

Prof.ssa Stefania Stefani

Academic carrier: PhD and Post -doc in Microbiology and Virology, 1989; Associate Professor 1991- 2001; Full Professor in Microbiology from 2001;

Current position: Full Professor of Microbiology

Teaching activity: Medical Microbiology, Applied Molecular Microbiology, Antibiotic Resistance and Pathogenicity,

Academic and scientific qualification:

- **Member of College PhD** in “Translational Bio-medicine” (since 2014)
- **Board of Trustees of the International Society of Chemotherapy (ISC) – (2013)**
- **Rector's Delegate** for the Scientific Research of the University of Catania (2013).
- **Editor in Chief** of Journal of Global Antimicrobial Resistance JGAR (Elsevier) since 2012
- **Editorial Scientific Board:** Section Editor of International Journal Antimicrob Agents since 2006, Annals of Microbiology since 2009, Libyan Journal of Medicine since 2010, Microbiology since 2013
- **Member of the National Board of evaluation of Italian professorship (ASN) 2013-2014**
- **Reviewer:** Journal Chemotherapy, Annals of Microbiology, Medical Science Monitor, Infezioni in Medicina, Research in Microbiology, J. Infectious Diseases, J. Hospital Infections, Expert Opinion in Pharmacology, Key Opinions, Clinical Microbiology and Infection, Journal Antimicrobial Chemotherapy, Microbiology, Future in microbiology, Frontiers in Microbiology.
- **Member of** the sub Committee for antimicrobial resistance EUCAST subcommittee of the ESCMID;
- **Member of the Scientific Board** of: Società Italiana di Microbiologia (SIM); Società Italiana Microbiologia Generale Biotecnologie Microbiche (SIMGBM); Società italiana di microbiologia medica, odontoiatrica e clinica (SIMMOC); Italian Society of Clinical Microbiology (AMCLI); Società Italiana di Chemioterapia (SIC); American Society for Microbiology (ASM), International Society of Chemotherapy (ISC).
- **Scientific Advisory Committee** (SAC) dell' European Society of Clinical Microbiology and Infectious diseases (ESCMID) (until 2012)
- **General Secretary** of Società Mediterranea di Chemioterapia (MSC)
- **Treasure** of 'Accademia Gioenia.(until 2012)
- **Patent N. RM2010A000163** – SIB B 4106R – Use of *S.salivarius* in the treatment of respiratory infections
- **Consultant** at the University Hospital, under contract with the Cannizzaro hospital for Advanced molecular diagnostics (since 2012)

Projects: Good experience as principal investigator of Projects funded by National or International Grant Agencies (PRIN, VI and VII FP –EU).

Experience as project evaluator (V, VI FP and VII of the EU) and for the Vinci and Galileo projects (Italy-France cooperation projects)

Experience as project evaluator for the Italian Ministero della Salute. Experience as project evaluator for the Universities of Milan and Naples.

Activity of supervisions of PhD students, Postdoctoral fellows and Research students since 1990.

Research topics:

- Study of the mechanisms of resistance responsible for resistance in Gram-positive and Gram-negative bacteria utilizing PCR and Real Time PCR, designing primers with Vector NTI program and sequencing.
- Expression studies in Staphylococci and their mechanisms of resistance and virulence
- Characterization of mobile genetic elements such as transposons and plasmids carrying resistance determinants; transfer of these elements among Gram-positive bacteria i.e. Staphylococci, Streptococci and Enterococci
- Study of biofilm production in Staphylococci and Pseudomonas
- Study of gene expression and signalling (quorum-sensing)
- Study of *Acinetobacter baumannii* isolated in nosocomial settings: molecular characterization of resistance strains and characterization of the major clones by MLST
- Typing studies in Gram-positive and Gram-negative bacteria by means of ribotyping, PFGE and MLST
- Susceptibility studies to determine the activity of investigational drugs
- Molecular identification of microorganisms (sequencing of 16S r RNA, *tuf*, *soda*)
- Study of the genomic organization of the *Burkholderia cepacia* complex

Publications: (2011-2014)

1. Cafiso V, Bertuccio T, Spina D, Purrello S, Campanile F, Di Pietro C, Purrello, M, **Stefani S**. Modulating activity of vancomycin and daptomycin on the expression of autolysis cell-wall turnover and membrane charge genes in hVISA and VISAs strains. PLoS One. 2012;7(1)
2. Santagati M, Scillato M, Patanè F, Aiello C, **Stefani S**. Bacteriocin-producing oral streptococci and inhibition of respiratory pathogens. FEMS Immunol Med Microbiol. 2012 Jun;65(1):23-31. doi: 10.1111/j.1574-695X.2012.00928.x. Epub 2012. Feb 3. PubMed PMID: 22243526.
3. **Stefani S**, Chung DR, Lindsay JA, Friedrich AW, Kearns AM, Westh H, Mackenzie FM. Meticillin-resistant *Staphylococcus aureus* (MRSA): global epidemiology and harmonisation of typing methods. Int J Antimicrob Agents. 2012 Apr;39(4):273-82. Epub 2012 Jan 9. PubMed PMID: 22230333.
4. Sarti M, Campanile F, Sabia C, Santagati M, Gargiulo R, **Stefani S**. Polyclonal diffusion of beta-lactamase-producing *Enterococcus faecium*. J Clin Microbiol. 2012 Jan;50(1):169-72. Epub 2011 Nov 9. PubMed PMID: 22075588; PubMed Central PMCID: PMC3256721
5. Falcone M, Russo A, Pompeo ME, Vena A, Marruncheddu L, Ciccaglioni A, Grossi P, Mancini C, Novelli A, **Stefani S**, Venditti M. Retrospective case-control analysis of patients with staphylococcal infections receiving daptomycin or glycopeptide therapy. Int J Antimicrob Agents. 2012 Jan;39(1):64-8. Epub 2011 Nov 1. PubMed PMID: 22047703
6. Perilli M, Segatore B, Mugnaioli C, Celenza G, Rossolini GM, **Stefani S**, Luzzaro F, Pini B, Amicosante G. Persistence of TEM-52/TEM-92 and SHV-12 extended-spectrum β -lactamases in clinical isolates of Enterobacteriaceae in Italy. Microb Drug Resist. 2011 Dec;17(4):521-4. Epub 2011 Oct 4. PubMed PMID:21970626

7. Campanile F, Bongiorno D, Falcone M, Vailati F, Pasticci MB, Perez M, Raglio A, Rumpianesi F, Scuderi C, Suter F, Venditti M, Venturelli C, Ravasio V, Codeluppi M, **Stefani S**. Changing Italian nosocomial-community trends and heteroresistance in *Staphylococcus aureus* from bacteremia and endocarditis. *Eur J Clin Microbiol Infect Dis*. 2012 May;31(5):739-45. Epub 2011 Aug 7. PubMed PMID:21822974; PubMed Central PMCID: PMC3319882
8. Vena A, Falcone M, Comandini E, Meledandri M, Novelli A, Campanile F, **Stefani S**, Venditti M. Daptomycin plus trimethoprim/sulfamethoxazole combination therapy in post-neurosurgical meningitis caused by linezolid-resistant *Staphylococcus epidermidis*. *Diagn Microbiol Infect Dis*. 2013 Feb 26. doi:pii: S0732-8893(13)00057-6. 10.1016/j.diagmicrobio.2013.01.021. [Epub ahead of print] PubMed PMID: 23453066.
9. Campanile F, Mongelli G, Bongiorno D, Adembri C, Ballardini M, Falcone M, Menichetti F, Repetto A, Sabia C, Sartor A, Scarparo C, Tascini C, Venditti M, Zoppi F, **Stefani S**. Worrisome trend in new multiple mechanisms of linezolid-resistant *Staphylococcal* clones diffused in Italy. *J Clin Microbiol*. 2013 Jan 23. [Epub ahead of print] PubMed PMID: 23345292.
10. Gesualdo F, Bongiorno D, Rizzo C, Bella A, Menichella D, **Stefani S**, Tozzi AE. MRSA Nasal Colonization in Children: Prevalence Meta-Analysis, Review of Risk Factors and Molecular Genetics. *Pediatr Infect Dis J*. 2013 Jan 21. [Epub ahead of print] PubMed PMID: 23340553
11. Campanile F, Mongelli G, Bongiorno D, Adembri C, Ballardini M, Falcone M, Menichetti F, Repetto A, Sabia C, Sartor A, Scarparo C, Tascini C, Venditti M, Zoppi F, **Stefani S**. Worrisome trend of new multiple mechanisms of linezolid resistance in *staphylococcal* clones diffused in Italy. *J Clin Microbiol*. 2013 Apr;51(4):1256-9. doi: 10.1128/JCM.00098-13. Epub 2013 Jan 23.
12. Vena A, Falcone M, Comandini E, Meledandri M, Novelli A, Campanile F, **Stefani S**, Venditti M. Daptomycin plus trimethoprim/sulfamethoxazole combination therapy in post-neurosurgical meningitis caused by linezolid-resistant *Staphylococcus epidermidis*. *Diagn Microbiol Infect Dis*. 2013 May;76(1):99-102. doi: 10.1016/j.diagmicrobio.2013.01.021. Epub 2013 Feb 26.
13. Ceccarelli G, Falcone M, Giordano A, Mezzatesta ML, Caio C, **Stefani S**, Venditti M. Successful Ertapenem-Doripenem Combination Treatment of Bacteremic Ventilator-Associated Pneumonia Due to Colistin-Resistant KPC-Producing *Klebsiella pneumoniae*. *Antimicrob Agents Chemother*. 2013 Jun;57(6):2900-1. doi: 10.1128/AAC.00188-13. Epub 2013 Apr 9.
14. Taglietti F, Principe L, Bordi E, D'Arezzo S, Di Bella S, Falasca L, Piacentini M, **Stefani S**, Petrosillo N. Telavancin and Daptomycin activity against methicillin-resistant *Staphylococcus aureus* strains after vancomycin resistance selection in vitro. *J Med Microbiol*. 2013 Apr 18.
15. Mezzatesta ML, Gona F, Caio C, Adembri C, Dell'utri P, Santagati M, **Stefani S**. Emergence of an extensively drug-resistant ArmA- and KPC-2-producing ST101 *Klebsiella pneumoniae* clone in Italy. *J Antimicrob Chemother*. 2013 May 10.
16. Cacopardo B, **Stefani S**, Cardì F, Cardì C, Pinzone MR, Nunnari G. Surgical Site Infection by *Corynebacterium macginleyi* in a Patient with Neurofibromatosis Type 1. *Case Report Inf Dis* 2013; 2013:970678. doi: 10.1155/2013/970678. Epub 2013 May 30.
17. Cafiso V¹, Bertuccio T¹, Purrello S¹, Campanile F¹, Mammìna C², Sartor A³, Raglio A⁴, **Stefani S**⁵. *dltA* overexpression: A strain-independent keystone of daptomycin resistance in methicillin-resistant *Staphylococcus aureus*. *Int J Antimicrob Agents*. 2014 Jan;43(1):26-31. doi: 10.1016/j.ijantimicag.2013.10.001. Epub 2013 Oct 16.
18. **Stefani S**, Dowzicky MJ. Longitudinal Assessment of Antimicrobial Susceptibility among Gram-Negative and Gram-Positive Organisms Collected from Italy as Part of the Tigecycline Evaluation and Surveillance Trial between 2004 and 2011. *Pharmaceuticals (Basel)*. 2013 Nov 7;6(11):1381-406. doi: 10.3390/ph6111381.
19. Fagioli S¹, Colli A², Bruno R³, Craxì A⁴, Gaeta GB⁵, Grossi P⁶, Mondelli MU⁷, Puoti M⁸, Sagnelli E⁹, **Stefani S**¹⁰, Toniutto P¹¹, Burra P¹²; 2011 AISF Single Topic Group. Management of infections pre- and post-liver transplantation: Report of an AISF consensus conference. *J Hepatol*. 2013 Dec 30. pii: S0168-8278(13)00890-8. doi: 10.1016/j.jhep.2013.12.021.
20. Gesualdo F¹, Onori M, Bongiorno D, Campanile F, Carloni E, Mancinelli L, Russo C, Villani A, Valentini D, Raponi M, Tozzi AE, **Stefani S**. Methicillin-resistant *Staphylococcus aureus* nasal colonization in a department of pediatrics: a cross-sectional study. *Ital J Pediatr*. 2014 Jan 10;40:3. doi: 10.1186/1824-7288-40-3.

21. Cascio A¹, Mezzatesta ML², Odierna A³, Di Bernardo F⁴, Barberi G⁵, Iaria C⁶, **Stefani S²**, Giordano S. Extended-spectrum beta-lactamase-producing and carbapenemase-producing *Enterobacter cloacae* ventriculitis successfully treated with intraventricular colistin S2014 Mar;20:66-7. doi: 10.1016/j.ijid.2013.11.012.
22. Gona F¹, Barbera F, Pasquariello AC, Grossi P, Gridelli B, Mezzatesta ML, Caio C, **Stefani S**, Conaldi PG. In vivo multiclonal transfer of blaKPC -3 from *Klebsiella pneumoniae* to *Escherichia coli* in surgery patients. *Clin Microbiol Infect.* 2014 Jan 30. doi: 10.1111/1469-0691.12577. [Epub ahead of print]
23. Santagati M, Spanu T, Scillato M, Santangelo R, Cavallaro F, Arena V, Castiglione G, Falcone M, Venditti M, **Stefani S**. Rapidly fatal hemorrhagic pneumonia and group A *Streptococcus* serotype M1. *Emerg Infect Dis.* 2014 Jan;20(1):98-101. doi: 10.3201/eid2001.130233.
24. Corcione S¹, Motta I, Fossati L, Campanile F, **Stefani S**, Cavallo R, Di Perri G, Ranieri VM, De Rosa FG. Molecular epidemiology of methicillin-resistant *S. aureus* in the ICU setting. *Intensive Care Med.* 2014 Mar 14. [Epub ahead of print]
25. Principe L, Piazza A, Giani T, Bracco S, Caltagirone MS, Arena F, Nucleo E, Tammaro F, Rossolini GM, Pagani L, Luzzaro F, AMCLI CRAB survey participants. Epidemic diffusion of oxa-23 producing *A.baumannii* isolates in Italy: results of the first cross-sectional nationwide survey. *J.Clin Microbiol* 2014; 52(8): 3004
26. Falcone M, Vena A, Mezzatesta ML, Gona F, Cascio C, Goldoni P, Trancassini AM, Conti C, Orsi GB, Carfagna P, Stefani S, Venditti M. Role of empirical and targeted therapy in hospitalized patients with bloodstream infections caused by ESBL-producing *Enterobacteria*. *Am J* 2014; 26(4): 293
27. Mezzatesta ML, Caio C, Gona F, Cormaci R, Salerno I, Zingali T, Denaro C, Gennaro M, Quattrone C, Stefani S. Carbapenem and multidrug resistance in Gram-negative bacteria in a single center in Italy: considerations on in vitro assay of active drugs. *Int J Antimicrob Agents* 2014; 44: 112-116
28. Matteo Bassetti^{1*}, Elda Righi¹, Gennaro De Pascale², Raffaele De Gaudio³, Antonino Giarratano⁴, Teresita Mazzei⁵, Giulia Morace⁶, Nicola Petrosillo⁷, Stefania Stefani⁸ and Massimo Antonelli² How to manage aspergillosis in non-neutropenic intensive care unit patients. *Crit Care* 2014; 18(4): 458
29. Corno G, Coci M, Giardina M, Plechiuk S, Campanile F, Stefani S. Antibiotics promote aggregation within aquatic bacterial communities. *Front. Microbiol* 2014; 1; 5: 297
30. Nagendra N. Mishra, Arnold S. Bayer, Christopher Weidenmaier, Timo Grau Stefanie Wanner, Stefania Stefani, Viviana Cafiso Tascia Bertuccio, Michael R. Yeaman Cynthia C. Nast, Soo-Jin Yan Phenotypic and Genotypic Characterization of Daptomycin-Resistant Methicillin-Resistant *Staphylococcus aureus* Strains: Relative Roles of mprF and dlt Operons *PLoS One* 2014 Sep 16;9(9):e107426
31. Iannelli F., Santagati M, Santoro F, Oggioni MR, Stefani S, Pozzi G. Nucleotide sequence of conjugative prophage Phi 1207.3 (formerly Tn1207.3) carrying the *mefA/msrD* genes for efflux resistance to macrolides in *Streptococcus pyogenes*. *Front Microbiol* 2014 Dec 9; 5: 687
32. Alessandro Russo^{a, 1}, Floriana Campanile^{b, 1}, Marco Falcone^a, Carlo Tascini^c, Matteo Bassetti^d, Paola Goldoni^a, Maria Trancassini^a, Paola Della Siega^d, Francesco Menichetti^c, Stefania Stefani^b, Mario Venditti^a. Linezolid-resistant staphylococcal bacteraemia: A multicentre case–case–control study in Italy. *In J Antimicrob Agents* 2015; Mar;45(3):255-61.

