

## Curriculum Vitae

*Francesco Massimo Lasorsa*

Name: Francesco Massimo Lasorsa.

Born: 04/02/1972 in Bari, Italy.

University education: 1996, graduated in Pharmacy with honors at the University of Bari,  
2000, Ph.D. degree in “Cellular biochemistry and cellular pharmacology”.

Actual position: permanent researcher at the Institute of Biomembrane and Bioenergetics of the Italian National Council of Research (IBBE – CNR) in Bari.

### Scientific career

Francesco Massimo Lasorsa obtained his Ph.D. in “Cellular biochemistry and cellular pharmacology” on february 2000 at the Department of Pharmaco-Biology, University of Studies of Bari.

He carried out his research activity at the Department of Pharmaco-Biology, also as technical assistant from 1999 to March 2001 and he is currently researcher of the Institute of Bioenergetics and Biomembranes, National Council of Research, Bari from March 2001.

Francesco Massimo Lasorsa performed his research also as visiting scientist in the following research institutes:

-) Institut für Physiologische Chemie, Physikalische Biochemie und Zellbiologie der Ludwig - Maximilians Universität Munich, Germany in the laboratories leded by Prof. Martin E. Klingenberg for the development of techniques for the functional reconstitution of membrane proteins in artificial membranes and fluorimetric methodologies.

-) Max-Planck Institut für Biophysik, Frankfurt am Main, Germany in the laboratories of Prof. Ernst Bamberg for the acquisition of biophysical techniques and for the study of electrogenic properties of membrane transporters in BLM (Black Lipid Membrane) e SSM (Solid Support Membrane);

-) Department of Experimental and Diagnostic Medicine, Section of General Pathology, University of Ferrara, Italy in the laboratories leded by Prof. Rosario Rizzuto for the accomplishment of methodologies in fluorescence microscopy and luminometry in culture cells and for the study of the role of  $Ca^{2+}$  in cellular and mitochondrial physiology.

-) Department of Cell Physiology and Metabolism, University Medical Centre, Geneva, Switzerland in the laboratories of Prof. Pierre Maechler for the study of the role of mitochondrial transporters in pancreatic insulin secretion.

### Research interests

- In vitro and in vivo studies of the function mitochondrial inner membrane transporters and peroxisomal membrane proteins in eukaryotic cells.
- Structural and evolutionistic analysis of genes encoding mitochondrial transporters and peroxisomal membrane proteins.
- Studies on the expression and subcellular localization of mitochondrial transporters and peroxisomal proteins in mammals and other eukaryotic organisms.
- Identification of new eukaryotic genes encoding the mitochondrial transporters and peroxisomal membrane proteins: cloning, over-expression in *E. coli* or *Saccharomyces cerevisiae*, purification and functional characterization of their gene product.
- Ca<sup>2+</sup> signaling transduction mechanisms in mitochondrial metabolism.
- Overexpression and silencing of human genes encoding members of mitochondrial carrier family in mammalian cell lines.
- Study of the role of mitochondrial transporters in pancreatic insulin secretion.
- Study of metabolic diseases caused by nuclear genes encoding mitochondrial transport proteins.

### Publications list

Wibom R, Lasorsa FM, Töhönen V, Barbaro M, Sterky FH, Kucinski T, Naess K, Jonsson M, Pierri CL, Palmieri F, Wedell A. (2009). AGC1 deficiency associated with global cerebral hypomyelination. (2009) *New England Journal of Medicine*, vol. 361; p. 489-95. Erratum in: *N Engl J Med.* ; vol 361; p. 731, ISSN: 0028-4793.

Casimir M, Lasorsa FM, Rubi B, Caille D, Palmieri F, Meda P, Maechler P. (2009). Mitochondrial glutamate carrier GC1 as a newly identified player in the control of glucose-stimulated insulin secretion. *The Journal of Biological Chemistry*, vol. 284; p. 25004-25014, ISSN: 0021-9258.

Laquintana V, Denora N, Musacchio T, Lasorsa FM, Latrofa A, Trapani G. (2009) Peripheral Benzodiazepine Receptor ligand-PLGA polymer conjugates potentially useful as delivery systems of apoptotic agents. *Journal of Controlled Release* vol. 137; p.185-95, ISSN: 0168-3659.

Lasorsa FM, Pinton P, Palmieri L, Scarcia P, Rottensteiner H, Rizzuto R, Palmieri F (2008). Peroxisomes as novel players in cell calcium homeostasis. *The Journal of Biological Chemistry*, vol. 283; p. 15300-15308, ISSN: 0021-9258.

Lasorsa FM, Pinton P, Scarcia P, Palmieri L, Rizzuto R, Palmieri F (2008). Role of peroxisomes in cell calcium homeostasis. In: *BBA - Bioenergetics / Supplement EBEC conference 2008*, vol. 1777,

p. S49.

Floyd S, Favre C, Lasorsa FM, Leahy M, Trigiant G, Stroebel P, Marx A, Loughran G, O'callaghan K, Marobbio CM, Slotboom DJ, Kunji ER, Palmieri F, O'connor R (2007). The insulin-like growth factor-I-mTOR signaling pathway induces the mitochondrial pyrimidine nucleotide carrier to promote cell growth. *Molecular Biology of the Cell*, vol. 18; p. 3545-3555, ISSN: 1059-1524.

Palmieri F, Agrimi G, Blanco E, Castegna A, Di Noia MA, Iacobazzi V, Lasorsa FM, Marobbio CM, Palmieri L, Scarcia P, Todisco S, Voza A, Walker JE (2006). Identification of mitochondrial carriers in *Saccharomyces cerevisiae* by transport assay of reconstituted recombinant proteins. *Biochimica et Biophysica Acta-Bioenergetics*, vol. 1757; p. 1249-1262, ISSN: 0005-2728.

Agrimi G, Di Noia MA, Marobbio CM, Fiermonte G, Lasorsa FM, Palmieri F (2004). Identification of the human mitochondrial S-adenosylmethionine transporter: bacterial expression, reconstitution, functional characterization and tissue distribution. *Biochemical Journal*, vol. 379; p. 183-190, ISSN: 0264-6021.

Fiermonte G, De Leonardis F, Todisco S, Palmieri L, Lasorsa FM, Palmieri F (2004). Identification of the human mitochondrial ATP-Mg/Pi transporter. In: *Biochimica et Biophysica Acta-Bioenergetics - Supplement S*, Amsterdam: Elsevier Science BV, vol. 1658, p. 191, ISBN/ISSN: 0005-2728.

Agrimi G, Marobbio CMT, Lasorsa FM, Di Noia MA, Fiermonte G, Palmieri F (2004). Identification of yeast and human mitochondrial S-adenosylmethionine transporters. In: *Biochimica et Biophysica Acta-Bioenergetics - Supplement S*, Amsterdam: Elsevier Science BV, vol. 1658, p. 190, ISBN/ISSN: 0005-2728.

Fiermonte G, De Leonardis F, Todisco S, Palmieri L, Lasorsa FM, Palmieri F (2004). Identification of the mitochondrial ATP-Mg/Pi transporter: Bacterial expression, reconstitution, functional characterization and tissue distribution. *The Journal of Biological Chemistry*, vol. 279; p. 30722-30730, ISSN: 0021-9258.

Lasorsa FM, Scarcia P, Erdmann R, Palmieri F, Rottensteiner H, Palmieri L (2004). The yeast peroxisomal adenine nucleotide transporter: characterization of two transport modes and involvement in DeltapH formation across peroxisomal membranes. *Biochemical Journal*, vol. 381; p. 581-585, ISSN: 0264-6021.

Lasorsa FM, Pinton P, Palmieri L, Fiermonte G, Rizzuto R, Palmieri F (2003). Recombinant expression of the Ca<sup>2+</sup>-sensitive aspartate/glutamate carrier increases mitochondrial ATP production in agonist-stimulated Chinese hamster ovary cells. *The Journal of Biological Chemistry*, vol. 278; p. 38686-38692, ISSN: 0021-9258.

Marobbio CMT, Agrimi G, Lasorsa FM (2003). Identification and functional reconstitution of yeast mitochondrial carrier for S-adenosylmethionine. *EMBO Journal*, vol. 22; p. 5975-5982, ISSN: 0261-4189.

Palmieri L, Pardo B, Lasorsa FM, Del Arco A, Kobayashi K, Iijima M, Runswick MJ, Walker JE, Saheki T, Satrustegui J, Palmieri F (2001). Citrin and Aralar1 are Ca(2+)-stimulated aspartate/glutamate transporters in mitochondria. *EMBO Journal*, vol. 20; p. 5060-5069, ISSN: 0261-4189.

Palmieri L, Lasorsa FM, Vozza A, Agrimi G, Fiermonte G, Runswick MJ, Walker JE, Palmieri F (2000). Identification and functions of new transporters in yeast mitochondria. *Biochimica et Biophysica Acta-Bioenergetics*, vol. 1459; p. 363-369, ISSN: 0005-2728.

Palmieri L, Lasorsa FM, Iacobazzi V, Palmieri F (2000). Identification of the mitochondrial carnitine carrier in *Saccharomyces cerevisiae*. In: *Italian Biochemical Society Transactions*, vol. 15, p. 93.

Lasorsa FM, Palmieri L, Iacobazzi V, Palmieri F (2000). Identification of the mitochondrial carnitine carrier in *Saccharomyces cerevisiae*. In: *Italian Biochemical Society Transactions*, vol. 16, p. 38.

Palmieri L, Lasorsa FM, Iacobazzi V, Runswick MJ, Palmieri F, Walker JE (1999). Identification of the mitochondrial carnitine carrier in *Saccharomyces cerevisiae*. *FEBS Letters*, vol. 462; p. 472-476, ISSN: 0014-5793.

Fiermonte G, Palmieri L, Dolce V, Lasorsa FM, Palmieri F, Runswick MJ Walker JE (1998). The Sequence, Bacterial Expression, and Functional Reconstitution of the Rat Mitochondrial Dicarboxylate Transporter cloned via Distant Homologs in Yeast and *Caenorhabditis elegans*. *The Journal of Biological Chemistry*, vol. 273; p. 24754-24759, ISSN: 0021-9258.

Palmieri L, Lasorsa FM, De Palma A, Vozza A, Palmisano A, Palmieri F (1998). *S. cerevisiae* ACR1 gene encodes a novel mitochondrial carrier essential for growth on ethanol or acetate. In: *Italian Biochemical Society Transactions*, vol. 11, p. 309.

Fiermonte G, Palmieri L, Dolce V, Lasorsa FM, Palmieri F (1998). Determination of the primary structure of the rat mitochondrial dicarboxylate transporter via distant homologues in yeast and *Caenorhabditis elegans*. In: *Italian Biochemical Society Transactions*, vol. 10, p. 130.

Palmieri L, Lasorsa FM, De Palma A, Palmieri F (1998). Identification of the yeast ACR1 gene product as a succinate-fumarate transporter essential for growth on ethanol or acetate. In: *Italian Biochemical Society Transactions*, vol. 10, p. 30.

Palmieri L, Lasorsa FM, De Palma A, Runswick MJ, Palmieri F, Walker JE (1997). Identification of the yeast ACR1 gene product as a succinate-fumarate transporter essential for growth on ethanol or acetate. *FEBS Letters*, vol. 417; p. 114-118, ISSN: 0014-5793