Section of Microbiology

Faculty members

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Assistant Professor

Laura TROVATO
Assistant Professor

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**RESEARCH LINES**

- *In vitro* susceptibility studies to determine the activity of investigational drugs
- Study on antimicrobial resistance mechanisms in MDR Gram-positive and negative microorganisms.
- Probiotics and Microbiome: screening and use of microorganisms with probiotic characteristics; metagenomic analysis of the oral microbiota using NGS.
- Traditional and molecular diagnostics and Bacterial epidemiology
- Virulence and persistence of *Staphylococcus* spp, *Pseudomonas aeruginosa* and *Streptococcus pyogenes*
- Study of internalization of *S.aureus* strains, from persistent and recurrent infections in human cell lines, by ex-vivo and imaging flow-cytometry analysis.
- Helminthiasis among migrants in Sicily: A possible focus for re-emerging neurocysticercosis in Europe
- Symbiotics and aging eye: Evaluation of ocular microbiome.
- Drug delivery system for antimicrobial and antymycotic agents
- Amensalistic behavior of human isolates of lactic bacteria
- Studies on biological biofunctions and role in host interaction and protection against intestinal pathogens of exopolisaccarides produced by *Bifidobacterium* spp
- Studies of natural and synthetic antimicrobials
- Molecular mechanisms in bacterial translocation of the blood brain and blood retinal barriers
- Study of the biological activity of natural substances
- Molecular diagnostics and evaluation of humoral and cell-mediated immune response of viral infections of immunocompromised hosts with particular regard to subjects undergoing transplantation of stem cells.
- Study of the role of human papillomavirus (HPV) in infertility
- Diagnosis, prevention and treatment of infections during pregnancy and at-risk newborn.
- Environmental distribution of *Cryptococcus neoformans* and *C. gattii* around the Sicily basin
- Susceptibility of *Aspergillus terreus* species complex infections
- Environmental isolates of multi-azole-resistant *Aspergillus* spp. in Southern Italy
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INTERNATIONAL COLLABORATIONS

TM Coque, Hospital Universitario Ramón y Cajal, Spain
Science and Engineering Complex University of Tuscaloosa, Alabama, USA
Master in Conversation of Antique Photographs and Paper Heritage, Università Helwan (Il Cairo), Egypt
Water Research and Technologies Centre, Laboratory of Wastewater Treatment. Università di Borj-Cédria (Tunisia).
P Gameiro; Chemistry and Biochemistry Department. University of Porto. Portugal.

M Oggioni, Department Genetics, University of Leicester, Leicester, UK.

AS Bayer Division of Infectious Diseases, Biomedical Research Institute at Harbor-UCLA Medical The David Geffen School of Medicine at UCLA, Los Angeles, California, United States of America

P Ruas-Madiedo, Instituto de Productos Lácteos de Asturias-Consejo Superior de Investigaciones Científicas (IPLA-CSIC) Asturias, Spain.

AW. Friedrich, Department of Medical Microbiology and Infection Control, University of Groningen, Holland

JA Rodríguez, Dpt. de Genètica i Microbiologia, Facultat de Biociències, Universitat Autònoma de Barcelona, BARCELONA (SPAIN)

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PON 01_02464  PON 2007-2013 - MICRO-MAP; PON 2007-201301_01078

2016-2017

Action1.1.5

AWARDS:
Stefania Stefani
- Editor in chef of IGAR
- Scientific Advisory Committee (SAC) of the European Society of Clinical Microbiology and Infectious diseases (ESCMID)
- Member of the sub-Committee for antimicrobial resistance (EUCAST subcommittee) of the ESCMID.

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Financial support from pharmaceutical companies
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**Research paper selection of Biometec (2016-2020)**

**Focal epilepsy as a long term sequela of Parvovirus B19 encephalitis.**

**Redox modulation of cellular stress response and lipoxin A4 expression by Coriolus versicolor in rat brain: Relevance to Alzheimer’s disease pathogenesis.**

**Infections of cardiovascular implantable electronic devices: 14 years of experience in an Italian hospital.**

**Colistin Increases the Cidal Activity of Antibiotic Combinations Against Multidrug-Resistant Klebsiella pneumoniae: An In Vitro Model Comparing Multiple Combination Bactericidal Testing at One Peak Serum Concentration and Time-Kill Method.**

**GrowthandadhesiontoHT-29cellsinhibitionofGram-negativesbyBifidobacterium longum BB536 e Lactobacillus rhamnosus HN011 alone and in combination.**

**Editorial.**

**The risk of HCV infection among health-care workers and its association with extrahepatic manifestations.**

**In vitro activity of fosfomycin trometamol and other oral antibiotics against multidrug-resistant uropathogens.**

**Geo-helminthiasis among migrants in Sicily: a possible focus for re-emerging neurocysticercosis in Europe.**

**Blood-Brain Barrier in a Haemophilus influenzae Type a In Vitro Infection: Role of Adenosine Receptors A2A and A2B.**

**Chemical and biological properties of the novel exopolysaccharide produced by a probiotic strain of Bifidobacterium longum.**

**Immunomodulatory Effects of Bifidobacterium longum W11 Produced Exopolysaccharide on Cytokine Production.**

**Differentially Enhancing Effects of Long-term Treatment with Serrazyme, Boswellia and Pine on Seminal Bacterial Detection in Patients with Chronic Bacterial or Inflammatory Prostatitis, Probably Related to Several Degrees of Bacterial Adherence.**

**Genetic organization of Streptococcus salivarius 24SMBc blp-like bacteriocin locus.**

**A Method for Efficient Loading of Ciprofloxacin Hydrochloride in Cationic Solid Lipid Nanoparticles: Formulation and Microbiological Evaluation.**

**Type M Resistance to Macrolides Is Due to a Two-Gene Efflux Transport System of the ATP-Binding Cassette (ABC) Superfamily.**

**Burden of Rifampicin - and Methicillin-Resistant Staphylococcus aureus in Italy.**

**Evaluation of isavuconazole MIC strips for susceptibility testing of Aspergillus and Scedosporium species.**

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Biological properties of itraconazole-SLN.

Neonatal HCMV-related polymicrogryria in seroimmune women: What is the optimal management?

Biological properties and production of bacteriocins-like-inhibitory substances by Lactobacillus sp. strains from human vagina.

Bactericidal activity of cefotibiprole combined with different antibiotics against selected Gram-positive isolates.

Colistin Resistant A. baumannii: Genomic and Transcriptional Traits Acquired Under Colistin Therapy.

In vitro evaluation of biological activities of Orobanche crenata Forssk. leaves extract.

Diagnostic surveillance by Candida albicans gcrm tube antibody in intensive care unit patients.

Emergence of two novel sequence types (3366 and 3367) NDM-1- and OXA-48-co-producing K. pneumoniae in Italy.

Bactericidal activity of ceftobiprole combined with different antibiotics against selected Gram-positive isolates.

Antibacterial and anti-biofilm activities of walnut pellicle extract (Juglans regia L.) against coagulase-negative staphylococci.

Bacteriotherapy with Streptococcus salivarius 24SMB and Streptococcus oralis 89a oral spray for children with recurrent streptococcal pharyngotonsillitis: a randomized placebo-controlled clinical study.

Molecular diagnosis of kerion celsi caused by Trichophyton tonsurans in an Italian child.

Dual-drugs delivery in solid lipid nanoparticles for the treatment of Candida albicans mycosis.

Metabolic Characterization of Supernatants Produced by Lactobacillus spp. With in vitro Anti-Legionella Activity.

Lipid Nanoparticles and Active Natural Compounds: A Perfect Combination for Pharmaceutical Applications.

Prevalence of meticillin-resistant and -susceptible coagulase-negative staphylococci with the first detection of the mecC gene among cows, humans and manure in Tunisia.

COLR Acinetobacter baumannii sRNA Signatures: Computational Comparative Identification and Biological Targets.