



23 Novembre 2017  
alle ore 10.30

presso Aula Toraldo Di Francia dell'Edificio F  
Area della Ricerca CNR  
Via Madonna del Piano, 10 Sesto Fiorentino (Firenze)

il Dott. **LUIGI CALZOLAI**  
Joint Research Center of the European Commission  
Ispra, Italia

terrà il seguente seminario:

## "How to characterize nanomaterials in biological systems"

Dr. Giovanni La Penna  
Ricercatore CNR

Dr. Francesco Vizza  
Direttore ICCOM

### Abstract:

There is a considerable amount of activity in the development of nanomaterials for different industrial fields and especially in the case of nanomaterials for food and health-care applications these new NM will need to be characterized in biological systems. Unfortunately, the proper characterization of NM in biological systems is inherently difficult due to the complexity of the systems to be analyzed. In this presentation I will introduce the basic concepts of characterization of NM and I will present some examples of our multi-techniques approach for the characterization of NM in biological systems.

Finally, I will briefly present the assay cascade approach developed by the recently launched European Union Nanomedicine Characterization Laboratory (EU-NCL) for the characterization of nanomedicines that could be adapted to the more general characterization of NM in biological systems.

## Biographic sketch:



Dr. Calzolari obtained his M.Sc. in chemistry and his Ph.D. in chemistry from the University of Florence and the University of Siena in 1991 and 1996, respectively. After a Postgraduate Research at the University of California, Davis, he joined, in 1998, the Swiss Institute of Technology in Zurich, in the laboratory of the Nobel laureate Kurth Wuthrich, where he determined the 3D structure of prion proteins responsible of neurological disorders, such as Mad Cow Disease and Creutzfeld-Jacob disease. In 2007 he moved to the School of Pharmacy of the University of Kent (UK) as Senior Lecturer in biochemistry. In 2009 he joined the Joint Research Center of the European Commission where his research focuses on the development of methods for the characterization of nanoparticles in complex matrices and nanomedicines.

Publication list available at:

Google Scholar (Calzolari Luigi):

<https://scholar.google.com/citations?user=jgiELM8AAAAJ&hl=en>