

## CURRICULUM VITAE

Marzia Boaretti

Born in Verona on November 17, 1961.

Degree in Biology, University of Padova, 1986.

Post Doctoral Fellow at the Microbiology Section of the Department of Pathology and Diagnosis, University of Verona.

Ability to the profession of Biologist at the University of Padova, 1988

PhD (Research Doctorate) in Basic and Applied Microbiology, University of Padova, 1996.

Assistant Professor of Microbiology, Faculty of Medicine, University of Verona since 1996 (present position).

Biologist Manager in the AOUI of Verona at the UOC of Microbiology and Virology, 2000 (present position).

### Research activity:

- bacterial physiology and genetics: studies on mechanism of bacterial growth and division and involvement of lytic enzymes in the final stages of cell wall assembly
- mechanism of action and antibacterial activity of new antibiotics such as RU 51,746 and Daptomycin
- mechanisms of resistance to beta-lactam antibiotics in gram-positive (*Enterococcus faecalis*, *Enterococcus faecium*) and gram-negative bacteria (*Escherichia coli*)
- evaluation of survival strategies adopted by bacteria of medical interest (*Enterococcus* spp and *Escherichia coli*) when they are released in natural environments and possible genetic mechanisms involved in persistence in viable but notculturable (VBNC) state
- development and evaluation of innovative molecular approaches for diagnosis of viral infections: viruses involved in acute tract respiratory infections and in central nervous system (CNS) infections, cytomegalovirus and BK virus reactivation in organ solid transplant recipients
- development and validation of molecular methods applied to the detection of bacteria of medical interest in biological fluids of cirrhotic patients with ascites, with negative microbiological report but indication of presumptive infection; 7)
- identification and molecular typing of *Pseudomonas aeruginosa* isolated from CF patients with acute and chronic lung infection; 8)
- evaluation of antimicrobial and anti-biofilm activity of biogenic selenium nanoparticles and effects on human dendritic cells and fibroblasts (actual research).

Partecipazione to Research Project of national interest: "Survival strategies of pathogenic bacteria in response to stress conditions found in the human body: biological, pathogenic and diagnostic aspects" (2006) ; "Role of the marine environment in the evolution, persistence and diffusion of virulence and antibiotic resistance genes in bacteria that might represent a risk for human health" (2010); "Development of a CF, IL-8/NF-KB transgenic mouse model for the in vivo long-term monitoring of

the inflammatory response induced by bacteria treated or not with azithromycin” – Italian Cystic Fibrosis Research Foundation (2013).

**Teaching activity:**

Courses of General Microbiology, Clinical and Diagnostic Microbiology for students and MD specialists of the Faculty of Medicine.

**Diagnostic activity**

Biologist Coordinator in charge for the diagnostic activities of the Operative Unit of Microbiology and Virology at the Azienda Ospedaliera Universitaria Integrata of Verona, expertise coordinator in “Molecular diagnosis of central nervous system infections”