

## Cinzia Calvio - CV

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 was carried out at the IGM-CNR, in Pavia. She did her first postdoc at the European Molecular Biology Laboratory (EMBL), Heidelberg (D), and a second Postdoc at the European Institute of Oncology - IEO, Milan. She then moved to a commercial company as Product Specialist for automated DNA sequencers and instrumentation for analyses of macromolecular interactions. In 1999 she joined the Dept. of Genetics and Microbiology of the University of Pavia as supervisor of the departmental sequencing facility. In 2003 she joined, the lab of Microbial Genetics at the Dept. of Biology and Biotechnology of Pavia University as Assistant Professor in Genetics. After a long collaboration with Prof. A. Galizzi, from 2009 she is the PI of the Microbial Genetics Laboratory.

C. Calvio 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 and identified the regulation driving the expression of *swrA*. She demonstrated that the biosynthesis of the polymer poly- $\gamma$ -glutamate ( $\gamma$ -PGA), with great biotechnological potentiality, is depending on SwrA+DegU and is still optimizing  $\gamma$ -PGA production by genetic engineering. Studies on the enzymatic degradation of  $\gamma$ -PGA led to the identification of several hydrolases among non-characterized *B. subtilis* genes. She analysed the evolutionary pattern of distribution of these genes in microbial genomes and is also exploring their applications as antimicrobial strategic enzymes. Since 2016 she also focusing on the engineering of *B. subtilis* strains for the sustainable production of biotechnological products from agro-industrial by-products.

C. Calvio currently holds the chair of "*Microbial Genetics*" (in English) for the Master programme in *Molecular Biology and Genetics*. 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 theses for Bachelor, Master and PhD students. She regularly acts as reviewer for several international journals, is in and Board of Reviewers for Microbiology and member of the Microbiology Society and the European Federation of Biotechnology.

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