# CURRICULUM VITAE

**Dr. Marika Lanza, *PhD***

**E-mail:** mlanza@unime.it

## Education

2013 – 2016 **PhD**, University of Messina (Italy)
2009 - 2011 **Master's Degree** in Biotechnology for Health, University of Messina (Italy)
2006 - 2009 **Bachelor's Degree** in Biotechnology, University of Messina (Italy)

## Qualifications

***PhD*** – Phd in "Clinical and Translational Research in Neuroscience and Oncology". Title of thesis: "*Evaluation of CTNNB1 and TP53 variability in patients with hepatocellular carcinoma and occult hepatitis B virus infection.*" Training in Molecular and Clinical Hepatology laboratory , directed by Prof Giovanni Raimondo and coordinated by Dr Teresa Pollicino, Unit of Clinical and Molecular Hepatology, Department of Internal Medicine, University of Messina, Italy

***MSc*** - Master degree in Science in Biotechnology for Health. Title of thesis: " *Infection with genetic variants PreS / S hepatitis B virus: prevalence and cytopathic effect* " Supervisor: Prof. Teresa Pollicino, Unit of Clinical and Molecular Hepatology, Department of Internal Medicine, University of Messina, Italy

***BSc*** - Bachelor degree in Biotechnologies. Title of thesis: "*Study of different Hepatitis B virus genotypes and main genetic variants and their response to interferon-alpha(IFN-α) treatment in hepatoma cells*" Supervisor: Prof. Teresa Pollicino, , Unit of Clinical and Molecular Hepatology, Department of Internal Medicine, University of Messina, Italy

## Current Occupation

Research fellowship in Pharmacology "***Radikal: Molecular mechanisms analysis of neuro-oncological pathologies***" at Department of Chemical, Biological, Pharmaceutical and Environmental Science, University of Messina.
Supervisors: Prof. S. Cuzzocrea and Prof. E. Esposito

## Relevant Career Experience

Cell culture; eukaryotic cell culture; transient and stable transfection of eukaryotic cells; analysis of proteins expression ( immunofluorescence, confocal microscope, western blotting, ELISA test);Vital Cycle of Hepatitis B Virus (HBV antigens, Preparation of Full Lenght HBV Genomes for Transient Transfetion, Purification and Analysis of HBV DNA from Core Particles, cccDNA and pgRNA quantification; RNA Analysis). Chromatin Immunoprecipitation assays; DNA and RNA isolation and purification; PCR; RT-PCR; Real Time PCR; Gene Expression array; Southern Blotting; Northern Blotting; Cloning and sequencing analyses.
I have also acquired microbiology skills on the growth and maintenance of bacterial cultures, with preparation of culture media, observations under a light microscope, working under sterile

conditions. I also have acquired the skills necessary for the preparation of durable paraffin prepared for light microscopy and obtaining histological sections to be used for subsequent histomorphological, histochemical and immunohistochemical analysis.

**Technical Skill and Competences**

- In vivo experiment murine models (spinal cord injury; traumatic brain injury; parkinson's desease; alzheimer desease's; model of Carrageenan (CAR)-induced rat paw)
- Nucleic acids and proteins extraction from human and animal tissues
- PCR; Real-Time PCR
- Agarose and polyacrylamide gel electrophoresis
- Southern Blot
- Northern Blot
- Western Blot
- Bacterial cultures
- Histology processing of animal tissues
- Immunohistochemistry
- Conservation and medium preparation for cell cultures
- Use of sterile laminar flow hood and manipulations in sterile conditions
- Use of conventional microscope and inverted microscope

- Excellent Expertise in cell culture and Molecular Biology techniques and good skills in the use of several molecular laboratory instruments. Good experience in project and time management (acquired during work experiences). Good ability and experience to present scientific and clinical data.

**Computer Skills**

Familiar with

- Microsoft Office™ tools
- Mac and Windows operating systems

**Language**

Mother tongue : Italian

Other language: English

- Understanding: B2 Level
- Speaking: B2 level
- Writing: B2 level

Currently studying in John Milton Istitute

**Scientific pubblications:**

**Sodium butyrate exerts neuroprotective effects in spinal cord injury**

***Lanza M***, Campolo M, Casili G, Filippone A, Paterniti I, Cuzzocrea S, Esposito E, submitted to *Molecular Neurobiology,* Accepted for pubblication 2018

***"Evaluation of CTNNB1 and TP53 variability in patients with hepatocellular carcinoma and occult epatiti B virus infection."***

Authors: Saitta C., ***Lanza M.***, Bertuccio A., Lazzara S., Navarra G., Raimondo G., Pollicino T. Cancer Genet. 2015 Oct;208(10):513-6. doi: 10.1016/j.cancergen.2015.07.002. Epub 2015 Jul 14. PMID: 26341700

***"Multiple mechanisms of dimethyl fumarate in amyloid β-induced neurotoxicity in human neuronal cells."***
Authors: Campolo M., Casili G., ***Lanza M.*** , Filippone A., Paterniti I., Cuzzocrea S., Esposito E .
J Cell Mol Med. 2017 Oct 9. doi: 10.1111/jcmm.13358

***"Dimethyl fumarate attenuates neuroinflammation and neurobehavioral deficits induced by experimental traumatic brain injury."***
G.Casili, M. Campolo, I. Paterniti, ***M. Lanza***, A. Filippone, S. Cuzzocrea ,E. Esposito
Journal of Neurotrauma

***"Effect of pea protein plus grape seed dry extract on a murine model of Candida albicans induced vaginitis"***
Esposito E, Campolo M, Casili G, ***Lanza M***, Filippone A, Peritore AF, Cuzzocrea S. Future Microbiology. 2018 Jun 13; (Epub published).

***"Protective Effects of Xyloglucan in Association with the Polysaccharide Gelose in an Experimental Model of Gastroenteritis and Urinary Tract Infections."***
Esposito E, Campolo M, Casili G, ***Lanza M***, Franco D, Filippone A, Peritore AF, Cuzzocrea S. Int J Mol Sci. 2018 Jun 22;19(7). pii: E1844. doi: 10.3390/ijms19071844.

**TLR-4/Wnt modulation as new therapeutic strategy in the treatment of glioblastomas**
Casili G, Caffo M, Campolo M, Barresi V, Caruso G, Cardali SM, **Lanza M**, Mallamace R, Filippone A, Conti A, Germanò A, Cuzzocrea S, Esposito E

**Scientific research submitted:**

**TAK1 inhibitor, as a potential sensitizer for chemotherapy in glioblastoma**
Campolo M, **Lanza M**, Casili G, Paterniti I, Filippone A, Caffo M, Cardali SM, Cuzzocrea S, Esposito E, submitted to Molecular *Cancer Research,* 2018.

**Efficacy of xyloglucan against Escherichia coli urinary tract infection: in vivo study**
Esposito E, Campolo M, Casili G, **Lanza M**, Franco D, Fazio E, Filippone A, Paterniti I, Peritore AF, Cuzzocrea S, submitted to *Microbial Cell Factories,* 2018.

**The anti-inflammatory, anti-oxidant and neuroprotective effects of sodium propionate**
Filippone A, Campolo M, **Lanza M**, Casili G, Paterniti I, Cuzzocrea S, Esposito E, submitted *Journal of Pharmacology and Experimental Therapeutics,* 2018.

**NATIONAL and INTERNAZIONAL CONGRESS PARTECIPATION**
**Abstracts:**

***"Fumaric acid esters as a new therapeutic target for traumatic brain injury"***
Esposito E., Campolo M., Casili G., D'Amico R., **Lanza M.**, Cuzzocrea S.
EXPERIMENTAL BIOLOGY 2017 APRIL 21–25, 2017 -CHICAGO

***"Multiple mechanisms of dimethyl fumarate in amyloid β-induced neurotoxicity in human neuronal cells"***
**M. Lanza**, M. Campolo, G. Casili, A. Filippone, I. Paterniti, S. Cuzzocrea, E. Esposito
13th World Congress on Inflammation July 8-12, 2017 London

***"Neuroprotective action of dimethyl fumarate in oxidative stress-induced damage through the activation of both NF-kB pathway and Nrf2/ antioxidant enzyme in neuronal cells."***
**M. Lanza**, M. Campolo, G. Casili, A. Filippone, I. Paterniti, S. Cuzzocrea , E. Esposito.
*38° SIF National Congress, Rimini October 25-28, 2017*

***"Dimethyl fumarate attenuates neuroinflammation and neurobehavioral deficits induced by experimental traumatic brain injury"***
G. Casili, M. Campolo, I. Paterniti , **M. Lanza**, A.Filippone, S. Cuzzocrea, E. Esposito.
*NEUROSCIENCE 2017, Washington (USA), November 11-15, 2017*

***"TAK1 inhibitor 5Z-7-oxozeaenol sensitizes glioma to chemotherapy"***
E. Esposito, M. Campolo, **M. Lanza**, G. Casili, I. Paterniti, A. Filippone, S. Cuzzocrea
*NEUROSCIENCE 2017, Washington (USA), November 11-15, 2017*

***"TAK1 inhibitor 5Z-7-oxozeaenol sensitizes glioblastoma to chemotherapy".***
G. Casili, *M. Campolo, **M. Lanza**, A.Filippone, S. Cuzzocrea, E. Esposito.*
*18° SITOX National Congress, Bologna April 10-13, 2018*

***"Effect of pea protein plus grape seed dry extract on a murine model of Candida albicans induced vaginitis"***
Esposito E, Campolo M, Casili G, ***Lanza M***, Filippone A, Peritore AF, Cuzzocrea S.
*18° SITOX National Congress, Bologna April 10-13, 2018*

**"Sodium butyrate exerts neuroprotective effects in spinal cord injury."**
**Lanza M**., Campolo M., Casili G., Filippone A., Cuzzocrea S., Esposito E.
*EXPERIMENTAL BIOLOGY 2018, San Diego April 02-06 2018*

**Oral presentations :**

***"Comparison of trascription/replication capacity and response to interferon-alpha treatment among HBV genomes of different genotype"***
("2010 International Meeting on Molecular Biology of Hepatitis B Viruses" held in Oxford, September 22-25, 2012).

***" Personalize the diagnosis and therapy of hepatitis B and C through the comprehension of viral pathogenesis"***
(6-8 February 2014, Parma, International meeting, Scientific Organizer Prof. Carlo Ferrari)

***"Multiple mechanisms of dimethyl fumarate in amyloid β-induced neurotoxicity in human neuronal cells"***
SIF, monothematic congress: 2017 Aging Brain: In Search for Better Neurotherapeutics. Rende, 4/5 May 2017

***"Comparison of replicative capacity and response to interferon-alpha treatment among HBV isolates of different genotype."***
Restuccia A., ***Lanza M.***, Raimondo G., Pollicino T.
47th Annual Meeting of the European Association for the Study of the Live" will be hold in Barcelona, Spain , April 18th - 22th, 2012

***"Occult HBV is highly prevalent in patients with intrahepatic cholangiocarcinoma and it is detected as both free episomal and integrated DNA"***
T. Pollicino, C. Musolino, G. Tripodi, ***M. Lanza***, G. Raffa, C. Saitta, S. Benfatto, C. Beninati, and others Journal of Hepatology, Vol. 62, S286–S287 Published in issue: April 2015

**Awards:**

Award Best Poster *18° SITOX National Congress, Bologna April 10-13, 2018*

**MEMBERSHIP OF SCIENTIFIC SOCIETY**

Italian Society of Pharmacology (SIF)
Italian Society of Toxicology (SITOX)

Messina, January 2019

Marika Lanza