PERSONAL INFORMATION

Elena Rosini

WORK EXPERIENCE

2024-ongoing	Associate Professor of Biochemistry, University of Insubria
2025	National Scientific Qualification (ASN) for Full Professor in BIOS/07
2021-2024	Associate Researcher of Biochemistry (RTDb), University of Insubria
2018-2021	Consultant for ABR Active Botanicals Research srl, a biotech company
2017-2020	Associate Researcher of Biochemistry (RTDa), University of Insubria
2016	Visiting researcher at the lab of Prof. Neri (ETH Zurich), (EMBO Short Term Fellowship)
2013	Visiting researcher at the lab of Prof. D'Auria (CNR, Napoli)
2011	Visiting researcher at the lab of Prof. Marinesco (Université Claude Bernard Lyon I, France)
2009-2018	Responsible of the Core Lab of the Research Center "The Protein Factory", Politecnico di Milano and University of Insubria
2008-2009	Post-Doc research fellowship, University of Insubria
2007-2008	Consultant for Ingenza Ltd, pharmaceutical company
2004-2007	PhD student in Biotechnology, University of Insubria
2002-2004	Consultant for Antibioticos SpA, pharmaceutical company

EDUCATION AND TRAINING

Ph.D. in Biotechnology (University of Insubria), 2007

Degree in Biology with honor (University of Insubria), 2001

Mother tongue: Italian

Other languages: English, French

EXPERIENCE.

- Teaching activity: “Applied Biochemistry”, "Food Biochemistry”, "Engineering of metabolic processes”
- Member of the board of professors of the PhD program in "Life Sciences and Biotechnology” (University of Insubria)
- Supervisor of 8 PhD students, tutor or co-tutor of 50 degree students (Bachelor and Master degree)
- Research topics addressed: Production of recombinant proteins in different hosts; Protein engineering for the evolution of new enzymatic activities (rational design and directed evolution methods); Development of multi-enzymatic cascade systems; Biocatalysis in the field of enzyme biotechnology for industrial and biomedical applications
- Author of 82 papers in peer-reviewed journals as ACS Sustainable Chemistry and Engineering, Catalysis Science & Technology, Advanced Synthesis & Catalysis, The FEBS Journal, Nanomedicine, Journal of Biological Chemistry, Scientific Reports, Frontiers
- More than 130 oral communications or poster presentations in national and international congresses
- Member of the Editorial Board of Journal of Biomedical Engineering and Informatics, Biosensors, Frontiers in Bioengineering and Biotechnology, Frontiers in Cell and Developmental Biology
- Reviewer for 30 international journals
- Member of the Italian Society of Biochemistry and Molecular Biology (SIB)
- Member of the Consorzio Interuniversitario Biotecnologie (CIB)
- Participant LignoCOST action CA17128

PERSONAL SKILLS

The scientific career of Elena Rosini focused on the production of recombinant proteins in different hosts *(E. coli, S. cerevisiae, P. pastoris* and CHO mammalian cells) and on protein engineering of selected enzymes. She exploited her experience in molecular biology, protein expression, protein engineering, protein biochemistry, cell biology, molecular modeling, docking analysis and biocatalysis in the field of enzyme biotechnology for industrial and biomedical applications. She acquired a wide experience in the evolution of enzymatic activities by using rational de sign and directed evolution methods. This expertise allowed the production of a new enzymatic activity in the bioconversion of Cephalosporin C into β-lactam antibiotics, the production of a new D-amino acid oxidase for the production of a prototype biosensor for the analytical determination of D-amino acids in food, the engineering of a glycine oxidase to detect glycine and sarcosine in biological flu ids, the evolution of a D-amino acid oxidase to be employed as a pro drug converter in cancer enzyme therapy, the production of an histamine oxidase for the application in a biosensor for the analytical determination of histamine in biological samples, and the development of an "enzymatic toolbox" for lignin degradation. All these proteins have been produced in a recombinant way using prokaryotic and eukaryotic hosts. Recently, she has been involved in the development of multi enzymatic cascade systems for the production of high value aromatic compounds through the use of in vitro enzymatic systems or whole cell systems, in the production of antibacterial peptides for the functionalization of a bacterial nanocellulose for biomedical applications, the development of antibody drug conjugates to target oxidative enzymes to tumor cells, and the expression of hormones, ribonuclease and the SARS CoV 2 S Spike protein in CHO mammalian cells.

PUBLICATIONS

Articles on international journals with IF	82
Book chapters	5
Patent	1
Total number of citations (Scopus)	2608
h-index (Scopus)	30 (Scopus ID: 9839184400)
Orcid:	https://orcid.org/0000-0001-8384-7992

AWARDS

- 2016 - EMBO Short Term Fellowship
- 2016 - Young Researcher Award “The Protein Factory"
- 2013 - Medal of the Italian Society of Biochemistry SIB, the main Italian award to a young researcher of Biochemistry
- 2011 - Young Researcher Award “The Protein Factory"
- 2010 - Best Young Researcher Award from the Centro Insubre di Biotecnologie per la Salute Umana, University of Insubria

Varese, 29/06/2026 f.to Elena Rosini