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Born in Naples 27.06.1965

ACADEMIC CAREER

- July 1990- Degree in Biological Sciences, University of Naples.
- June-August 1992- Fellowship at “ Biochemistry and Molecular Biology Laboratory of the Department of Fundamental Biology and Health Sciences”, University of Baleary Islands, Palma de Mallorca, Spain.
- January-November 1993- Fellowship at “Department of Internal Medicine III” Erasmus University, Medical School, Rotterdam, The Netherlands.
- December 1995- PhD in Physiology, University of Naples.
- 1996-2002- Researcher of Physiology (BIO-09) at the Faculty of MM.FF.NN. Sciences (now Department of Science and Technologies)- University of Sannio.
- December 1997-February 1998 and August-September 1998- Fellowships at “Department of Internal Medicine III” Erasmus University, Medical School, Rotterdam, The Netherlands.
- 2002- to now- Associate Professor of Physiology (BIO-09) at the Faculty of MM.FF.NN. Sciences (now Department of Science and Technologies)- University of Sannio.

ACADEMIC AND MANAGEMENT ROLES

- 2004-2007- Vice Director of the Department of Biological and Environmental Sciences (now Department of Science and Technologies), University of Sannio.
- December 2005-April 2010- President of the Biological Sciences Course, Faculty of MM.FF.NN. Sciences (now Department of Science and Technologies)- University of Sannio.
- 2010-2013-Vice Dean of the Faculty of MM.FF.NN. Sciences (now Department of Science and Technologies)- University of Sannio.
- January 2014 to now- President of the Biotechnology Course Department of Science and Technologies)- University of Sannio.
- January 2014 to now- President of the Science and Genetic Technologies Course Department of Science and Technologies)- University of Sannio.
- February 2011-September 2012: Member of the Statute Commission of University of Sannio.

SCIENTIFIC ACTIVITY

Author of more than 70 scientific publications on subjects of Physiology, Metabolism and Endocrinology. The research carried out is principally focused on regulation of energy metabolism at cellular/molecular level with a particular attention to the identification and characterization of mitochondrial functions in physiological and pathological state also via functional proteomic

approaches. Her skills are in the field of thyroid hormone effects on energy metabolism and their mechanisms of action.

Main Research Lines

- Biological effects of 3,5- diiodothyronine
- Effect of thyroid hormones on the proteome of rat liver and muscle
- Metabolic Homeostasis : cellular and molecular mechanisms and pathophysiological aspects related to lipid metabolism
- Mechanisms and molecular pathways involved in the hypocholesterolemic effect of thyroid hormones by reducing lipoprotein apo - B
- Molecular and Bioenergetic processes involved in ageing of rat skeletal muscle.
- Effect of ageing on systemic and peripheral thyroid hormone homeostasis and deiodinase activities.
- Uncoupling proteins and calorogenic effect of thyroid hormones

Regularly participating to the most important Italian Conferences in the field of Physiology. Invited speaker or keynote speaker in many international Conferences among which:

-Novembre 2005 Buenos Aires (Argentina)- Chair Person al 13th International Thyroid Congress "Action of iodothyronines on mitochondria" October 30th-November 4th, 2005.

-XIVth ANNUAL SYMPOSIUM OF THE DUTCH THYROID CLUB- "Biological effects of thyroid hormone metabolites: rT3 and 3,5-T2". Amsterdam, 20th February, 2009.

-35th ANNUAL MEETING OF THE EUROPEAN THYROID ASSOCIATION: "The effects of thyroid hormone on muscle metabolism via regulation of uncoupling protein 3". Krakow, 12 September 2011.

- 62th Italian Society of Physiology- Simposium: Systems and mechanisms involved in metabolic homeostasis: physiology and patho-physiology of fat handling. "3,5-diiiodothyronine, a naturally occurring thyroid hormone derivative, as a novel lipid-lowering agent". Sorrento, 26th September 2011.

Prizes and Patents

2-4 July 2006 - The Italian Proteomic Association, 1st ANNUAL NATIONAL CONGRESS "Proteomics: deciphering the phenotype", Pisa, Italy.

2007-Inventor of a patent titled "COMPOSIZIONI COMPREDENTI LA 3,5-DIIODOTIRONINA ED USO FARMACEUTICO DI ESSE" N.0001343549, 2007. CLASSIFIC A61K3100.

MEMBERSHIPS OF SCIENTIFIC AND CULTURAL SOCIETIES

From 2007 is a member of the Editorial Board of the international journal Immunology, Endocrine & Metabolic Agents in Medicinal Chemistry.

From 2013 is Associate Editor of the Journals: *Frontiers in Thyroid Endocrinology* and *Frontiers in Physiology*.

She is member of the Italian Society of Physiology and Honorary member of the European Thyroid Association (ETA).

International partnerships:

- Dr. Visser TJ, Erasmus University, The Netherlands
- Dr. Ira J Goldberg, Department of Medicine Preventive Medicine & Nutrition, Columbia University, NY.
- Dr. Scanlan, Thomas S, Dept. of Physiology and Pharmacology, Oregon Health Sciences University, Portland, OR, United States
- Dr. Ehrenkranz J, Medicine, Intermountain Healthcare, Murray, UT, United States.
- Dr. Villarroya F, University of Barcelona, Spain
- Dr. Roca P, Universitat de les Illes Balears, Palma de Mallorca, Spain
- Dr. Diano S, Yale University
- Dr. Larsen PR, Boston University
- Dr. M.D. Brand: Cambridge University (UK)
- Dr. D. Ricquier: CNRSF Paris (France)
- Dr. S. Alexson : Karolinska University, Stockholm (Sweden)
- Dr. J.P. Giacobino: University of Geneve (Switzerland)
- Dr. A. Palou: University of Balears (Spain)
- Clinical research, Torrent Research Centre, Torrent Pharmaceuticals Ltd., Gujarat, India.

EVALUATOR AND REFEREE ACTIVITY

She is reviewer from several international journals among which those from the “Endocrine Society” (*Endocrinology*, *Molecular Endocrinology*, *Journal Clinical Endocrinology and Metabolism*, *J of Endocrinology*), *Journals of Physiology and Biochemistry* (*Journal of Physiology*, *Biochem Biophys Acta*, *FEBS Letters*). Evaluator of PRIN, FIRB and VQR.

PARTICIPATION TO COMMISSIONS AND DOCTORATE BOARDS

Member of the Board of the Doctorate School in Life and Environmental Sciences, University of Sannio.

Since 2014: Member of the Board of the Doctorate School in Science and Technologies of Environment and Health, University of Sannio.

Supervisor of 2 PhD theses.

She has been a member of the Commission for the Thesis defence of the Doctorate School in Biological processes and biomolecules (Second University of Naples) and of the Doctorate School in Applied Biology (University of Naples “Federico II”). She has been a member of the National Commission to evaluate candidates to the position of researcher at University of Bari, University of Bologna and University of Naples “Federico II”. She has supervised more than 60 Bachelor and Master theses.

TEACHING ACTIVITY

Since 1999 she is teaching the Physiology Courses for the Bachelor Degree in Biological Sciences, Biotechnology, and Physiology Courses for the Master Degree in Biology and in Science and Genetic Technologies.

1999-2000 to AA 2009-2010: teaching in General Endocrinology

2001-2002 to 2009-2010: teaching in Cellular Physiology

2003-2004 to 2010-2011: teaching in Physiology of Nutrition

2005-2006 to 2012-2013: teaching in Endocrine Physiopathology

2007-2008: teaching in Molecular Physiology

2010-2011 up to now: teaching in General Physiology and Human Physiology

FUND RAISING AND COORDINATION OF RESEARCH PROGRAMS

PRIN 2003: “Adaptative mechanisms in the modulation of energy metabolism in skeletal muscle”.

SELECTED PUBLICATIONS (2005-2015)

COPPOLA M, GLINNI D, MORENO M, CIOFFI F, SILVESTRI E, GOGLIA F (2014) Thyroid hormone analogues and derivatives: Actions in fatty liver. *WORLD J HEPATOL.* 6(3):114-29. Review.

DE LANGE P, CIOFFI F, SILVESTRI E, MORENO M, GOGLIA F, LANNI A (2013). (Healthy) ageing: focus on iodothyronines. *INT J MOL SCI.* 14(7):13873-92. Review.

SILVESTRI E, GLINNI D, CIOFFI F, MORENO M, LOMBARDI A, DE LANGE P, SENESE R, CECCARELLI M, SALZANO AM, SCALONI A, LANNI A, GOGLIA F (2012). Metabolic effects of the iodothyronine functional analogue TRC150094 on the liver and skeletal muscle of high-fat diet fed overweight rats: an integrated proteomic study. *MOLECULAR BIOSYSTEMS.* 8: 1987-2000.

DEL VISCOVO A, SECONDO A, ESPOSITO A, GOGLIA F, MORENO M, CANZONIERO LM (2012). Intracellular and plasma membrane-initiated pathways involved in the $[Ca^{2+}]_i$ elevations induced by iodothyronines (T3 and T2) in pituitary GH3 cells. *AMERICAN JOURNAL OF PHYSIOLOGY: ENDOCRINOLOGY AND METABOLISM.* 302: 1419-1430.

LOMBARDI A, DE MATTEIS R, MORENO M, NAPOLITANO L, BUSIELLO RA, SENESE R, DE LANGE P, LANNI A, GOGLIA F. (2012). Responses of skeletal muscle lipid metabolism in rat gastrocnemius to hypothyroidism and iodothyronine administration: a putative role for FAT/CD36. *AMERICAN JOURNAL OF PHYSIOLOGY: ENDOCRINOLOGY AND METABOLISM.* 303: E1222-33.

SILVESTRI E, LOMBARDI A, DE LANGE P, GLINNI D, SENESE R, CIOFFI F, LANNI A, GOGLIA F, MORENO M (2011). Studies of Complex Biological Systems with Applications to Molecular Medicine: the Need to Integrate Transcriptomic and Proteomic Approaches. *JOURNAL OF BIOMEDICINE AND BIOTECHNOLOGY,* 2011:810242. Review

SENESE R, VALLI V, MORENO M, LOMBARDI A, BUSIELLO RA, CIOFFI F, SILVESTRI E, GOGLIA F, LANNI A, DE LANGE P (2011). Uncoupling protein 3 expression levels influence insulin sensitivity, fatty acid oxidation, and related signaling pathways. *PFLUGERS ARCHIV.* 461: 153-164

DE LANGE P, CIOFFI F, SENESE R, MORENO M, LOMBARDI A, SILVESTRI E, DE MATTEIS R, LIONETTI L, MOLLICA MP, GOGLIA F, LANNI A. (2011). Nonthyrotoxic prevention of diet-induced insulin resistance by 3,5-diiodo-L-thyronine in rats. *DIABETES.* 60: 2730-2739

MORENO M, SILVESTRI E, DE MATTEIS R, DE LANGE P, LOMBARDI A, GLINNI D, SENESE R, CIOFFI F, SALZANO AM, SCALONI A, LANNI A, GOGLIA F. (2011). 3,5-Diiodo-L-thyronine prevents high-fat-diet-induced insulin resistance in rat skeletal muscle through metabolic and structural adaptations. *FASEB JOURNAL*. 25: 3312-3324

ANTONELLI A, FALLAHI P, FERRARI SM, DI DOMENICANTONIO A, MORENO M, LANNI A, GOGLIA F (2011). 3,5-diiodo-L-thyronine increases resting metabolic rate and reduces body weight without undesirable side effects. *JOURNAL OF BIOLOGICAL REGULATORS & HOMEOSTATIC AGENTS*. 60: 2730-2739

SILVESTRI E, LOMBARDI A, GLINNI D, SENESE R, CIOFFI F, LANNI A, GOGLIA F, MORENO M, DE LANGE P (2011). Mammalian mitochondrial proteome and its functions: current investigative techniques and future perspectives on ageing and diabetes. *JOURNAL OF INTEGRATED OMICS Review*

MORENO M, LOMBARDI A, SILVESTRI E, SENESE R, CIOFFI F, GOGLIA F, LANNI A, DE LANGE P (2010). PPARs: nuclear receptors controlled by, and controlling, nutrient handling through nuclear and cytosolic signaling. *PPAR RESEARCH*, ISSN: 1687-4757 Review

SILVESTRI E, CIOFFI F, GLINNI D, CECCARELLI M, LOMBARDI A, DE LANGE P, CHAMBERY A, SEVERINO V, LANNI A, GOGLIA F, MORENO M (2010). Pathways affected by 3,5-diiodo-L-thyronine in liver of high fat-fed rats: evidence from two-dimensional electrophoresis, Blue-Native PAGE, and mass spectrometry. *MOLECULAR BIOSYSTEMS*.. 6: 2256-2271.

CIOFFI F, ZAMBAD SP, CHHIPA L, SENESE R, BUSIELLO RA, TULI D, MUNSHI S, MORENO M, LOMBARDI A, GUPTA RC, CHAUTHAIWALE V, DUTT C, DE LANGE P, SILVESTRI E, LANNI A, GOGLIA F (2010). TRC150094, a novel functional analogue of iodothyronines, reduces adiposity by increasing energy expenditure and fatty acid oxidation in rats receiving a high-fat diet. *FASEB JOURNAL*. 24: 3451-3461

LOMBARDI A, BUSIELLO R.A, NAPOLITANO L, CIOFFI F, MORENO M, DE LANGE P, SILVESTRI E, LANNI A, GOGLIA F (2010). Uncoupling protein-3 (UCP3) translocates lipid hydroperoxide and mediates lipid hydroperoxide-dependent mitochondrial uncoupling. *THE JOURNAL OF BIOLOGICAL CHEMISTRY*. 285: 16599-16605

CIAVARDELLI D, SILVESTRI E, VISCOVO A, BOMBA M, GREGORIO DD, MORENO M, DI ILIO C, GOGLIA F, CANZONIERO LM, SENSI SL. (2010). Alterations of brain and cerebellar proteomes linked to A β and tau pathology in a female triple-transgenic murine model of Alzheimer's disease. . *CELL DEATH & DISEASE*. 1:e90, ISSN: 2041-4889

MOLLICA MP, LIONETTI L, MORENO M, LOMBARDI A, DE LANGE P, LANNI A, BARLETTA A, GOGLIA F (2009). 3,5-diiodo-L-thyronine, by modulating mitochondrial functions, reverses hepatic fat accumulation in rats fed a high-fat diet. *JOURNAL OF HEPATOLOGY*.. 51: 363-370

LOMBARDI A, DE LANGE P, SILVESTRI E, BUSIELLO RA, LANNI A, GOGLIA F, MORENO M (2009). 3,5-diiodo-L-thyronine rapidly enhances mitochondrial fatty acid oxidation rate and thermogenesis in rat skeletal muscle: AMP-activated protein kinase involvement. *AMERICAN JOURNAL OF PHYSIOLOGY: ENDOCRINOLOGY AND METABOLISM*. 296:E497-E502

TALEUX N, GUIGAS B, DUBOCHAUD H, MORENO M, WEITEL J, HUE L, GOGLIA F, FAVIER R, LEVERVE XM (2009). High expression of thyroid hormone receptors and mitochondrial glycerol-3-phosphate dehydrogenase in the liver is linked to enhanced fatty acid oxidation in Lou/C rat strain resistant to obesity. *THE JOURNAL OF BIOLOGICAL CHEMISTRY*. 284: 4308-4316

LOMBARDI A, SILVESTRI E, MAINIERI D, LANNI A, GOGLIA F, DE LANGE P, MORENO M (2009). Defining the transcriptomic profile of rat ageing skeletal muscle using cDNA array, 2D- and Blue Native-PAGE. *JOURNAL OF PROTEOMICS*. 72:708-721

VALLE A, SILVESTRI E, MORENO M, CHAMBERY A, OLIVER J, ROCA P, GOGLIA F (2008). Combined effect of gender and caloric restriction on liver proteomic expression profile. *JOURNAL OF PROTEOME RESEARCH*. 7: 2872-2881

MORENO M, DE LANGE P, LOMBARDI A, SILVESTRI E, LANNI A, GOGLIA F (2008). Metabolic effects of thyroid hormone derivatives. *THYROID*. 18: 239-253.

LOMBARDI A, GRASSO P, MORENO M, DE LANGE P, SILVESTRI E, LANNI A, GOGLIA F (2008). Interrelated influence of superoxides and free fatty acids over mitochondrial uncoupling in skeletal muscle. *BIOCHIMICA ET BIOPHYSICA ACTA*. 1777: 826-833.

SILVESTRI E, LOMBARDI A, DE LANGE P, SCHIAVO L, LANNI A, GOGLIA F, VISSER T.J, MORENO M (2008). Age-related changes in renal and hepatic cellular mechanisms associated with variations in rat serum thyroid hormone levels. *AMERICAN JOURNAL OF PHYSIOLOGY*. 294: E1160-E1168

DE LANGE P, SENESE R, CIOFFI F, MORENO M, LOMBARDI A, SILVESTRI E, GOGLIA F, LANNI A (2008). Rapid activation by 3,5,3'-triiodothyronine of adenosine-5'-monophosphate-activated protein kinase/acetyl-coenzyme A carboxylase and AKT/protein kinase B signaling pathways: relation to changes in fuel metabolism and myosin heavy-chain protein content in rat gastrocnemius muscle in vivo. *ENDOCRINOLOGY*. 149: 6462-6470

DE LANGE P, LOMBARDI A, SILVESTRI E, GOGLIA F, LANNI A, MORENO M (2008). Peroxisome proliferator-activated receptor delta: a conserved director of lipid homeostasis through regulation of the oxidative capacity of muscle. *PPAR RESEARCH*. 2008:172676-172682 Review

SILVESTRI E, LOMBARDI A, DE LANGE P, LANNI A, GOGLIA F, MORENO M (2008). Metabolic action of thyroid hormones: insights from functional and proteomic studies. *CURRENT PROTEOMICS*. 5:45-61 Review

CALAMITA G, MORENO M, FERRI D, SILVESTRI E, ROBERTI P, SCHIAVO L, GENA P, SVELTO M, GOGLIA F (2007). Triiodothyronine modulates the expression of aquaporin 8 in rat liver mitochondria. *JOURNAL OF ENDOCRINOLOGY*. 192: 111-120

SILVESTRI E, BURRONE L, DE LANGE P, LOMBARDI A, FARINA P, CHAMBERY A, PARENTE A, LANNI A, GOGLIA F, MORENO M (2007). Thyroid-state influence on protein-expression profile of rat skeletal muscle. *JOURNAL OF PROTEOME RESEARCH*. 6: 3187-3196

DE LANGE P, FEOLA A, RAGNI M, SENESE R, MORENO M, LOMBARDI A, SILVESTRI E, AMAT R, VILLARROYA F, GOGLIA F, LANNI A (2007). Differential 3,5,3'-triiodothyronine-mediated regulation of uncoupling protein 3 transcription: role of Fatty acids. *ENDOCRINOLOGY*. 148: 4064-4072

DE LANGE P, MORENO M, SILVESTRI E, LOMBARDI A, GOGLIA F, LANNI A (2007). Fuel economy in food-deprived skeletal muscle: signaling pathways and regulatory mechanisms. *FASEB JOURNAL*. 21:3431-3441 Review

DE LANGE P, FARINA P, MORENO M, RAGNI M, LOMBARDI A, SILVESTRI E, BURRONE L, LANNI A, GOGLIA F (2007). Sequential changes in the signal transduction responses of skeletal muscle following food deprivation. *FASEB JOURNAL*. 21(2):629.

LOMBARDI A, LANNI A, DE LANGE P, SILVESTRI E, GRASSO P, SENESE R, GOGLIA F, MORENO M (2007). Acute administration of 3,5-diiido-L-thyronine to hypothyroid rats affects bioenergetic parameters in rat skeletal muscle mitochondria. *FEBS LETTERS*. 581: 5911-5916

SILVESTRI E, DE LANGE P, MORENO M, LOMBARDI A, RAGNI M, FEOLA A, SCHIAVO L, GOGLIA F, LANNI A (2006). Fenofibrate activates the biochemical pathways and the de novo expression of genes related to lipid handling and uncoupling protein-3 functions in liver of normal rats. *BIOCHIMICA ET BIOPHYSICA ACTA*. 1757: 486-495

SILVESTRI E, MORENO M, SCHIAVO L, DE LANGE P, LOMBARDI A, CHAMBERY A, PARENTE A, LANNI A, GOGLIA F (2006). A proteomics approach to identify protein expression changes in rat liver following administration of 3,5,3'-triiodo-L-thyronine. *JOURNAL OF PROTEOME RESEARCH*.. 5: 2317-2327.

LOMBARDI A, LANNI A, SILVESTRI E, DE LANGE P, GOGLIA F, MORENO M (2006). 3,5-diiodothyronine: biological actions and therapeutic perspectives. In: *CURRENT MEDICINAL CHEMISTRY, IMMUNOLOGY, ENDOCRINE & METABOLIC AGENTS*. 6: 255-266, Bentham Science Publishers

SILVESTRI E, MORENO M, LOMBARDI A, RAGNI M, DE LANGE P, ALEXSON SEH, LANNI A, GOGLIA F (2005). Thyroid-hormone effects on putative biochemical pathways involved in UCP3 activation in rat skeletal muscle mitochondria. *FEBS LETTERS*.. 579:1639-1645

LANNI A, MORENO M, LOMBARDI A, DE LANGE P, SILVESTRI E, RAGNI M, FARINA P, BACCARI CHIEFFI G, FALLAHI P, ANTONELLI A, GOGLIA F (2005). 3,5-diiodo-L-thyronine powerfully reduces adiposity in rats by increasing the burning of fats. *FASEB JOURNAL*. 19(11):1552-4

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