CURRICULUM VITAE

Name	Florence Michèle MALISAN
Birthdate	15/06/1969, Albertville (France)
Nationality	French and Italian
Status	Married VISCO, 3 children
Address	Via Montpellier 1 – 00133 Rome +39 06 72596504 Malisan@med.uniroma2.it
Languages	French: native proficiency Italian: bilingual proficiency English: full professional proficiency

Actual Position

2017 - date	Associate Professor (MED/46), Department of Biomedicine and Prevention, University of Rome Tor Vergata
2006 - 2017	Researcher - Assistant Professor (MED/04), Department of Biomedicine and Prevention, University of Rome Tor Vergata

Education

- 1996: PhD in Immunology, with highest Honour -awarded to 10% of the best theses- at the University Claude Bernard of Lyon, in France.
- 1992: Degree in Biological Sciences (Master 2) at the University Claude Bernard of Lyon, in France.
- 1987: High School Diploma in Sciences at Annecy, France.

Awarded fellowships

- 1996-1998: EEC Human Mobility Capital postdoctoral fellowship
- 1999-2001: Postdoctoral Research fellowship from Italian Foundation for Cancer Research (FIRC).

Research experience

- 1992-1996 : PhD, Schering-Plough, France**,** under the direction of Drs J. Banchereau and H. Martinez-Valdez: "Cellular and molecular biology on human B cells".
- 1993-1994: Visiting PhD student at Center for Biologics Evaluation and Research, Food and Drug Administration, Bethesda, MD, USA, under the direction of Drs E.E. Max e F.C. Mills:
- 1998: Visiting researcher at Department of Molecular Toxicology, Faculty of Biology, University of Konstanz, Germany, under the direction of Prof. P. Nicotera,.
- 2002-2005: Research Associate: Department of Experimental Medicine and Biochemical Sciences, University of Rome "Tor Vergata".

Research activity

The expertise of Prof. Florence Malisan (IF: 244, 39 peer-reviewed papers, H-index-24, Citations >2100, ORCID ID 0000-0002-0213-9407) in molecular and biochemical biology encompasses a wide range of areas including molecular biology, cell biology, glycolipid biology, cell transfection, in vitro gene delivery, gene expression, proteomics, protein analysis and detection by western blot, flow cytometry, immunofluorescence, ELISA.

During the last 15 years she studied the role of the frataxin protein in the genetic disease Friedreich's ataxia (FRDA). Both molecular pathophysiology and novel therapeutic approaches are under investigation (http://www.labst.org).

In particular, she studied the role of the phosphorylation of frataxin in FRDA, demonstrating that phosphorylation in Tyrosine 118 by Src kinase promotes the degradation of frataxin through the Ubiquitin-Proteasome system therefore regulating its stability. Importantly, she observed that Src inhibitors increase frataxin expression in living cells, suggesting their possible use as therapeutics

in FRDA (Cherubini et al., Hum. Mol. Genet., **24**,4296-305, *2015*).

Recently, her research focused on the identification of potential diagnostic and prognostic specific biomarkers of FRDA. She reported that frataxin deficiency in FRDA is indeed associated with reduced levels of antiapoptotic protein HAX-1, a regulator of cardiomyocyte death and survival. She also demonstrated a significant modulation of HAX-1 expression by frataxin levels in AC16 human cardiomyocytes, thus suggesting HAX-1 as a potential biomarker of cardiac disease in FRDA (Tiano F et al., Hum. Mol. Genet., ***29***,471-482*, 2020).*

Since HAX-1 - crucial protein for neurons and cardiomyocytes survival - is a putative biomarker of disease progression, she activated a strong collaboration with Dr. Francesca Amati and Dr. Caterina Mariotti in order to analyse HAX-1 related circulating microRNAs as they represent interesting non-invasive biomarkers that could help clinical practice (Quatrana, A. et al. Hum. Mol. Genet., **31**,2010-2022, *2022*)

Patents

Methods of treating Friedreich's ataxia using Src inhibitors, assigned serial no. PCT/IB2015/059963, published 30 June 2016, n. WO2016103223 A1.

Grants

-Telethon-AFM (2020): Involvement of protein kinase CK2 in the Friedreich's ataxia, Grant 22974, 12 months, Team leader.

-AFAF (2020): Association Française Ataxie de Friedreich, Study of the physiological variations of microRNAs in Friedreich's ataxia as new biomarkers for cardiomyopathy, 12 months**,** Co-investigator.

-University Mission Sustainability (2018): HAX-1 splice variants as potential molecular biomarkers for cardiomyopathies. Principal Investigator.

-National Ataxia Foundation (2018): HAX-1 is a biomarker for cardiomyopathies in Friedreich's Ataxia. Principal Investigator.

Teaching

She is in charge of Immunology courses in Degree course in Medicine and Surgery (since 2006 in Italian and 2013 in English), Pharmacy (since 2009), Biomedical Laboratory Techniques and Dietetics (since 2018) for a total of 15 ECTS Credits with 110 hours of lectures (more than 250 students and 21 exam sessions/year) in 2020-2021.

Publications

ORCID ID 0000-0002-0213-9407
39 peer-reviewed papers, Impact factor : 244, H-index-24, Citations > 2100

39) Rufini A, **Malisan F** , Condò I, Testi R. Drug repositioning in Friedreich ataxia. **Front Neurosci.** (Impact factor 2020: 4,68)

38) Quatrana A, Morini E, Tiano F, Vancheri C, Panarello L, Romano S, Marcotulli C, Casali C, Mariotti C, Mongelli A, Fichera M, Rufini, A, Condò I, Novelli G, Testi R, Amati F, **Malisan F**. Hsa-miR223-3p circulating level is upregulated in Friedreich's ataxia and inversely associated with HCLS1 associated protein X-1, HAX-1.
Hum Mol Genet 2022 Jan 7;ddac005. doi: 10.1093/hmg/ddac005. Online ahead of print. (Impact factor 2020: 6,15)

37) Tiano F, Amati F, Cherubini F, Morini E, Vancheri C, Maletta S, Fortuni S, Serio D, Quatrana A, Luffarelli R, Benini M, Alfedi G, Panarello L, Rufini A, Toschi N, Frontali F, Romano S, Marcotulli C, Casali C, Gioiosa S, Mariotti C, Mongelli A, Fichera M, Condò I, Novelli G, Testi R, and **Malisan F.**

Frataxin deficiency in Friedreich's Ataxia is associated with reduced levels of HAX-1, a regulator of cardiomyocyte death and survival **Hum Mol Genet.** 2020. 29(3):471-482. (Impact factor 2020: 6,15)

36) Vetrano M, Ranieri D, Nanni M, Pavan A, **Malisan F**, Vulpiani MC and Visco V. Hyaluronic Acid (HA), Platelet-Rich Plasm and Extracorporeal Shock Wave Therapy (ESWT) promote human chondrocyte regeneration in vitro and ESWT-mediated increase of CD44 expression enhances their susceptibility to HA treatment. **PLOS ONE**. 2019. Jun 28;14(6):e0218740 (Impact factor 2019: 2,74)

35) Alfedi G, Luffarelli R, Condò I, Pedini G, Mannucci L, Massaro DS, Benini M, Toschi N, Alaimo G, Panarello L, Pacini L, Fortuni S, Serio D, **Malisan F**, Testi R, Rufini A. Drug repositioning screening identifies etravirine as a potential therapeutic for friedreich's ataxia. **Mov Disord**. 2019. 34(3):323-334. (Impact factor 2019: 8,68)

34) Benini M, Fortuni S, Condò I, Alfedi G, **Malisan F**, Toschi N, Serio D, Massaro DS, Arcuri G, Testi R, Rufini A. The E3 ligase RNF126 directly ubiquitinates frataxin promoting its degradation: identification of a potential therapeutic target for Friedreich ataxia. **Cell Reports**. 2017. 18(8):2007-17. (Impact factor 2017: 8,03)

33) Leone L, Raffa S, Vetrano M, Ranieri D, **Malisan F**, Scrofani C, Vulpiani MC, Ferretti A, Torrisi MR and Visco V. Extracorporeal Shock Wave Treatment (ESWT) enhances the in vitro-induced differentiation of human Tendon-derived Stem/Progenitor Cells (hTSPCs) **Oncotarget**. 2016. 7(6):6410-23. (Impact factor 2016: 5.17)

32) F. Cherubini, D. Serio, I. Guccini, S. Fortuni, G. Arcuri, I. Condò, A. Rufini, S. Moiz, S. Camerini, M. Crescenzi, R. Testi, and **F. Malisan**. Src inhibitors modulate frataxin protein levels. **Hum Mol Genet.** 2015. 24(15):4296-305. (Impact factor 2015: 5.985)

31) Rufini A, Cavallo F, Condo I, Fortuni S, De Martino G, Incani O, Di Venere A, Benini M, Massaro DS, Arcuri G, Serio D, **Malisan F**, Testi R. Highly specific ubiquitin-competing molecules effectively promote frataxin accumulation and partially rescue the aconitase defect in Friedreich ataxia cells. **Neurobiol Dis.** 2015. 75:91-99. (Impact factor 2015: 4.86)

30) Ferri M, Rossi Del Monte S, Salerno G, Bocchetti T, Angeletti S, **Malisan F**, Cardelli P, Ziparo V, Torrisi MR, and Visco V. Recovery of immunological homeostasis positively correlates both with early stages of right-colorectal cancer and laparoscopic surgery**. PLoS One**. 8(9):e74455. 2013. (Impact factor 2013: 3.53)

29) Schiavi, A. Torgovnick, A. Kell, E. Megalou, N. Castelein, I. Guccini, L. Marzocchella, S. Gelino, M. Hansen, **F. Malisan**, I. Condo', R. Bei, S. Rea, B.P. Braeckman, N. Tavernarakis, R. Testi, and N. Ventura. Autophagy induction extends lifespan and reduces lipids content in response to frataxin silencing in C. elegans. **Exp Gerontol.** 48(2): 191-201. 2013 (Impact factor 2013: 3.53)

28) B. Tomassini, G. Arcuri, S. Fortuni, C. Sandi, V. Ezzatizadeh, C. Casali, I. Condò, **F. Malisan**, S. Al-Mahdawi, M. Pook, and R. Testi. Interferon gamma upregulates frataxin and corrects the functional deficits in a Friedreich ataxia model. **Hum Mol Genet.** 21(13): 2855-61. 2012. (Impact factor 2012: 7.69)

27) I. Guccini, D. Serio, I. Condò, A. Rufini, B. Tomassini, A. Mangiola, G. Maira, C. Anile, D. Fina, F. Pallone, M.P. Mongiardi, A. Levi, N. Ventura, R. Testi, and **F. Malisan**. Frataxin participates to the hypoxia-induced response in tumors. **Cell Death Dis**. 2011 Feb 24;2(1):e123. (Impact factor 2011: 5.33)

26) A. Rufini, S. Fortuni, G. Arcuri, I. Condo', D. Serio, O. Incani, **F. Malisan**, N. Ventura, and R. Testi. Preventing the ubiquitin/proteasome-dependent degradation of frataxin, the protein defective in Friedreich's Ataxia. **Hum Mol Genet**. *20 (7): 1253-61*. 2011. (Impact factor 2011: 7.64)

25) I. Condò, **F. Malisan**, I. Guccini, D. Serio, A. Rufini, and R. Testi. Molecular control of the cytosolic aconitase/IRP1 switch by extramitochondrial frataxin. **Hum Mol Genet**. *19 (7): 1221-9*. 2010. (Impact factor 2010: 8.06)

24) I. Condò, N. Ventura, **F. Malisan**, A. Rufini, B. Tomassini, and R. Testi. In vivo maturation of human frataxin. **Hum. Mol. Genet**. *16 (13): 1534-40*. 2007. (Impact factor 2007: 7.81)

23) I. Condò, N. Ventura, **F. Malisan**, B. Tomassini, and R. Testi. A pool of extramitochondrial frataxin that promotes cell survival. **J. Biol. Chem.** *281 (24): 16750-16756*. 2006. (Impact factor 2006: 5.81)

22) B. Kniep, E. Kniep, N. Ozkucur, S. Barz, M. Bachmann, **F. Malisan**, R. Testi, and E.P. Rieber. 9-O-acetyl GD3 protects tumor cells from apoptosis. **Int J Cancer.** *119 (1):67-73*. 2006. (Impact factor 2006: 4.69)

21) L. Franchi, **F. Malisan**, B. Tomassini and R. Testi. Ceramide catabolism critically controls survival of human dendritic cells. **J. Leukoc. Biol.** *79 (1):166-172*. 2006. (Impact factor 2006: 4.57)

20) **F. Malisan** and R. Testi. The ganglioside GD3 as the Greek goddess Hecate: several faces turned towards as many directions. **IUBMB life.** *57 (7):477-482*. 2005.
(Impact factor 2005: 2.12)

19) B. Hampel, **F. Malisan**, H. Niederegger, R. Testi and P. Jansen-Durr. Differential regulation of apoptotic cell death in senescent human cells. **Exp Gerontol.** *39 (11-12):1713-1721*. 2004. (Impact factor 2004: 2.88)

18) B. Tomassini, **F. Malisan**, L. Franchi, C. Nicolo', G. Brea-Calvo, T. Saito and R. Testi. Calnexin suppresses GD3 synthase-induced apoptosis. **FASEB J.** *18 (13):1553-1555*. 2004. (Impact factor 2004: 6.82)

17) **F. Malisan** and R. Testi. Mitochondrial lipids as apoptosis regulators. **Curr Med Chem.** *10 (16):1573-1580*. 2003. (Impact factor 2003: 4.41)

16) **F. Malisan**, L. Franchi, B. Tomassini, N. Ventura, I. Condo', M.R. Rippo, A. Rufini, L. Liberati, C. Nachtigall, B. Kniep and R. Testi. Acetylation suppresses the pro-apoptotic activity of GD3 ganglioside. **J. Exp. Med.** *196 (12):1535–1541*. 2002. (Impact factor 2002: 15.34)

15) **F. Malisan** and R. Testi. GD3 ganglioside and apoptosis.
Biochim Biophys Acta. *1585 (2-3):179-187*. 2002. (Impact factor 2002: 3.77)

14) **F. Malisan** and R. Testi. GD3 in cellular ageing and apoptosis.
Exp. Ger. *37 (10-11):1273-1282*. 2002. (Impact factor 2002: 2.49)

13) B.M. Simon, **F. Malisan**, R. Testi, P. Nicotera and M. Leist. Disialoganglioside GD3 is released by microglia and induces oligodendrocyte apoptosis.
Cell Death Differ. *9 (7):758-767*. 2002. (Impact factor 2002: 5.70)

12) M.R. Rippo, **F. Malisan**, L. Ravagnan, B. Tomassini, I. Condo', P. Costantini, S. A. Susin, A. Rufini, M. Todaro, G. Kroemer and R. Testi. GD3 ganglioside as an intracellular mediator of apoptosis. **Eur. Cytokine Netw.** *11 (3):487-488*. 2000. (Impact factor 2000: 1.69)

11) V. Frances, C. Guret, **F. Malisan**, E. Peyron, S. Ho, M.J. Maat, F. Fossiez, J.F. Nicolas, S. Lebecque, and H. Martinez-Valdez. The human anti-bullous pemphigoid monoclonal autoantibody P22 is encoded by genes of the IGHV4 and IGLV4 families.
J. Autoimmun. *15 (4):459-468*. 2000. (Impact factor 2000: 2.18)

10) M.R. Rippo, **F. Malisan**, L. Ravagnan, B. Tomassini, I. Condo', P. Costantini, S. A. Susin, A. Rufini, M. Todaro, G. Kroemer and R. Testi. GD3 ganglioside directly targets mitochondria in a bcl-2-controlled fashion. **FASEB J.** *14 (13): 2047-2054*. 2000. (Impact factor 2000: 9.25)

9) **F. Malisan** and R. Testi. Lipid signaling in CD95-mediated apoptosis.
FEBS Lett. *452 (1-2):100-103*. 1999. (Impact factor 1999: 3.72)

8) **F. Malisan**, M. R. Rippo, R. De Maria and R. Testi. Lipid and glycolipid mediators in CD95-induced apoptotic signaling. *In* **Apoptosis: Biology, Mechanisms and Role in Disease** *edited by S. Kumar. Springer-Verlag. Results Probl Cell Differ. 23: 65-76*. 1999.

7) R. De Maria, L. Lenti, **F. Malisan**, F. d'Agostino, B. Tomassini, A. Zeuner, M. R. Rippo and R. Testi. Requirement for GD3 ganglioside in CD95- and ceramide -induced apoptosis. **Science**. *277 (5332): 1652-1655*. 1997. (Impact factor 1997: 24.68)

6) **F. Malisan**, F. Brière, J.M. Bridon, N. Harindranath, F.C. Mills, E.E. Max, J. Banchereau and H. Martinez-Valdez. Interleukin-10 induces Immunoglobulin G isotype switch recombination in human CD40-activated naive B lymphocytes.
J. Exp. Med. *183 (3) : 937-947.* 1996. (Impact factor 1996: 15.57)

5) Y.J. Liu, **F. Malisan**, O. de Bouteiller, C. Guret, S. Lebecque, J. Banchereau, F.C. Mills, E.E. Max and H. Martinez-Valdez. Within germinal centers, isotype switching of immunoglobulin genes occurs after the onset of somatic mutation. **Immunity.** *4(3) :241-250.* 1996.
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4) **F. Malisan**, A.C. Fluckiger, S. Ho, C. Guret, J. Banchereau and H. Martinez-Valdez.
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2) H. Martinez-Valdez, **F. Malisan**, O. de Bouteiller, C. Guret, J. Banchereau and Y.J. Liu. Molecular evidence that in vivo isotype switching occurs within the germinal centres.
Annals. NY Acad. Sci. *764 : 151-154.* 1995. (Impact factor 1995: 0.87)

1) J. Banchereau, C. Bidaud, A.C. Fluckiger, L. Galibert, P. Garrone, **F. Malisan**, D. Pandrau. Effects of interleukin 4 on human B cell growth and differentiation.
Res. Immunol. *144 (8) : 601-605*. 1993. (Impact factor 1993: 1.54)

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