

# Curriculum Vitae

**Prof. Domenico Salvatore**

## Current position

Associate Professor of Endocrinology, Department of Molecular and Clinical Endocrinology, University of Naples "Federico II", Naples, Italy

## Education and training

Year(s)	Institution	Degree	Field
1991	University of Naples "Federico II", Italy	MD degree "Cum laude"	Medicine
11 December 1996	University of Naples "Federico II", Italy	Ph.D. degree	Molecular endocrinology
12 October 2000	University of Naples "Federico II", Italy	Residency in Endocrinology	Clinical endocrinology

## Academic positions

- 2001 Researcher, Department of Molecular and Cellular Endocrinology and Oncology, University of Naples "Federico II", Italy.  
Main activities and responsibilities: Person responsible for and Coordinator of the Laboratory of Molecular Endocrinology. This activity includes supervising a research team of 6 people, two of whom are research students.
- 2002 Assistant Professor, Department of Molecular and Cellular Endocrinology and Oncology, University of Naples "Federico II", Italy.
- 2008 Associate Professor in Endocrinology  
Main activities and responsibilities: Teaching activities for both undergraduate and graduate courses, supervising undergraduates' degree theses, teaching at the Schools of Specialization in Endocrinology and Metabolic Diseases, and in Clinical Biochemistry. 80% of my time is devoted to research and teaching activities and 20% to clinical activity.

## Relevant scientific and academic experiences

- 2000 Research Associate, Thyroid Division (Dr. P.R. Larsen), Brigham and Women's Hospital, Harvard Medical School. (Scholarship awarded: Short term mobility international program, 2000 CNR)
- 1993-1996 Postdoctoral Fellow in the Thyroid Division (Dr. P. R. Larsen), Brigham and Women's Hospital, Harvard Medical School.
- 1991-1993 Postdoctoral Fellow (MD) in the laboratory of Prof. M. Santoro, Department of General Pathology, University of Naples, Federico II. Italy
- 1992 Visiting Fellow, Thyroid Division (Dr. P.R. Larsen), Brigham and Women's Hospital, Harvard Medical School
- 1988, 1989 Summer student, Laboratory of Cell Biology, directed by Dr. E. Appella. National Cancer Institute, National Institutes of Health, Bethesda, MD.
- and 1990
- 2011 100% at the ICH-GCP training

### **Editorial Board Membership**

2010 Editor in Chief *Frontiers in Thyroid Endocrinology*

2009 Senior Associate Editor *Journal of Endocrinology* official journal of the English Society of Endocrinology

2008 Editorial Board Member of *Hot Thyroidology*, official journal of the European Thyroid Association

2008/2011 Editorial Board Member of *Endocrinology*, official journal of the Endocrine Society

2013-2015 : Editorial Board Member “**Thyroid**” official journal ATA

**Services as reviewer:** Regularly acts as expert reviewer for the following international journals: *Endocrine Reviews*, *Journal of Biological Chemistry*, *Cancer Research*, *Endocrine Related Cancer*, *Gene*, *Clinical Endocrinology*, *European Journal of Endocrinology*, *Journal of Endocrinological Investigation*,; *Brain Research*, *European Journal of Cancer*, and *Journal of Cell Physiology*.

### **Membership of Scientific Societies**

Member of the Endocrine Society, American Thyroid Association, European Thyroid Association and of the Italian Society of Endocrinology.

2003-07 Member elected of the Scientific Committee of the Italian Society of Endocrinology

2008 President elect of the Regional Board of the Italian Society of Endocrinology

### **Most relevant publications (max 15)**

1. D. Salvatore, S.C. Low, M. Berry, A.L. Maia, J. Harney, W. Croteau, D. St. Germain, and P.R. Larsen. Type 3 iodothyronine deiodinase cloning, in vitro expression, and functional analysis of the placental selenoenzyme. *Journal of Clinical Investigation*. 1995, 96. 2421-2430
2. Deiodinase is Highly Expressed in Human Thyroid. *Journal Clinical Investigations* 1996, 98 (4) 962-968
3. D. Salvatore, T. Bartha and P.R. Larsen. The guanosine monophosphate reductase gene is conserved in rats and its expression increases rapidly in brown adipose tissue during cold exposure. *J Biol Chem*. 1998, 20; 273 (47):31092-6
4. D.Salvatore, MV. Barone, G. Salvatore, RM Melillo, G. Chiappetta, A. Mineo, G. Fenzi, G. Vecchio, A. Fusco and M. Santoro. Tyrosines 1015 and 1062 are in vivo auto-phosphorylation site in Ret and Ret-derived oncoproteins. *J Clin Endocrinol Metab*.2000, Oct; 85 (10) : 3898-907.
5. D. Salvatore, B. Gereben, J.W. Harney, H Tu and P.R. Larsen. The human, but not the rat, *dio2* gene is stimulated by thyroid transcription factor –I (TTF-I). *Mol Endocrinol* 2001 Jan;15(1):112-24
6. D. Salvatore, RM Melillo, C. Monaco, R. Visconti, G. Fenzi, G. Vecchio, A. Fusco, and M. Santoro. Increased *in-vivo* phosphorylation of Ret tyrosine 1062 is a potential pathogenetic mechanism of multiple endocrine neoplasia type 2B. *Cancer Research* . 2001 Feb 15;61(4):1426-31.
7. Dentice M, Morisco C, Vitale M, Rossi G, Fenzi G, Salvatore D. The different cardiac expression of the type 2 iodothyronine deiodinase gene between human and rat is related to the differential response of the *dio2* genes to Nkx-2.5 and GATA-4 transcription factors. *Mol Endocrinol*. 2003 Aug;17(8):1508-21.

8. Dentice M, Luongo C, Elefante A, Romino R, Ambrosio R, Vitale M, Rossi G, Fenzi G, [Salvatore D](#). Transcription factor Nkx-2.5 induces sodium/iodide symporter gene expression and participates in retinoic acid- and lactation-induced transcription in mammary cells. *Mol Cell Biol*, 24:7863-77, 2004
9. Dentice, M, C. Luongo, A. Elefante, R. Ambrosio, S. Salzano, M. Zannini, R. Nitsch, R. Di Lauro, G. Rossi, G. Fenzi, [D. Salvatore](#). Pendrin is a Novel In Vivo Downstream Target Gene of the TTF-1/Nkx-2.1 Homeodomain Transcription Factor in Differentiated Thyroid Cells. *Mol Cell Biol*, 25:10171-182, 2005
10. Dentice M, Luongo C, Huang S, Ambrosio R, Elefante A, Mirebeau-Prunier D, Zavacki AM, Fenzi G, Grachtchouk M, Dlugosz A, Missero C, Bianco AC, Larsen PR, [Salvatore D](#). "Sonic hedgehog-induced type 3 deiodinase blocks thyroid hormone action thereby enhancing proliferation of normal and malignant keratinocytes". *Proc Natl Acad Sci U S A*. 2007 Sep 4;104(36):14466-71.
11. Ferone G, Mollo MR, Thomason HA, Antonini D, Zhou H, Ambrosio R, [Salvatore D](#), Getsios S, van Bokhoven H, Dixon J, Missero C. p63 control of desmosome gene expression and adhesion is compromised in AEC syndrome. [Hum Mol Genet](#). 2012 Oct 29
12. [Salvatore D](#), Simonides WS, Dentice M, Zavacki AM, Larsen PR. Thyroid hormones and skeletal muscle--new insights and potential implications. [Nat Rev Endocrinol](#). 2014 Apr;10(4):206-14
13. Darius K.L. Aw, B.S., Rohit A. Sinha, Hong C. Tan, [D. Salvatore](#) and P.M. Yen. Studies of molecular mechanisms associated with increased deiodinase 3 expression in a case of consumptive hypothyroidism. *J Clin Endocrinol Metab*. 2014 Nov;99(11):3965-71
14. Luongo C, Martin C, Vella K, Marsili A, Ambrosio R, Dentice M, Harney JW, [Salvatore D](#), Marie Zavacki A, Reed Larsen P. The selective loss of the Type 2 iodothyronine deiodinase in mouse thyrotrophs increases basal TSH but blunts the thyrotropin response to hypothyroidism. [Endocrinology](#). 2014 Dec 2;en20141698
15. Dentice M, Ambrosio R, Damiano V, Sibilio A, Luongo C, Guardiola O, Yennek S, Zordan P, Minchiotti G, Colao A, Marsili A, Brunelli S, Del Vecchio L, Larsen PR, Tajbakhsh S, [Salvatore D](#). [Intracellular inactivation of thyroid hormone is a survival mechanism for muscle stem cell proliferation and lineage progression](#). [Cell Metab](#). 2014 Dec 2;20(6):1038-48

**Invited presentations to peer-reviewed, internationally established conferences**

- 2010 "Thyroid hormone deiodinases and cancer" Invited speaker 59th Annual Meeting of The British Thyroid Association, London, 7 October 2010.
- 2010 "Peripheral thyroid hormone metabolism: local actions with systemic consequences" Invited speaker. XXX National Congress of the Italian Society of Pathology. Salerno, October 14-17.

- 2010 “Intracellular thyroid hormone activation and inactivation by deiodinases” Invited speaker. International Thyroid Congress, Paris, 11-16 September.
- 2010 “Type 3 deiodinase and cancer” Invited Speaker, Dutch Thyroid Club Meeting, Amsterdam, May 5.2010
- 2010 Symposium title “Thyroid Hormone Metabolism” Invited Speaker, International Congress of Endocrinology March 2010, Kyoto, Japan.
- 2009 “Upregulation of D3 in malignancy” Invited Speaker 34th Annual Meeting of the European Thyroid Association, 5-9 September 2009 Lisbon.
- 2009 “The Role of Type 3 Deiodinase in cancer” Invited Speaker “11<sup>th</sup> European Congress of Endocrinology 25-29 April, 2009” Istanbul, Turkey.
- 2008 Chair Person at 10<sup>th</sup> European Congress of Endocrinology. 3-7 May 2008. .”The TGF-B superfamily “ Berlin . Germany”
- 2008 Symposium title: Thyroid and heart: a lifelong intimate relationship. Invited Speaker “Endocrine society Meeting”, San Francisco, USA
- 2007 "The role of thyroid hormones in tumorigenesis and development of epithelial cells” Invited lecture Department of Physiopathology University of Florence, Italy.
- 2007 “Shh signaling and control of thyroid status” - 6/7/2007 Invited lecture Department of Molecular and cellular biology and pathology, University of Naples Federico II.
- 2006 “Nis and Gene Therapy”. 30° Giornate Italiane della Tiroide, Turin, Italy.
- 2005 “Thyroid hormone deiodinases”, Jubilee Meeting of the European Thyroid Association. Athens, Greece.
- 2003 Seminar: “Regulation of NIS expression in mammary gland”. Thyroid Division, Brigham and Women’s Hospital, Harvard Medical School, Boston.
- 2003 “Hyperthyroidism during pregnancy”: Meet-the-expert. 30° Congress of the Italian Society of Endocrinology, Milan, Italy

**Principal Investigator in the following Multicenter Clinical Studies:**

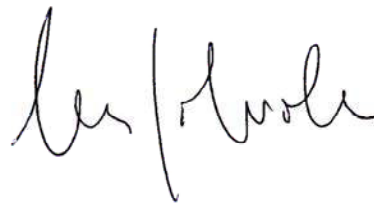
1. “Multicentre, controlled, randomised, open-label,cross-over clinical study of the efficacy and tolerability of L-thyroxine (T4) soft capsules, in comparison to L-thyroxine tablets, in thyroidectomised patients” Protocol nr. 05ICHF/T407- EUDRACT Nr: 2006-002614-36 Sponsor: ISPharm- IBSA Institut Biochimique SA
2. “A Phase II, open-label study to assess the efficacy and tolerability of ZD6474 100 mg monotherapy in subjects with locally advanced or metastatic hereditary medullary thyroid cancer.” Protocol N.D4200C00068 Sponsor: Astra Zeneca International
3. An International, Phase II, randomized, double-blinded, placebo-controlled, multi-canter study to assess the efficacy of ZD6474 (ZACTIMA™) versus placebo in subjects with unresectable locally advanced or metastatic medullary thyroid cancer D4200C00058. Sponsor: Astra Zeneca International
4. “An International, Randomized, Double-Blinded, Phase 3 Efficacy Study of XL184 versus Placebo in Subjects with Unresectable, Locally Advanced, or Metastatic Medullary Thyroid Cancer”. Protocol Number XL184-301. Sponsor: Exelixis, Inc
5. E7080 “Re: E7080-G000-201: Phase II, Multicenter, Open-label, Single Arm Trial to Evaluate the Safety and Efficacy of Oral E7080 in Medullary and Iodine-131 Refractory, Unresectable Differentiated Thyroid Cancers,

Stratified by Histology. Sponsor: Eisai Limited, London

6. E7080 “Re E7080-G000-303: Phase III. A Multicenter, Randomized, Double-Blind, Placebo-Controlled, Phase 3 Trial of E7080 in 131I-Refractory Differentiated Thyroid Cancer Sponsor: Eisai Limited, London
7. AstraZeneca Protocol D4200C00097. An International, Randomised, Double-blind, Two-Arm Study to Evaluate the Safety and Efficacy of Vandetanib 150 and 300 mg/day in Patients with Unresectable and Locally Advanced or Metastatic Medullary Thyroid Carcinoma with Progressive or Symptomatic Disease. Sponsor: AstraZeneca International
8. EORTC study 1209 “A phase II study exploring the safety and efficacy of nintedanib (BIBF1120) as second line therapy for patients with either differentiated or medullary thyroid cancer progressing after first line therapy”. Sponsor: Boehringer Ingelheim Pharma. GmbH & Co.KG.

#### **Prizes and Awards**

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|------|----------------------------------------------------------------------------------------------|
| 1997 | Short-term mobility fellowship CNR (Consiglio Nazionale delle Ricerche).                     |
| 1998 | Short-term mobility fellowship CNR (Consiglio Nazionale delle Ricerche).                     |
| 2001 | “Conti 2001” Award, from the Endocrine Italian Association.                                  |
| 2010 | International Prize on “Thyroid Research” June 2012 by the Italian President “G. Napolitano” |



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