

Curriculum

Cinzia Calvio obtained her first degree *cum laude* in Biology from the University of Pavia in 1990. In 1993 she obtained the degree in Applied Genetics from the Specialization School in “Applied Genetics” at the University of Pavia. The Specialization thesis work (Nov. '90 - Aug. '92) was carried out at the IGM-CNR, in Pavia. From Sept. '92 to Dec. '95, she held a Postdoc position at the European Molecular Biology Laboratory (EMBL), Heidelberg (D), in the laboratory of Prof. A.I. Lamond. A second Postdoc (Feb. '96 - May '97) was carried out at the European Institute of Oncology - IEO, Milan, in the group led by Prof. P.G. Pelicci. In June 1997 she was hired by BIOSENSE srl, a commercial company based in Milan as Product specialist for automated DNA sequencers and instrumentation for analyses of macromolecular interactions. In 1999 she obtained a Research assistant position at the Dept. of Genetics and Microbiology of the University of Pavia, being in charge of the supervision of the departmental sequencing facility. In 2003 she joined, as Assistant Professor in Genetics, the lab of Microbial Genetics at the Dept. of Biology and Biotechnology (formerly Dept. of Genetics and Microbiology) of the University of Pavia. After a long collaboration with Prof. A. Galizzi, from 2009 she is the PI of the Microbial Genetics Laboratory.

Her main research interest has been the regulation of stationary phase phenotypes in the model organism *Bacillus subtilis*. In particular she characterized the *swrA* operon necessary for swarming, a specialized form of motility. She identified the regulation driving the expression of *swrA* and demonstrated that the biosynthesis of the polymer poly- γ -glutamate (γ -PGA), with great biotechnological potentiality, is also depending on SwrA. γ -PGA production has been gradually optimized by genetic engineering. Studies on the enzymatic degradation of γ -PGA led to the identification of several *B. subtilis* hydrolases among non-characterized genes. She analyzed the evolutionary pattern of distribution of these genes in microbial genomes and is now interested in their applications as antimicrobial strategic enzymes.

After several years of contributing to the teaching of *Genetics* and *Functional genomics* for bachelor degree courses at the Biology and the Biotechnology programs, since 2009 she holds the chair of “*Microbial Genetics*” (6 CFU; course held in English) for the Master programme in *Molecular Biology and Genetics*. From 2016 she is also involved in teaching *Microbial biodiversity and genetics in soil* at the Master program in Natural Sciences.

Since 2004, she supervised 49 experimental thesis for Bachelor, Master and PhD students.

Her research has been funded by the Italian Ministry for University and Research (MIUR) (in 2003, in 2005 and in 2008 - For the latter project CC acted as PI/Coordinator); by the “Alma Mater Foundation” (2009); by the Lombardy Region-INSTM consortium (in 2009 and in 2013) and by the CARIPLO Foundation (2015 - two grants, one as PI; 2016 – one grant).