

## ***Curriculum vitae di Stefania Brocca***

### **Personal data**

**1968** Born in S. Pietro Vernotico (BR)  
Living in Milano

### **Present position**

- Biochemistry Associate professor in Biochemistry at the Department of Biotechnology and Biosciences, University of Milano-Bicocca
- Member of Doctorate School in Convergent Technologies for Biomolecular Systems (TeCSBi), University of Milano-Bicocca

### **Education**

**1986-1991** Master's degree in Biological Sciences- University of Milano  
**1991-1994** Specialization in Biotechnology (Applicazioni Biotecnologiche) – University of Milano  
**1995-1996** Master's in management of Technology – University of Milano

### **Professional experience**

**1994-1995** Fellowship of National Research Council (CNR - University of Milano)  
**1996-1998** Researcher at the Institute for Technical Biochemistry, Stuttgart University, Germany  
**1998-1999** Technical assistant - University of Milano, Italy  
**1999-2003** Post-doctoral fellow (“assegnista di ricerca”) - University of Milano - Bicocca  
**2004-2016** Assistant Professor of Biochemistry - University of Milano - Bicocca  
**2016 – present** Associate Professor of Biochemistry - University of Milano - Bicocca

### **Scientific interests and research**

Scientific interests of S. Brocca are in the field of Protein Science and are aimed at understanding function-structure relationships. Investigated proteins span from industrial enzymes to cold-adapted enzymes and include globular, well-folded proteins as well as intrinsically disordered proteins. Most recent studies were dedicated on this latter class of proteins and were aimed at describing main factors influencing their conformation and solubility/aggregation propensity. These properties were studied by applying biochemical and biophysical techniques, also in collaboration with several research groups belonging to the BTBS Department and to other Universities and research centers. S. Brocca has also experience in recombinant production of improved industrial biocatalysts by protein engineering and recombinant DNA methodologies.

The research activity of Stefania Brocca is documented by 46 publications on peer-reviewed international scientific journals, two patents and more than 65 poster communications at national and international meetings. Scopus h-index: 19, total citations: 1197 (May, 2018)

### **Tutoring Activity**

Since 2004, Stefania Brocca has been:

- Supervisor of 22 experimental theses for the masters in Industrial Biotechnology and Biological Sciences,
- Supervisor of 62 review theses for the Bachelor in Biotechnology,
- Tutor for 34 stages - Bachelor in Biotechnology,
- Supervisor of 3 Ph.D theses

### **Titles of Ph.D theses supervised by Stefania Brocca**

- Effects of electrostatic charges on aggregation and conformation of intrinsically disordered proteins. Ph.D Student: Giulia Tedeschi, XXX Cycle, (AA. 2016-2017)
- Conformational transitions of the intrinsically disordered protein Sic1 from the yeast *Saccharomyces cerevisiae*. Towards structural and functional characterization of the inhibitory complex with Cdk1-Clb5. Conformational effects in protein Ph.D Student: Lorenzo Testa, XXI Cycle, (AA 2011-2012)
- Evolution of copper tolerance in yeast cells. Ph.D Student: Giusy Manuela Adamo, XXIV Cycle, (AA 2010-2011).

### **Titles of Experimental Master theses supervised by Stefania Brocca**

- Effects of net charge per residue on the solubility of intrinsically disordered proteins (AA 2016-2017) – Master thesis in Industrial Biotechnology
- Relevance of dimerization on structural stability of a psychrophilic peptidase (AA 2015-2016) - Master thesis in Industrial Biotechnology
- Setting up of protocols for recombinant production of enzymes and detection of their activity (AA 2016-2017) - Master thesis in Industrial Biotechnology
- Design and production of supercharged disordered proteins (aa 2015-2016) - Master thesis in Biological Sciences
- Effects of ionic liquids on stability and activity of a formate dehydrogenase from *Pseudomonas sp.* 101 (AA 2015-2016) - Master thesis in Industrial Biotechnology

### **Titles of Bachelor theses supervised by Stefania Brocca**

- Detection of antibiotics by gold nano-particles (AA 2016-2017)
- Structural determinants of the solubility of globular proteins (AA 2016-2017)
- Parkinson's disease and mutations of Parkin protein (AA 2016-2017)
- Conformational modulation of polymeric brushes derived from disordered proteins (AA 2016-2017)
- Keratinolytic enzymes and their industrial applications (AA 2016-2017)
- The role of prion-like domains in paraspeckle formation (AA 2016-2017)

### **Teaching**

#### **AA 2017/2018**

Biochemistry for Biotechnology (Bachelor's degree in Biotechnology)

Practical course on Biochemistry Techniques (Bachelor's degree in Biotechnology)

Methods in Biochemistry (Master's degree in Biological Sciences)

#### **AA 2016/2017**

Biochemistry for Biotechnology (Bachelor's degree in Biotechnology)

Practical course on Biochemistry Techniques (Bachelor's degree in Biotechnology)

Methods in Biochemistry (Master in Biological Sciences)

#### **AA 2015/2016**

Practical course on Biochemistry Techniques (Bachelor's degree in Biotechnology)

#### **AA2014/2015**

Practical course on Biochemistry Techniques (Bachelor's degree in Biotechnology)

Industrial Biotechnology (Master's in Industrial Biotechnology)