: An Ancient Commensal with Weapons of a Pathogen M. Sarshar, P. Behzadi, **D. Scribano**, A.T. Palamara and C. Ambrosi Pathogens 2021 **IF 3.018**
27. Urinary tract infections: Can we prevent uropathogenic *Escherichia coli* infection with dietary intervention? **Scribano D,** Sarshar M, Fettucciari L, Ambrosi C. Int J Vitam Nutr Res. 2021 **IF 0.7**
28. Hold together in a biofilm: The *Acinetobacter baumannii* way. Arianna Pompilio, **Daniela Scribano**, Meysam Sarshar, Giovanni Di Bonaventura, Anna Teresa Palamara, Cecilia Ambrosi Microorganisms 2021 **IF 4.167**

## Publications

Books chapters:

Microbiologia Medica 3ed Chapter 76 (edited by CEA)
Virologia Medica Appendix (edited by CEA)
A World of Wonders: Interleukin-1 (IL-1) and IL-2 Families Márió Gajdács, Herney Andrés García-Perdomo, Meysam Sarshar, **Daniela Scribano**, Cecilia Ambrosi and Payam Behzadi IntechOpen 2021

## Participation to projects

- PRIN project: 2009KJ9SRT 003 Scientific responsible: CASALINO Mariassunta Title: "Role of *Stenotrophomonas maltophilia* in cystic fibrosis: a molecular approach for the characterization of virulence factors and their effect on the immune response."
- PRIN project: 2009KJ9SRT 002 Scientific responsible: NICOLETTI Mauro Title: "Study of *ospB-phoN2* operon in the pathogenetic mechanism of *Shigella flexneri*: characterization of the role of OspB effector in the innate immune response and PhoN2 in the IcsA polar localization"
- PRIN project: 2012WJSX8K_006 Scientific responsible: NICOLETTI Mauro Title: "Interaction models between microorganisms and host in mucosal infections to develop innovative therapeutic strategies"
- Ministry of Health project 2015 Scientific responsible: PALAMARA Anna Teresa Title “Study of microbial and polymicrobial contamination of oxygen masks used in pulmonary rehabilitation”
- Ateneo Project 2015 - prot. C26A15EY8F Scientific responsible: PRONIO Annamaria “Ruolo dei ceppi di *Escherichia coli* produttori di colibactina nell’insorgenza del polipo e del cancro del colon-retto"
- Ministry of Health project 2017 Scientific responsible: PALAMARA Anna Teresa “Sviluppo di procedure atte al mantenimento della conformità microbiologica di dispositivi medici utilizzati in ambito ospedaliero per la cura del paziente allettato.”
- MIUR Project PNR 2015-2020 Scientific unit responsible PALAMARA Anna Teresa "Nuovi antimicrobici ottenuti da composti di origine naturale", NAOCON (ARS01_00597). Data di inizio 03/09/2018-30/08/2021.

- Piano Nazionale della Ricerca Militare (PNRM) Scientific responsible PALAMARA Anna Teresa “Analisi Genomica Resistoma Infezioni Nosocomiali dei Teatri Operativi" (AGRINTO). Data di inizio: Novembre 2019-Novembre 2020
- Piano Nazionale della Ricerca Militare (PNRM) Scientific responsible PALAMARA Anna Teresa “Analisi del Biofilm e Resistenza Antibiotica in pazienti Neurolesi " (ABRAN). Data di inizio: Novembre 2019-Novembre 2020
- Piano Nazionale della Ricerca Militare (PNRM) Scientific responsible PALAMARA Anna Teresa “Analisi Genomica Idrica dei Teatri Operativi " (AGITO). Data di inizio: Gennaio 2020-Gennaio 2021

## Conferences

National and International Congresses with a total of 25 scientific contributions.

**Oral communication**:

▪ **38°SIM Congress Riccione 2010**
“The periplasmic apyrase (PhoN2) of *Shigella flexneri* localized at the old pole of the bacterium beneath IcsA” A.Petrucca, **D.Scribano**, S.Cannavacciuolo, M.Pompili, C.Ambrosi, E.Bruni, C.Zagaglia, A.Calconi, M.Casalino and M.Nicoletti

▪ **39°SIM Congress Riccione 2011**
“Interaction between PhoN2 and OmpA at the old pole of the bacterium allows proper polar IcsA surface axposition and actin based motility in *Shigella flexneri*” **D.Scribano**, A.Petrucca, M.Pompili, C.Ambrosi, E.Bruni, C.Zagaglia, M.Grossi, A.Calconi, L.Nencioni, M.Casalino and M.Nicoletti

▪ **40°SIM Congress Riccione 2012**
“Outer membrane protein A (OmpA) is required for *Shigella flexneri* protrusion and plaque formation and cell-to-cell spread” C.Ambrosi, M.Pompili, **D.Scribano**, E.Bruni, C.Zagaglia, S.Ripa, and M.Nicoletti

▪ **41°Congresso SIM Riccione 2013**
“Periplasmic PhoN2 is required for the escape of *S. flexneri* from autophagy” **D.Scribano**, C. Ambrosi, G.Buglia, V.Iebba, A.Calconi, C.Zagaglia, and M.Nicoletti

▪ **Applications of Organoid Technology Symposium Online** June 2-4, 2021
“Intestinal organoid modeling for intestinal bacteria competition assay” Ambrosi, C.1,2, Sarshar, M.3, Pronio A.4, Palamara, A.T.1,5, Scribano, D.6,7

**Poster**

▪ **4°FEMS Congress Geneve 2011**
“*phoN2*, the gene encoding for apyrase (PhoN2) of *Shigella flexneri*, is essential for the polar localization of IcsA” **D.Scribano**, A.Petrucca, M.Pompili, C.Ambrosi, E.Bruni, S.Cannavacciuolo, C.Zagaglia, A.Calconi, M.Casalino, and M.Nicoletti

▪ **29°SIMGBM Congress Pisa 2011**
“*Shigella flexneri* OspB effector fine tunes the activity of MAP Kinases at early stages of infection” M.Pompili, A.Petrucca, **D.Scribano**, S.Cannavacciuolo, E.Bruni, M.Nicoletti, and C.Ambrosi

▪ **30°SIMGBM Congress Pisa 2013**
“Determinants of protein stability and folding: the *Shigella flexneri* periplasmic ATPdiphosphohydrolase story” **D.Scribano**, A.Petrucca, M.Pompili C.Ambrosi E.Bruni F.Polticelli, C.Zagaglia, and M.Nicoletti

▪ **42°SIM Torino Congress 2014**
“PERIPLASMIC PhoN2 IS REQUIRED FOR THE ESCAPE OF *SHIGELLA FLEXNERI* FROM AUTOPHAGY” **D. Scribano**, C. Ambrosi, A. Calconi, V. Nicoletti, C. Zagaglia, and M. Nicoletti

▪ **43°SIM Congress Napoli 2015**
“Identification of critical residues for OmpA-PhoN2 binding” **Scribano D**., Damico R., Ambrosi C., Zagaglia C., and Nicoletti M.

▪ **44° SIM Congress Pisa 2016**
"Phenotypic comparison of virulence-associated traits between a new sequence type and Italian endemic international clones of *Acinetobacter baumannii"* C. Ambrosi, **D. Scribano**, M. Aleandri, C. Zagaglia, A. Giordano, A.T. Palamara
“*in vitro* model of the human JC polyomavirus replication" C. Prezioso, **D. Scribano**, E. Anzivino, D.M. Rodio, A. Bellizzi, A.T. Palamara, M. Trancassini, V. Pietropaolo
"Genotoxic mucosa-associated *Escherichia coli* in colon diseases: bad bugs in our gut" M Sarshar, **D. Scribano**, M. Marazzato, M. Aleandri, A. Pronio, C. Longhi, C. Zagaglia, M. Nicoletti, A.T. Palamara, M.P. Conte. ▪ 45° Congress Genova 2017

"Human polyomavirus JC replication in immortalized COS-7 and glial SVGP12 cell lines: an *in vitro* model of infection" C. Prezioso, **D. Scribano**, D.M. Rodio, A. Bellizzi A.T. Palamara, M. Trancassini, V. Pietropaolo

- **45° SIM Congress Napoli 2016**

"*Escherichia coli* colonizes colorectal adenomatous polyps: insights into genotypic and phenotypic features" M. Sarshar, C. Ambrosi, M.R. Aprea, M. Nicoletti, M.P. Conte, A.T. Palamara, C. Zagaglia, D. Scribano

"A new, fast and reliable technique for quantification of intracellular bacteria by In-Cell Western Odyssey Assay" M. Sarshar, **D. Scribano**, A.T. Palamara, C. Ambrosi

"Assessmet of infectious risk during respiratory rehabilitation: study of microbial and polymicrobial contamination of oxygen supply." D.M. Rodio, D. Limongi, **D. Scribano**, C. Ambrosi, V. Cardaci, V. Conti, V. Pietropaolo, M. Trancassini, E. Garaci, A.T. Palamara

- **46 SIM Congress Palermo 2018**

"*Yersinia enterocolitica* in Italy: a case of septicemia and abdominal aortic aneurysm infection" D. M. Rodio, A. Bressan, C. Ambrosi, **D. Scribano**, R. Tolli, M. Wassim, F. Speziale, G. Antonelli, M. Trancassini, V. Pietropaolo

"Study of bacterial contamination of oxygen medical devises in chronic obstructive pulmonary disease patients" D. M. Rodio, D. Limongi, P. Checconi, **D. Scribano**, C. Ambrosi, V. Cardaci, V. Conti, V. Pietropaolo, M. Trancassini, E. Garaci, A.T. Palamara

"COS-7-based model: a reliable system able to support a productive John Cunningham virus infection" C. Prezioso, D. Scribano, D.M. Rodio, C. Ambrosi, F. Obregon, M. Trancassini, A.T. Palamara, V. Pietropaolo

"Apyrase, the *Shigella flexneri* virulence factor downregulates caspases activity through the degradation of intracellular ATP" C. Ambrosi, L. Perruzza, E. Rottoli, F. Strati, M. Sarshar, A.T. Palamara, C. Zagaglia, F. Grassi, M. Nicoletti and **D. Scribano**

- **12th International symposium on the Biology of *Acinetobacter* Frankfurt 2019**

"Fatal attraction: *Acinetobacter baumannii* exploits carinoembryonic antigen-related cell adhesion molecules (CEACAMs) for cellular adherence" **D. Scribano**, M. Sarshar, C. Zagaglia, A.T. Palamra, B.B. Singer, C. Ambrosi

- **47 SIM Congress Roma 2019**

"Insights into the periplasmic proteins of *Acinetobacter baumannii* AB5075 and the impact of imipenem exposure: a proteomic approach" **Scribano D**., Marzano V., Levi Mortera S., Sarshar M., Vernocchi P., Zagaglia C., Putignani L., Palamara A.T., Ambrosi C.

"Fatal attraction: *Acinetobacter baumannii* exploits carinoembryonic antigen-related cell adhesion molecules (CEACAMs) for cellular adherence" **D. Scribano**, M. Sarshar, C. Zagaglia, A.T. Palamara, B.B. Singer, C. Ambrosi

- **48 SIM Congress Virtual SIM 2020**

"D-mannose treatment neither affects uropathogenic *Escherichia coli* properties nor induces stable FimH modifications **D. Scribano**, M. Sarshar, C. Prezioso, M. Lucarelli, A. Angeloni, C. Zagaglia, A.T. Palamara and C. Ambrosi

Honours and awards

- Fems Travel Grant to participate at the 46° SIM Congress
- Mario Campa Award, First Classified Bacteriology Section 47° SIM Congress

Reviewer Board member

- Annals of Clinical Microbiology and Antimicrobials
- Antibiotics
- Microorganisms

Co-guest editor

- IJERPH, Special Issue "Understanding Host-Microbe Interactions: Conflict or Harmony?"

## BRIEF RÉSUMÉ

I started my scientific career at the Prof. Mauro Nicoletti laboratory, a bacteriology lab at the Department of Public Health and Infectious Diseases of the Sapienza University of Rome. We studied bacteria-host interaction by using the human pathogen *Shigella flexneri* as a model microorganism. We described the role of three different virulence factors involved in the pathogenesis of *S. flexneri*. The collaboration with the research group of Prof. Grassi at the Research Institute of Biomedicine of Bellinzona in Switzerland resulted in two scientific publications on the regulation of enteric T helper lymphocyte maturation mediated by the extracellular ATP released by intestinal microbiota. In the Bacteriology lab supervised by Prof. Anna Teresa Palamara, we characterized *Escherichia coli* isolates associated to adenomatous colon polyps, focusing on the study of virulence factors of bacteria belonging to intestinal microbiota. Furthermore, we are currently collaborating with Dr. Andrea Masotti, at the Bambino Gesù pediatric hospital in Rome, by characterizing the role of microRNAs released by eukaryotic cells on the physiology of *E. coli* isolated from celiac patients. It is well known that *E. coli* species reflects an enormous diversity of strains that possess a variety of fitness and / or virulence factors that make them capable of colonizing different tissues. Hence, we moved on the study of uropathogenic *E. coli* strains with particular attention on the mechanisms through which anti-virulence strategies can contribute to reduce the incidence of urinary infections caused by these strains.
Dealing with the worldwide problem of the antimicrobial resistance we are studying the pathogen *Acinetobacter baumannii*, a multi-resistant bacterium, which causes lung infections in patients admitted to intensive care units and in patients undergoing mechanical ventilation. We are characterizing both its pathogenesis (the mode of interaction with lung epithelial cells) and its mechanisms of antibiotic resistance in order to find alternative therapeutic strategies.