Curriculum vitae Prof. Leila Birolo.

Department of Chemical Sciences, University of Naples, Federico II.
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Born: 3 May 1966, Naples, Italy

- April 1990 Obtained a degree in Chemistry with summa cum laude.
- June 1994 PhD. in Chemical Sciences University of Naples "Federico II"
- January-March 1993 EMBO fellow, Dep. of Biochemistry, Wales University, Cardiff, U.K.
- April-July 1993 HFSPO fellow, Dep. of Biochemistry, Wales University, Cardiff, U.K..
- March 1994-February 1995 Post-doctoral Fellow, Dep. of Biochemistry Wales University, Cardiff, U.K, in the Human Capital and Mobilities Programme of the European Community.
- April-September 1995 CNR fellow.
- October 1995-September 1997 Post-doctoral Fellow University of Naples "Federico II".
- October 1997-october 1999 Post-doctoral Fellow University of Naples "Federico II" In a European Community Programme.
- 2001-November 2005 Research Assistant of Biochemistry (BIO10) at the Faculty of MM.FF.NN. Sciences until november 2004 and thereafter at the Faculty of Biotechnological Sciences, University of Naples, Federico II.
- November 2005- to date. Associate Professor of Biochemistry (BIO10), University of Naples, Federico II.
- Present address. Department of Chemical Sciences, University of Naples, Federico II.

Teaching experience at the University of Naples, Federico II:

- 2000, 2002-2004 Advanced course of Biological Chemistry, Degree in Chemistry.
- 2004-2005 Structure and function of proteins, Master Degree in Chemistry.
- 2002 Chemistry of Fermentation Practical Course, Degree in Biotechnology
- 2004-2008 Experimental I for molecular and industrial biotechnologies. Master Degree in Molecular and Industrial Biotecnologies
- 2006 to date Structural Proteomics. Master Degree in Molecular and Industrial Biotecnologies.
- 2009-2011 Analytical Methods for Biotechnology. Master Degree in Molecular and Industrial Biotecnologies.
- 2009-2011 Introduction to Biotechnology and biology. Degree in Biomolecular and Industrial

Biotecnologies.

- 2011 to date Proteomics. Master Degree in Biotechnology of the Drugs.
- 2011-2013 Industrial Enzimology. Degree in Biomolecular and Industrial Biotecnologies.
- 2014 to date Biological Chemistry. Degree in Industrial Chemistry

The scientific activity has been mainly devoted to the structural and functional characterisation of proteins. During the past years, she focused her research on three main subjects:

1) Structural and Functional Proteomics.
2) Conformational analysis of proteins by means of mass spectrometric approaches.
3) Application of Proteomic strategies to the Cultural Heritage.

FUNDED GRANTS:

2002. Regione Campania (L.R. 41/94 – art. 3, 1° comma – Annualità 2000). Responsible of Operative Unit "Produzione di una β-galattosidasi psicrofila di interesse industriale: allestimento di un sistema di espressione in un batterio antartico e validazione del prodotto ricombinante".

2004 Two years grant funded by Italian Ministry of Education, (PRIN2004) entitled "Partners di interazione di proteine amiloidogeniche per lo studio dei processi di misfolding ed aggregazione; possibili applicazioni". Responsible of Operative Unit.

2006 Two years grant funded by Italian Ministry of Education, (PRIN2006) entitled "Analisi conformazionale di mutanti della beta2-microglobulina e loro interazione con il collageno". Responsible of Operative Unit.

2008 Two years grant funded by Italian Ministry of Education, (PRIN2008) entitled "Analisi conformazionale e proteomica funzionale per l'analisi dell'effetto della matice extracellulare sul processo di fibrillogenesi". Responsible of Operative Unit.

LAST FIVE YEARS PUBLICATIONS

1- Montibeller, V. W., Vandenberghe, L. P. S., Amore, A., Soccol, C. R., Birolo, L., Vinciguerra, R., Salmon, D. N. X., Spier, M. R., Faraco, V. Characterization of hemicellulolytic enzymes produced by Aspergillus niger NRRL 328 under solid state fermentation on soybean husks (2014) BioRes. 9(4), 7128-7140.

2- Giacobbe S, Pepe O, Ventorino V, Birolo L, Vinciguerra R, Faraco V. Identification and Characterisation of a Pectinolytic Enzyme from Paenibacillus xylanolyticus. BioRes (2014) 9(4), 4873-4887.

3- Rasmussen KL, Tenorio AL, Bonaduce I, Colombini MP, Birolo L, Galano E, Amoresano A, Doudna G, Bond AD; Palleschi V, Lorenzetti G, Legnaioli S, van der Plicht J, Gunneweg J. Reply to Ira Rabin's Comment on our paper Rasmussen et al. (2012). J Archaeol Sci. 2014, 43, 155-158. DOI: 10.1016/j.jas.2013.11.030. IF: 2.142

4- Leo G., Altucci C., Bourgoin-Voillard S., Gravagnuolo A.M., Esposito R., Marino G., Costello C.E., Velotta R., Birolo L. UV laser induced cross-linking in peptides. Rapid Commun. Mass Spectrom. 2013, 27, 1660–1668 DOI: 10.1002/rcm. 6610. IF: 2.782

5- Gambino M., Cappitelli F., Cattò C., Carpen A., Principi P., Ghezzi L., Bonaduce I., Galano E., Pucci P., Birolo L., Villa F., Forlani F.. A simple and reliable methodology to detect egg white in art samples. J Biosci. 2013 Jun;38(2):317-28. doi: 10.1007/s12038-013-9321-z. IF: 2.2218

6- Infusini G, Iannuzzi C, Vilasi S, Maritato R, Birolo L, Pagnozzi D, Pucci P, Irace G, Sirangelo I.W-F substitutions in apomyoglobin increase the local flexibility of the N-terminal region causing amyloid aggregation: A H/D exchange study. Protein Pept Lett. 2013 Aug;20(8):898-904. doi: 10.2174/0929866511320080006. IF: 1.545

7- Amore A., Pepe O., Ventorino V., Birolo L., Giangrande C. Faraco V. Industrial waste based compost as a source of novel cellulolytic strains and enzymes. FEMS Microbiology Letters. 2013 Feb;339(2):93-101. doi: 10.1111/1574-6968.12057 IF: 2.295

8- Amore A., Pepe O., Ventorino V., Birolo L., Giangrande C., Faraco V. Cloning and recombinant expression of a cellulase from the cellulolytic strain Streptomyces sp. G12 isolated from compost. Microb Cell Fact. 2012 Dec 26;11:164. doi: 10.1186/1475-2859-11-164. IF: 4.000

9- Infusini G, Ianuzzi C., Vilasi S., Birolo L, Pagnozzi D, Pucci P, Irace G and Sirangelo I. *Resolution Of The Effects Induced By W-F Substitutions On The Conformation And Dynamics Of The Amyloid Forming Apomyoglobin Mutant W7FW14F. European Biophysics Journal. 2012, 41, 615-27. DOI: 10.1007/s00249-012-0829-1. IF: 2.313

10- Karp SG, Faraco V, Amore A, Birolo L, Giangrande C, Soccol VT, Pandey A, Soccol CR. Characterization of laccase isoforms produced by Pleurotus ostreatus in solid state fermentation of sugarcane bagasse. Bioresour Technol. 2012, 114, 735-9. DOI: 10.1016/j.biortech.2012.03.058 IF: 5.352

11- Rasmussen KL, Tenorio AL, Bonaduce I, Colombini MP, Birolo L, Galano E, Amoresano A, Doudna G, Bond AD; Palleschi V, Lorenzetti G, Legnaioli S, van der Plicht J, Gunneweg J. Constituents of the ink from a Qumran inkwell: New prospects for provenancing the ink on the Dead Sea Scrolls. J Archaeol Sci. 2012, 39, 2956-2968 DOI: 10.1016/j.jas. 2012.04.041 IF: 2.142

12- Del Vecchio C., Lettera V., Pezzella C., Piscitelli A., Leo G., Birolo L., Sannia G. Classical Breeding in Pleurotus ostreatus: a natural approach for laccase production improvement. Biocatalysis and Biotransformation, 2012, 30, 78-85. DOI: 10.3109/10242422.2012.646032. IF: 1.113

13- Amore A, Amoresano A, Birolo L, Henrissat B, Leo G, Palmese A, Faraco V. A family GH51 α-L: -arabinofuranosidase from Pleurotus ostreatus: identification, recombinant expression and characterization. Appl Microbiol Biotechnol. 2012, 94, 995-1006. DOI: 10.1007/s00253-011-3678-4. IF: 3.613

14- Iandolo D, Amore A, Birolo L, Leo G, Olivieri G, Faraco V. Fungal solid state fermentation on agro-industrial wastes for acid wastewater decolorization in a continuous flow packed-bed bioreactor. Bioresour Technol., 2011, 102, 7603-7. DOI: 10.1016/j.biortech.2011.05.029. IF: 5.352

15- Leo G, Bonaduce I., Andreotti A., Marino G., Pucci P., Colombini M.P., Birolo L. Deamidation at Asparagine and Glutamine as a major modification upon deterioration/aging of proteinaceous binders in mural paintings. Anal Chem, 2011, 83, 2056-64. DOI: 10.1021/ac1027275. IF: 5.983

16- Izzo V., Leo G., Scognamiglio R., Troncone L., Birolo L., Di Donato A.. PHK from phenol hydroxylase of Pseudomonas sp. OX1. Insight into the role of an accessory protein in bacterial multicomponent monooxygenases. Arch Biochem Biophys. 2011, 505, 48-59. DOI: 10.1016/j.abb.2010.09.023. IF: 2.889

17- Lettera V., Piscitelli A., Leo G., Birolo L., Pezzella C., Sannia G.. Identification of a new member of Pleurotus ostreatus laccase family from mature fruiting body. Fungal biology, 2010, 114, 724-730. IF: 1.429

18- Fontanella B., Birolo L., Infusini G., Cirulli C., Marzullo L., Pucci P., Turco M.C., Tosco A.. The co-chaperone BAG3 interacts with the cytosolic chaperonin CCT: New hints for actin folding. Int J Biochem Cell Biol., 2010, 42, 641-50. IF: 4.759

19- Pagnozzi D., Birolo L., Leo G., Contessi S., Lippe G., Pucci P., Mavelli I.. Stoichiometry and Topology of the Complex of the Endogenous ATP Synthase Inhibitor Protein IF1 with Calmodulin. Biochemistry, 2010, 49, 7542–7552. IF: 3.249

20- Gabriella Leo, Gennaro Marino, Leila Birolo. La spettrometria di massa per l'analisi dei beni culturali. In "La diagnostica dei beni culturali. Moderne metodiche di indagine" Eds. Loghia Publishing and Research. 2009 pp 97-107

21- Leo G., Cartechini L., Pucci P., Sgamellotti A., Marino G., Birolo L.. Proteomic strategies for the identification of proteinaceous binders in paintings. Anal Bioanal Chem 2009, 395, 2269–2280. IF: 3.733