

## MARINA LOTTI

Full Professor of Biochemistry at the University of Milano-Bicocca from 2006, she leads the Laboratory of **Protein Engineering and Industrial Enzymology**.

She graduated in Biological Sciences in Milano and got her PhD at the Max-Planck-Institut fuer Molekulare Genetik in Berlin (Germany). She was a Researcher of the National Research Council and of the State University of Milano. Later on she became associated Professor of Biochemistry at the University of Milano Bicocca.

From Oct 2008 to Sept 2015 she was the Head of the Department of Biotechnology and Biosciences of the State University of Milano Bicocca.

### RESEARCH ACTIVITY

Major research topics target the study of enzymes employed in **biocatalysis**, model proteins and **intrinsically disordered proteins** (IDPs) by a combined approach of mutagenesis (both directed evolution and site directed mutagenesis) and biochemical and biophysical characterization. The study of **Cold adapted enzymes** obtained from psychophilic organisms is performed both to understand the structural determinants of temperature adaptation and to develop biocatalysts for low-temperature reactions. **Ice-binding proteins** from Antarctic organisms are studied with the goal of gaining insight into the detail of protein-ice crystals interactions and to use this knowledge to produce anti-ice devices. **Protein aggregation** is studied *in vitro* and *in vivo*, in particular in bacterial inclusion bodies formed upon overproduction of recombinant proteins. Moreover, **novel biocatalysts** are isolated from non-commercial sources or produced by protein engineering.

### RECENT RESEARCH GRANTS

- Project ASTIL of the Lombardy Region for the project “Diesel-Biotech: Produzione di biodiesel per via biotecnologica” Italian Regional Government
- Project BIOREFILL Bio-Refinery Integrated Lombardy Labs.
- “Genome scanning” di microorganismi antartici e caratterizzazione di nuove proteine antifreeze per applicazioni industriali. Programma Nazionale di Ricerche in Antartide.

- MSCA-RISE-2014. Advanced bioinformatics for genome and metagenome analyses and discovery of novel biocatalysts from extremophiles: implications for improving industrial bioprocesses.

## **REFeree OF RESEARCH ACTIVITY**

Nord Rhein Westphalen (Germany) Research programs

Icelandic Research Fund

Research Foundation Flanders – FWO, Belgio

## **TEACHING**

Marina Lotti is presently involved in teaching in the area of **Biochemistry** and **Industrial Biochemistry** in the curricula of Biotechnology and Industrial Biotechnology.

She is member and vice-coordinator of the **PhD program “Converging Technologies for Biomolecular Systems (TeCSBi)”** at the University of Milano Bicocca and Chair of the **International School on Industrial Biotechnology (ESSIB)**, led in collaboration with the University of Barcelona and Stuttgart. She is one of the organizers of the International Summer School **“TOWARDS A BIO-BASED ECONOMY: science, innovation, economics, education”** in collaboration with the Chalmers University (Gothenborg).