

Alessandro Aliverti- Curriculum

Education and Professional Activity

Alessandro Aliverti graduated in Biological Sciences in 1986 and obtained a PhD in Molecular and Cell Biology in 1990 at the University of Milano.

During 1989, he held a position as Research Associate at the Ludwig-Maximilians Universität of Munich (Germany).

From 1991 to 2004, he carried out research and teaching activities at the Dept. of General Biochemistry and Physiology, University of Milano, initially as Scientific Officer and then as Assistant Professor.

Since 2005, he holds a position of Associate Professor at the Dept. Biosciences, University of Milano. Alessandro Aliverti currently teaches "Chimica Biologica" (Biological Chemistry) for the first-level degree in Chimica (Chemistry), a teaching unit of "Advanced Enzymology" within the course of "Methods in Biochemical Investigation" for the Master Programme in Molecular and Cell Biology, and "Biochimica della Nutrizione" (Biochemistry of Nutrition) and a teaching unit of "Analisi dello Stato Nutrizionale" (Assessment of the Nutritional State) within the course of "Eco-Etologia della Nutrizione" (Eco-Ethology of Nutrition) for the Master Programme in Biologia Applicata alle Scienze della Nutrizione (Biology Applied to Nutrition Science).

Since 2014, Alessandro Aliverti is the Coordinator of the Master Programme in Biologia Applicata alle Scienze della Nutrizione (Biology Applied to Nutrition Science) and member of the Commissione Didattica (Teaching Commission) of the Department of Biosciences.

Alessandro Aliverti is a member of the Teaching Committee of PhD in Molecular and Cellular Biology.

Alessandro Aliverti has obtained the National Scientific Habilitation in the 2012 national competition for the position of Full Professor in General Biochemistry and Clinical Biochemistry (05/E1), with validity from 16/06/2014 to 16/06/2020.

Publications

(Publications from the Archivio Istituzionale della Ricerca)

- Caldarini, M., Sonar, P., Valpapuram, I., Tavella, D., Volonte, C., Pandini, V., Vanoni, M.A., Aliverti, A., Broglia, R.A., Tiana, G., and Cecconi, C. (2014) The complex folding behavior of HIV-1-protease monomer revealed by optical-tweezer single-molecule experiments and molecular-dynamics simulations. *Biophys. Chem.* 195, 32-42.
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- Sorrentino, L., Calogero, A.M., Pandini, V., Vanoni, M.A., Sevrioukova, I.F., and Aliverti, A. (2015) Key role of the adenylate moiety and integrity of the adenylate-binding site for the NAD⁺/H binding to mitochondrial apoptosis inducing factor. *Biochemistry* 54, 6996-7009.
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- Cartelli, D., Aliverti, A., Barbiroli, A., Santambrogio, C., Ragg, E.M., Casagrande, F.V., Cantele, F., Beltramone, S., Marangon, J., De Gregorio, C., Pandini, V., Emanuele, M., Chierigatti, E., Pieraccini, S., Holmqvist, S., Bubacco, L., Roybon, L., Pezzoli, G., Grandori, R., Arnal, I., and Cappelletti, G. (2016) α -Synuclein is a Novel Microtubule Dynamase. *Sci. Rep.* 6:33289.
- Piano, V., Nenci, S., Magnani, F., Aliverti, A., and Mattevi, A. (2016) Recombinant human dihydroxyacetonephosphate acyl-transferase characterization as an integral monotopic membrane protein. *Biochem. Biophys. Res. Commun.* 481, 51-58.
- Rösner, H.I., Caldarini, M., Prestel, A., Vanoni, M.A., Broglia, R.A., Aliverti, A., Tiana, G., and

- Kragelund, B.B. (2017) Cold denaturation of the HIV-1 protease monomer. *Biochemistry* **56**, 1029-1032.
- Dapiaggi, F., Pieraccini, S., Potenza, D., Vasile, F., Macut, H., Pellegrino, S., Aliverti, A. and Sironi, M. (2017) Computer aided design and NMR characterization of an oligopeptide targeting Ebola virus VP24 protein. *New J. Chem.* **41**, 4308-4315.
- Lodi, G., Pellegrini, L.A., Aliverti, A., Rivas Torres, B., Bernardi, M., Morbidelli, M., and Storti, G. (2017) Recovery of monosaccharides from lignocellulosic hydrolysates by ion exclusion chromatography. *J Chromatogr A* **1496**, 25-36.
- Sorrentino, L., Cossu, F., Milani, M., Aliverti, A., Mastrangelo, E. (2017) Structural bases of the altered catalytic properties of a pathogenic variant of apoptosis inducing factor. *Biochem. Biophys. Res. Commun.* **490**, 1011-1017.
- Kean, K.M., Carpenter, R.A., Pandini, V., Zanetti, G., Hall, A.R., Faber, R., Aliverti, A., Karplus, P.A. (2017) High resolution studies of hydride transfer in the ferredoxin:NADP⁺ reductase superfamily. *FEBS J.* **284**, 3302-3319.
- Rossi, E., Motta, S., Aliverti, A., Cossu, F., Gourlay, L., Mauri, P., Landini, P. (2017) Cellulose production is coupled to sensing of the pyrimidine biosynthetic pathway via c-di-GMP production by the DgcQ protein of *Escherichia coli*. *Environ. Microbiol.* **19**, 4551-4563.

Research topics

The scientific interests of Alessandro Aliverti span several areas of biochemistry and molecular biology, including enzymology of flavo- and iron-sulfur proteins, protein-protein interactions, characterization of protein targets for development of drugs against infective diseases, and study of the molecular bases of human degenerative illnesses affecting cardiovascular and nervous systems. His expertise combines a wide experience in protein biochemistry and enzyme kinetics, with a solid background in the technologies involved in recombinant protein production, purification and engineering.

To date, Alessandro Aliverti has coauthored 95 in-extenso publications in peer-reviewed international journals and as chapters in books.