

Monica Marzagalli

Birth: Crema (CR), Italy, Jan 22nd, 1986

University Degrees

- 2015 PhD in Endocrinological and Metabolic Sciences (University of Milano, Italy). Thesis: *“New insights on estrogens and vitamin-derivative Tocotrienols on human malignant melanoma: towards novel therapeutic interventions”*.
- 2012 Master Degree in Pharmaceutical Biotechnology (summa cum laude, University of Milano, Italy). Thesis: *“Role of the anabolic androgens in Amiotrophic Lateral Sclerosis: evidences from muscle cells experimental models”*. This thesis received a special mention by SLA Committee R.C. Sesto Miliun-Centenario.
- 2009 Bachelor Degree in Pharmaceutical Biotechnology (summa cum laude, University of Milano, Italy). Thesis: *“Volumetric variation in Xenopus laevis oocytes expressing the mutant D338E and T339C of the aminoacid transporter KAAT1”*.

Work experience

- 2012-2015 PhD fellow in Endocrinological and Metabolic Sciences, Prof. P. Limonta's lab, Department of Pharmacological and Biomolecular Sciences (DiSFeB), University of Milano. PhD project: *“Molecular basis for the development of innovative chemopreventive and therapeutic strategies for melanoma: ER β , epigenetic and tocotrienols”*. The work was firstly focused on the characterization of the estrogenic system in human melanoma cell lines, and the dissection of the cellular and molecular mechanisms associated with tumor-suppressing activity of the estrogen receptor β . The involvement of ER β in the antitumor action of Vitamin E-derived δ -Tocotrienol was also assessed, together with the molecular pathways associated with the apoptotic effect of this compound.

Education and training

- 23rd-25th Nov 2015 “Introductory course on animal testing”, organized by IRCCS-Istituto di Ricerche Farmacologiche “Mario Negri”, Milano.
- 23rd-28th Aug 2015 FEBS Advanced Lecture Course: “Spetses Summer School on Nuclear Receptor Signaling in Physiology and Disease”, organized by Karolinska Institutet (Stockholm, Sweden).
- 12th-13th May 2015 Special training and professional development: “Operative techniques for effective and safely use of fluorescence microscopy”, organized by Aware Lab.
- 05th-20th Feb 2013 “Basic course for researchers and staff involved in animal testing”, organized by Istituto Zooprofilattico Sperimentale della Lombardia e dell'Emilia Romagna.
- 2011-2012 One-year experimental training for Master Degree, in Dr. M. Galbiati's lab, Department of Pharmacological and Biomolecular Sciences (DiSFeB), University of

Milano. The thesis project was focused on the role of anabolic androgens abuse in the skeletal muscle cell damage observed in SLA. To this purpose, an *in vitro* model of SLA was developed, and the degenerative action of testosterone was analyzed on this model and on animal and human samples.

2009 Four months experimental training for Bachelor Degree, in Prof. V. F. Sacchi's lab, Department of Pharmacological and Biomolecular Sciences (DiSFeB), University of Milano. The thesis project was based on the structural and functional aspect of the amino acid transporter KAT1, and in particular it was focused on the water/amino acid cotransport. Studies were conducted on engineered *X. laevis* oocytes.

Abstracts, Publications and Awards

14 abstracts, of which 8 as first author; of which 5 oral presentation. 2 abstracts were awarded as the "Best oral presentation".

6 publications, of which one as first author.

PUBLICATIONS

Maggi R, Cariboni AM, Montagnani Marelli M, Moretti RM, Andrè V, Marzagalli M, Limonta P *GnRH and GnRH receptors in the pathophysiology of the human female reproductive system*. Human Reproduction Update 0: 1-24, 2015. IF 10.165

Marzagalli M, Casati L, Moretti RM, Montagnani Marelli M, Limonta P *Estrogen receptor β agonists differentially affect the growth of human melanoma cell lines*. PLoS One 10(7): e0134396, 2015. IF 3.234

Montagnani Marelli M, Manea M, Moretti RM, Marzagalli M, Limonta P *Oxime bond-linked daunorubicin-GnRH-III bioconjugates exert antitumor activity in castration-resistant prostate cancer cells via the type I GnRH receptor*. Int J Oncol. 46(1):243-53, 2015. IF 3.025

Manea M, Marelli Montagnani M, Moretti RM, Maggi R, Marzagalli M, Limonta P *Targeting hormonal signaling pathways in castration resistant prostate cancer*. Recent Patents on Anticancer Drug Discovery 9(3): 267-85, 2014. IF 4.295

Limonta P, Moretti RM, Marzagalli M, Montagnani Marelli M *Castration resistant prostate cancer: from emerging molecular pathways to targeted therapeutic approaches*. Clinical Cancer Drugs 1: 11-27, 2014.

Moretti RM, Marelli MM, Taylor DM, Martini PG, Marzagalli M, Limonta P *Gonadotropin-releasing hormone agonists sensitize, and resensitize, prostate cancer cells to docetaxel in a p53-dependent manner*. PLoS One 9(4): e93713, 2014. IF 3.234

ABSTRACTS

Marzagalli M, Casati L, Moretti RM, Montagnani Marelli M, Limonta P *Dissecting the tumor-suppressive role of ER β in human melanoma cells: molecular mechanisms and mutational state-dependence*. FEBS Advanced Lecture Course: Spetses Summer School on Nuclear Receptor Signaling in Physiology and Disease; Spetses, Greece, Aug. 23rd-28th, 2015. Selected for oral presentation.

Marzagalli M, Montagnani Marelli M, Moretti RM, Beretta G, Limonta P *Vitamin E-derived δ -Tocotrienol against melanoma: molecular pathways leading to cell death.* Next Step VI-La giovane ricerca avanza, DiSFeB, Milano, Italy, Jul. 2nd, 2015. Oral presentation. Awarded for the “Best oral presentation-nutraceutical”.

Marzagalli M, Montagnani Marelli M, Moretti RM, Comitato R, Beretta G, Limonta P *Delta-tocotrienol induces ER stress-mediated apoptosis in human melanoma cells.* EACR-AACR-SIC 2015 Special Conference; Firenze, Italy, Jun. 20th-23rd, 2015.

Montagnani Marelli M, Manea M, Moretti RM, Marzagalli M, Mancini A, Gravina GL, Festuccia C, Limonta P *Type I GnRH receptor mediates the antitumor effect of daunorubicin-GnRH III bioconjugates on aggressive castration-resistant DU145 and PC3 prostate cancer cell lines.* XXV Congresso SIUrO; Roma, 21-23 Giugno 2015.

Montagnani Marelli M, Manea M, Moretti RM, Marzagalli M, Limonta P *Type I GnRH receptor mediates the antitumor effect of daunorubicin-GnRH-III bioconjugates on prostate cancer cells.* XI Congresso Nazionale Società Italiana di Andrologia e Medicina della Sessualità; Cagliari, 13-15 novembre 2014.

Marzagalli M, Casati L, Moretti RM, Montagnani Marelli M, Beretta G, Comitato R, Limonta P *Molecular mechanisms of the antitumor activity of vitamin E-derived δ -Tocotrienol in human melanoma cells.* XVI Congresso Nazionale AIBG; Napoli, 26-27 settembre 2014.

Marzagalli M, Casati L, Montagnani Marelli M, Moretti RM, Limonta P *Investigating the role of ER β in melanoma growth and its interaction with the tumor epigenome.* 56th Annual Meeting of the Italian Cancer Society; Ferrara, 11-13 settembre 2014.

Marzagalli M, Montagnani Marelli M, Manea M, Moretti RM, Limonta P *Type I GnRH receptor mediates the antitumor effect of daunorubicin-GnRH-III bioconjugates on prostate cancer cells.* Next Step V- La giovane ricerca avanza; Milano, 3 giugno 2014. Comunicazione orale.

Limonta P, Manea M, Moretti RM, Marzagalli M, Mezo G, Montagnani Marelli M *Daunorubicin-GnRH-III bioconjugates exert a cytostatic effect on prostate cancer cells through the type-I GnRH receptor.* 11th International Symposium on GnRH-The hypothalamic pituitary-gonadal axis in cancer and reproduction; Salisburgo, Austria 9-11 febbraio 2014.

Moretti RM, Montagnani Marelli M, Marzagalli M, Limonta P *Targeting Gonadotropin-releasing hormone receptors to sensitize, and resensitize, castration-resistant prostate cancer cells to docetaxel: role of the p53-dependent apoptosis pathway.* 11th International Symposium on GnRH-The hypothalamic pituitary-gonadal axis in cancer and reproduction; Salisburgo, Austria 9-11 febbraio 2014.

Marzagalli M, Casati L, Moretti RM, Montagnani Marelli M, Limonta P *Dissecting the role of ER β in melanoma growth and its cross-talk with the tumor epigenome.* XV Congresso Nazionale AIBG; Arcavacata di Rende (CS), 27-28 settembre 2013. Comunicazione orale.

Montagnani Marelli M, Moretti RM, Marzagalli M, Limonta P *Role of ER β in human melanoma cells and its involvement in tocotrienols activity.* 64^o Congresso Nazionale SIF; Portonovo (AN), 18-20 settembre 2013.

Marzagalli, Casati L, Montagnani Marelli M, Moretti RM, Limonta P *Unraveling the role of ERβ in melanoma growth and progression: cross-talk with tumor epigenome and dietary tocotrienols.* Next Step IV-La giovane ricerca avanza; Milano, 17 luglio 2013. Comunicazione orale.

Limonta P, Montagnani Marelli M, Marzagalli M, Moretti RM *GnRH agonists sensitize, and resensitize, castration-resistant prostate cancer cells to docetaxel: role of the p53- dependent apoptosis pathway.* 10° Congresso Nazionale SIAMS; Lecce, 15-17 novembre 2012.

AWARDS

Awarded as the “Best oral presentation-Nutraceutical”: Next Step VI-La giovane ricerca avanza, DiSFeB, Milano, Jul. 2nd, 2015.

Awarded as the “Best oral presentation-Nutraceutical”: Next Step VI-La giovane ricerca avanza, DiSFeB, Milano, Jun. 2nd, 2014.