

**Giovanna Farruggia**

*Department of Biotechnological Sciences, University of Bologna, Italy*



ALMA MATER STUDIORUM  
UNIVERSITÀ DI BOLOGNA

DEPARTMENT  
OF PHARMACY  
AND BIOTECHNOLOGY

**Biographical sketch:**

Giovanna Farruggia gained her master degree in Biology in 1980 and a PhD in Molecular and Cellular Pathology in 1990. Since 1990 she has been Assistant Professor in the Department of Pharmacy and Biotechnology of the University of Bologna. Her main research is cellular biochemistry, in this field she studied the application of new biosensors for Magnesium, by integrating spectroscopic, microscopic and cytofluorimetric approaches. Furthermore, in recent years she has been interested in the study of the antiproliferative effects of retinol derivatives in tumor cells.

**Short sentence of the scientific presentation:**

Efficient fluorimetric chemosensors were obtained by derivatizing crown ethers with hydroxyquinoline groups. The phenyl-substituted molecule, 1,10-bis ((5-phenyl-8-hydroxy-7-quinoliny) methyl)-1,10-diaza-18-crown-6-ether (DCHQ5) showed great fluorescence intensity upon magnesium binding, a noticeable intracellular retention and the option to be excited both in the UV and visible spectrum range. It allows to detect magnesium in very small samples and can be used in confocal microscopy and in flow cytometry.