CURRICULUM VITAE - Caterina Missero

Current position Professor of Molecular Biology
Department of Biology - University of Naples Federico II
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Education and Professional Experience:

1989 **Laurea cum laude** in Biology, University of Trieste, Italy.

1989-1992 **Postdoctoral Fellow** at the Department of Pathology, School of Medicine, Yale University, New Haven, CT, USA.

1992-1993 **Research Scientist** at the Department of Pathology, School of Medicine, Yale University, New Haven, CT, USA.

1993-1996 **Research Scientist** at the Cutaneous Biology Research Center (CBRC), Department of Dermatology, Mass. Gen. Hospital, Charlestown, MA, USA.

1993-1996 **Instructor in Dermatology** at the Harvard Medical School, Boston, MA, USA.

1996-2000 **Research Scientist** in Biochemistry and Molecular Biology, Stazione Zoologica "A.Dohrn", Naples, Italy.

8-9/1998 **Visiting Scientist,** at the CBRC, Massachusetts General Hospital, Harvard Medical School, Charlestown, MA, USA.

8/1999 **Visiting Scientist** at the CBRC, Massachusetts General Hospital, Harvard Medical School, Charlestown, MA, USA.

8-9/2000 **Visiting Scientist** at the CBRC, Massachusetts General Hospital, Harvard Medical School, Charlestown, MA, USA.

10/00-5/2006 **Group Leader** at the Telethon Institute of Genetics and Medicine (TIGEM), Naples, Italy.

6/2006-to present **Group Leader** at the Center for Genetic Engineering (CEINGE), Naples, Italy.

1/2014 to 11/2016 **Associate Professor of Molecular Biology**, Department of Biology - University of Naples Federico II

12/2016 to present **Professor of Molecular Biology**, Department of Biology - University of Naples Federico II

2018 to present **Supervisor of the Advanced Light Microscopy Facility** (CEINGE - https://www.ceinge.unina.it/en/advanced-light-microscopy-alm-facility)

Patents, Committees and Reviewing Panels:

2008 International patent WO 2008140713 A1 - Methods and products for treating proliferative disorders**.** BWH Division of Endocrinology, Dept. of Medicine. P.Reed Larsen, Antonio Bianco, Domenico Salvatore, Caterina Missero, Monica Dentice.

Reviewing panel for the Fifth and Sixth Framework Programme, Life Science: Genomic and Biotechnology for Health

Reviewing Panels: European Research Council, the MRC UK, BBSRC UK, the Swiss National Science Foundation, the DEBRA UK and Austria, the FWO (Flanders) Belgium, INSERM (France); Israel Science Foundation (ISF).

Teaching positions

2002-2006 Teacher and Examiner for the Ph.D. program of the Open University (UK).

2012-2015 Board member of the PhD program SEMM (European School of Molecular Medicine)

2014-to 2016 Professor in Molecular Biology, Department of Biology - University of Naples Federico II

2016-to present Professor in Molecular Biology, Department of Biology - University of Naples Federico II
2016-to present Board member of the PhD program in Biology

Society memberships

1997-to present Member of the Italian Society of Biophysics and Molecular Biology (SIBBM).

2012-to present Member of the Italian Association of Cellular Biology and Differentiation (ABCD).

2012-to present Member of the ESDR/SID (European Society of Dermatological Research e Society of Investigative Dermatology).

2014-2016 Vice Chair and Chair of the ABCD Stem Cell Development and Regenerative Medicine conference, Italy.

2013-2016 Member of the Executive Committee and Treasurer of SIBBM (Italian Society of Biophysical and Molecular Biology).

2015-2020 Board member of the ESDR-European Society of Dermatological Research.

2019 Chair of the Scientific Program Committee of the 49th ESDR annual meeting in Bordeaux

Editorial board and reviewing experience

2012-2015 Editorial Board Member of Frontiers in Endocrinology
2013-to present Editorial Board Member of Experimental Dermatology
2015- 2017 Associate Editor of Journal Investigative Dermatology
6/2017-9/2020 Consultant Editor of Journal Investigative Dermatology
Present Consultant Editor of Journal Investigative Dermatology Symposium Proceedings

Publications (ORCID identifier is 0000-0003-0905-5123)

Missero, C., Filvaroff, E., & Dotto, G.P. (1991). Induction of TGFß 1 resistance by the *E1a* oncogene requires binding to a specific set of cellular proteins. **Proc. Natl. Acad. Sci. USA**, 88:3489-3493

Missero, C., Ramon y Cajal, S., & Dotto, G.P. (1991). Escape from TGFß control and oncogene cooperation in skin tumor development. **Proc. Natl. Acad. Sci. USA**, 88: 9613-9617.

Florin-Christensen, M., *Missero, C.*, Dotto, G.P., & Florin-Christensen, J. (1992). The *E1a* gene prevents inhibition of keratinocyte proliferation by dexamethasone. **Exper. Cell Res.,** 203: 285-288.

Brissette, J. L., *Missero, C.*, Yuspa, S.H., & Dotto, G.P. (1993). Different levels of v-Ha-*RAS* p21 expression in primary keratinocytes transformed with Harvey Sarcoma virus correlate with benign versus malignant behavior. **Molec. Carcinog**.,7: 21-25.

Florin-Christensen, M., *Missero, C.,* Florin-Christensen, J., Tranque, P., Ramon y Cajal, S., & Dotto, G.P. (1993). Counteracting effects of *E1a* transformation on cAMP growth inhibition. **Exper. Cell Res**., 207: 57-61.

Missero, C., Serra, C., Stenn, K., & Dotto, G.P. (1993). Skin-specific expression of a truncated *E1a* oncoprotein binding to p105-Rb leads to abnormal hair follicle maturation without increased epidermal proliferation. **J. Cell. Biol**., 121: 1109-1120.

Esherick, J.S., DiCunto, F., Flanders, K.C., *Missero, C.* & Dotto, G.P. (1993). TGF ß1 induction is associated with TGF ß2 and TGF 3 downmodulation in TPA-induced skin hyperplasia. **Cancer Res**. 53: 5517-5522.

Cauci, S., Monte, R., Ropele, M., *Missero, C.*, Not, T., Quadrifoglio, F., & Menestrina, G. (1993). Pore-forming and haemolytic properties of the *Gardnerella vaginalis* cytolisin. **Molec. Macrob**. 9 (6): 1143-1155.

Ramon y Cajal, S., *Missero, C.*, Marchetti, E. & Dotto, G.P. (1994). Dermal fibroblasts tumor suppression of *ras*-trasformed keratinocytes is associated with induction of squamous cell differentiation. **Amer. J. Path**. 145(4): 846-855.

Missero, C., Calautti, E., Eckner, R., Chin, J., Tsai, L.H., Livingston, D.M., & Dotto, G.P. (1995). Involvement of the cell cycle inhibitor Cip1/WAF1 and the transcriptional modulator p300 protein in terminal differentiation. **Proc. Natl. Acad. Sci. USA**, 92, 5451-5455.

Calautti, E., *Missero, C.*, Stein, P., Ezzel, R. & Dotto, G.P. (1995). *fyn* tyrosine kinase is involved in keratinocyte differentiation control. **Genes Dev**., 9 (18): 2279-2291.

Missero, C. & Dotto, G.P. (1996). $p21^{WAF1/Cip1}$ and terminal differentiation control in normal epithelia. (Review article). **Molec. Cell. Differentiation**, 4 (1): 1-16.

Enders, G.H., Koh, J., *Missero, C.*, Dotto, G.P., Rustgi, A.K., & Harlow E. (1996). p16 inhibition of primary and trasformed squamous epithelial cells. **Oncogene**, 12: 1239-1245.

Missero, C., Di Cunto, F., Kiyokawa, H., Koff, A., Dotto, G.P. (1996). The absence of $p21^{Cip1/WAF1}$ alters keratinocyte growth and differentiation and promotes *ras*-tumor progression. **Genes Dev**., 10 : 3065-3075.

Macchia, P.E., Lapi, P., Krude H., Pirro, M.T., *Missero, C.*, Chiovato, L., Souabni, A., Baserga, M., Tassi, V., Pinchera, A., Fenzi, G., Gruters, A., Busslinger, M., Di Lauro, R. (1998). Mutations in the DNA binding domain of Pax8 associated with congenital hypothyroidism caused by thyroid dysgenesis. **Nat Genetics**, 19 (1): 83-86.

Missero, C, Cobellis, G., De Felice, M., Di Lauro, R. (1998). Molecular events involved in differentiation of thyroid follicular cells. **Mol. Cell. Endocr.,** 140 (1-2):37-43.

Cobellis, G., *Missero, C.*, Di Lauro, R. (1998). Concomitant activation of MAP kinase kinase and Rac increases the proliferative potential of thyroid follicular cells, without affecting their differentiation. **Oncogene**, 17 (16): 2047-2058.

Foley, J., Wysolmerski, J.J., *Missero, C.*, King, C.S., Philbrick, W.M. (1999) Regulation of parathyroid hormone-related protein gene expression in murine keratinocytes by E1A isoforms: a role for basal promoter and Ets-1 site. **Mol Cell Endocrinol** 156(1-2): 13-23.

Missero, C., Pirro, M.T., Di Lauro, R. (2000). Multiple Ras downstream pathways mediate functional repression of the homeobox gene product TTF-1. **Mol. Cell. Biol**., 20 (8): 2783-93.

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Zhang, M., Brancaccio, A., Weiner, L., *Missero, C.*, Brissette, J.L. (2003). Ectodysplasin regulates pattern formation in the mammalian hair coat. **Genesis** Sep;37(1):30-7.

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Nguyen, B-C., Lefort, K., Mandinova, A., Antonini, D., Devgan, V., Della Gatta, G., Koster, M.I., Zhang, Z., Wang, J., Tommasi di Vignano, A., Kitajewski, J., Chiorino, G., Roop, D.R., *Missero*, C.* Dotto*, G.P., (2006). Cross-regulation between Notch and p63 in keratinocyte commitment to differentiation. **Genes Dev.**, 2006; 20 1028-1042. (*equal contribution).

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Fete, M., van Bokhoven, H., Clements, S., McKeon, F., Roop, D.R., Koster, M.I., *Missero, C.*, Attardi, L.D., Lombillo, V.A., Ratovitski, E., Julapalli, M., Ruths, D., Sybert, V.P., Siegfried, E.C., Bree, A.F. (2009). Conference Report: International Research Symposium on Ankyloblepharon-Ectodermal Defects-Cleft Lip and/or Palate (AEC) Syndrome. **The American Journal of Medical Genetics**, 7 Apr 2009.

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Fessing, M.Y., Mardaryev, A.N., Gdula, M.R., Sharov, A.A., Sharova, T.Y., Rapisarda, V., Gordon, K.B., Smorodchenko, A.D., Poterlowicz, K., Ferone, G., Kohwi, Y., Missero, C., Kohwi-Shigematsu, T., and Botchkarev V.A. (2011). p63 Regulates Satb1 to Control Tissue-Specific Chromatin Remodeling during Development of the Epidermis. **J. Cell. Biol.** 194(6):825-39.

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Günschmann C., Stachelscheid H., Akyüz M.D. , Schmitz A., *Missero* C.*, Brüning* J.C. and Niessen* C.M. (2013). Insulin/IGF-1 controls epidermal morphogenesis via regulation of FoxO-mediated p63 inhibition. (*co-corresponding authors). **Developmental Cell**, 26(2):176-87.

Antonini D, Sibilio A, Dentice M, *Missero C.* (2013). An Intimate Relationship between Thyroid Hormone and Skin: Regulation of Gene Expression. **Front Endocrinol**, 4:104.

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Luongo C, Ambrosio R, Salzano S, Dlugosz AA, *Missero C*, Dentice M. The sonic hedgehog-induced type 3 deiodinase facilitates tumorigenesis of basal cell carcinoma by reducing Gli2 inactivation. **Endocrinology**. 2014 155(6):2077-88.

Mollo MR, Antonini D, Mitchell K, Fortugno P, Costanzo A, Dixon J, Brancati F, *Missero C.* p63-dependent and independent mechanisms of nectin-1 and -4 regulation in the epidermis. **Exp Dermatol.** 2014 Nov 12. doi: 10.1111/exd.12593.

Antonini D, Sirico A, Aberdam E, Ambrosio R, Campanile C, Fagoonee S, Altruda F, Aberdam D, Brissette JL, *Missero C*. A composite enhancer regulates p63 gene expression in epidermal morphogenesis and in keratinocyte differentiation by multiple mechanisms. **Nucleic Acid Res.** 2015 Jan;43(2):862-74. doi: 10.1093/nar/gku1396.

Ferone G, Mollo MR, *Missero C.* Epidermal cell junctions and their regulation by p63 in health and disease. **Cell Tissue Res.** 2015 Jun;360(3):513-28. doi: 10.1007/s00441-014-2108-1.

Mollo MR, Antonini D, Cirillo L, *Missero C.* Research Techniques Made Simple: Skin Carcinogenesis Models: Xenotransplantation Techniques. **J Invest Dermatol**. 2016 Feb;136(2):e13-7. doi: 10.1016/j.jid.2015.12.015.

Missero C. The genetic evolution of skin squamous cell carcinoma: tumor suppressor identity matters. **Exp Dermatol**. 2016 Nov;25(11):863-864. doi: 10.1111/exd.13075.

Di Girolamo D, Ambrosio R, De Stefano MA, Mancino G, Porcelli T, Luongo C, Di Cicco E, Scalia G, Vecchio LD, Colao A, Dlugosz AA, *Missero C*, Salvatore D, Dentice M. Reciprocal interplay between thyroid hormone and microRNA-21 regulates hedgehog pathway-driven skin tumorigenesis. **J Clin Invest.** 2016 Jun 1;126(6):2308-20. doi: 10.1172/JCI84465.

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Protein aggregation of the p63 transcription factor underlies severe skin fragility in AEC syndrome. **Proc Natl Acad Sci U S A.** 2018 115(5):E906-E915. doi 10.1073/pnas.1713773115.

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