Dr.Marianna Flora Tomasello
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CURRENT POSITION: Permanent CNR researcher at Institute of Crystallography, Unit of Catania, Italy.

AREA OF INTEREST:
Topics: Life Science, Apoptotis, Mitochondria, Signal Transduction, Neurobiology, Oxidative stress, Cancer.
Techniques: Cellular and Molecular Biology, Biochemistry, Imaging, Flow Cytometry, Fluorescence, HTS, HCS.

SCIENTIFIC PRODUCTION AND IMPACT
-30 articles in peer-reviewed journals
-number of citations: 887
-H-index: 17 (Scopus databases, March 2022)

EDUCATION
February 2012: International PhD in Neuropharmacology. Department of clinical and experimental pharmacology. PhD thesis Title: "Beta-Amyloid oligomeric and monomeric states: implications for Alzheimer's Disease**"**. PhD supervisors: Prof. A. Copani/Dr. G. Pappalardo.
February 2005: PhD Life Science- Biochemistry and Molecular Biology. Department of Chemical Sciences, University of Catania, Catania IT-95125, Italy. PhD thesis Title: "Essential role of VDAC porin in oxidative stress and apoptosis".PhD supervisor: Prof. Vito DePinto/Dr. F. Ichas.
July 2001: M. sc/B.sc (Italian Laurea in Biological Sciences, with honors : 110/110 cum laude)- University of Catania, Catania IT-95125, Italy. Topics: Cell Biology, Molecular Biology and Biochemistry. Thesis title "Triggering the apoptotic pathway by overexpression of the mitochondrial channel VDAC: investigation by imaging and flow cytometry".

TRAINING
2019: Functional Biology in flow cytometry and imaging techniques: ISCCA conference- Urbino July 2019
2021: Workshop "how to evaluate the mitochondria function" part of the "12-word conference on Targeting mitochondria.
2016: Workshop "High performance Confocal Raman Imaging and Correlative Microscopy". LOT-Quantum-Design and WITec. Bio-Nanotech Research and Innovation Tower- Catania
2016: Workshop "Microscopia Widefield e Confocale". Bio-Nanotech Research and Innovation Tower-Catania
2016: "Smart Science" conference. Catania-Italy
2012**:** Training PARTEC CYFLOW SPACE- Catania Italy.
2011: 9° summer school in Neuroscience "PAIN"- Catania Italy.
2012: Workshop: Direttiva 2010/63/EU sulla protezione degli animali utilizzati per scopi scientifici: quali implicazioni per la ricerca in Italia. Catania Italy.
2010**:** 8° summer school in Neuroscience "Schizophrenia and other psychoses: what can clinics learn from basic science"- Catania Italy.
2010: BioRad Workshop: "Gene expression analysis; from the beginnings to the state of the art. The relevance of reference genes, RNA quality and the importance of MIQE guidelines". Catania Italy

HONORS AND AWARDS
2018 –2024: National Scientific Qualification: Assistant Professor in "General Biochemistry" (05/E1)(BANDO D.D. 1532/2016)
2016**:** Short Term Mobility CNR Scholarship, at INSERM U 916 - Validation et Identification de Nouvelles Cibles en Oncologie (VINCO) Institut Bergonié, 229 cours de l'Argonne, 33076 Bordeaux (France).

Supervisor: Dr. L. Bresson-Bepoldin. Subject: Introduction to 3D cultures and "High Contenet Screening" and "drug profiling"in the biomedical research. Ref: Prot AMMCNT-CNR n° 19864.
2004-2005**:** Egide fellowship from *Ministère affaires étranger*. IECB - 2, Rue Escarpit 33607 Pessac. France. Advisor F. Ichas. Research topics: Developing a new cell-based method for monitoring molecular events during apoptosis based on intracellular change of phase of recombinant fluorescent probes.
2002-2003: Galileo fellowship. INSERM E347 and European Institute of Chemistry and Biology, IECB. Pessac Cedex. (France). Advisor F. Ichas. Research topics: Studying the structure-function relationship for hVADAC1 by using site-directed mutagenesis.
2001: Erasmus scholarship. INSERM EMI E 9929 and mitochondrial physiology-Université Victor Segalen Bordeaux 2. Advisors: Dr Francesca De Giorgi and JP. Mazat. Research topics: Training in the use of recombinant biosensors, immunostaining, imaging, and flow cytometry.

WORK EXPERIENCE

2015-2018: Contractual research assistant: The Bioimaging and Biostructure Institute (IBB) of CNR (National Research Council), U.O.S. Catania- Research on Neurodegenerative disease and diabetes
2013-2015: post-graduate fellow The Bioimaging and Biostructure Institute (IBB) of CNR (National Research Council), U.O.S. Catania. Research on Neurodegenerative diseases and diabetes.
2009: post-graduate fellow. The Bioimaging and Biostructure Institute (IBB) of CNR (National Research Council), U.O.S. Catania. Department of Chemical Sciences. University of Catania.
2008: Research assistant. Inositide Laboratory. Biotechnology and biological sciences research council (BBSRC). The Babraham Institute- Babraham Research Campus Cambridge, CB22 3AT. United Kingdom.
2007 : Research assistant. INSERM U 916 - Validation et Identification de Nouvelles Cibles en Oncologie (VINCO). Institut Bergonié, 229 cours de l'Argonne, 33076 Bordeaux, France.
2005-2007 : Postdoctoral researcher (5th PCRD). Commissariat à l'Energie Atomique (CEA)-SACLAY - Laboratoire Stress Oxydant et Cancer - DSV/DBJC/SMSM- Gif sur Yvette – France
2001-2002 : Junior scientist position -UCB-Pharma -Allée de la Recherche, 60-1070 Brussels- Belgium.

PARTECIPANT TO THE FOLLOWING PROJECTS

2009: PRIN 2009- 2009B7ASKP_005: Beta-amyloid monomers as an endogenous neuroprotective factor: mechanism of action and implications for the therapy of Alzheimer's disease.
2010-11: PRIN 2010-11 CSJX4F**:** Intracellular channels and pores: structural and functional studies provide new rules for engineering artificial channels.
2014-2018: PON 00 607-342 1644: Study of cytoprotective molecules to be used in Alzheimer Disease and in the treatment of Diabetes by pancreatic islet transplantation.
2015-2016: ARISLA **(**AriSLA – Fondazione Italiana di Ricerca per la Sclerosi Laterale Amiotrofica) **grant** to Dr. AngelaMessina (codex: ALSINTERACTORS). ANALYSIS OF SOD1-VDAC1 RELATIONSHIPS IN VITRO AND IN VIVO: NEW PARADIGMS FOR MOLECULAR INTERACTIONS
2016-2018: Bilateral CNR e la HAS (MTA) (Ungheria) Pappalardo/Kallay Title: Derivati peptidici nanostrutturati ad uso teranostico nei sistemi biologici. Peptide based nanostructures as theranostic tools for biological systems. CODICE CUP: B62F16000730001
2018-2019: SPIN OFF "TECNOLOGIE CHIMICHE ABILITANTI PER LA SALUTE E L'AMBIENTE", CUP: G67B17000150009, CIP: 2014.IT.05.SFOP.014/3/10.4/9.2.10/0003,
2022: ARS01_00693 "BONE++ - Svil MicroNanotecn per Predit, Diagn,Terapia e Tratt Rigen delle Alteraz Patol Osso e Osteo-Articol" - Programma PON «R&I» 2014-2020. CUP B66G18000200005
2016-2021: INCIPIT Grant agreement ID: 665403 Participation to the EU project INCIPIT. COFUND Marie Skłodowska-Curie Actions GRANT AGREEMENT NUMBER — 665403 — INCIPIT. Total cost of the project 7.702.947.44 €.

TEACHING AND TUTORING EXPERIENCE

2022: Teaching activity and member of the examination board regarding the following courses "Aspetti Biomolecolari di Patologie degenerative" at Department of Biological science, section of biochemistry and molecular biology. Università di Catania. Catania. Italy.University of Catania

2022: Workshop: CNR-IC e ISS, dip. DAMSA, rep. MBM: Mitochondria in life and diseases.
2015-2020: Mentorship of degree and doctoral dissertations. Supervisor of 5 Masters or bachelor's Theses and 1 "spin off" student.
2010-2016: Tutoring activity and member of the examination board (nomina a cultore delle materia in Molecular Biology- BIO11) regarding the following courses "Tecniche Biochimiche e Biomolecolari" and "Biologia Molecolare con elementi di Bioinformatica" at Department of Biological science, section of biochemistry and molecular biology. Università di Catania. Catania. Italy.University of Catania
2009**:** tutoring for the project DM20919 (Lab. Pubblico Privato)- "experimental procedures of cellular and molecular biology" CNR- IBB-UOS). Catania. Italy. Prot 0002474.

EDITOR ND REVISOR ACTIVITY

2020: Guest Editor for the special issue "Regulating Energy Balance: Uncovering the Involvement of Neurotrophins" Life (IF 2.991, ISSN 2075-1729)
2020-2022: Editorial Board, of Life (IF 2.991, ISSN 2075-1729).
Regularly revising peer review articles for numerous journals.

Collaborations

Established long-standing cooperation with several outstanding groups, as witnessed by the scientific production: V. DePinto (unict), E. Rizzarelli (unict), A. Copani (unict), G. Lazzarino (unict), D. Fregona (unipd), PV. Piazza (INSERM), L. Bepoldin (CNRS), C. Satriano (unict), N. Micali (CNR), C. Martini (unipi). F. Nicoletti (uniroma),

COMPETENCES

LANGUAGES.
French: bilingual (C2).
English: fluent in speaking, reading, and writing (C1).
TECHNICAL SKILLS:
Biochemistry: protein's extraction, ELISA, Westerns Blots, Infrared Odissey LICOR system, enzymatic and colorimetric essays. Detection of cellular thiols.
Molecular biology: cloning, PCR, DNA purification, sequencing, site-directed mutagenesis, Southern Blotting. Nucleic acids labelling with P32 and related techniques. Real Time PCR
Cell biology: culture of mammalian cells, transient and stable transfection, cellular counting,
Imaging, HCS and HTS: stained or unstained in vivo time-lapse, FRET, FRAP (Metafluor, Metamorph, Zeiss, LAS AF, Fluoview 1.7 software). High throughput live imaging: IncuCyte.
Microscopy: Confocal (ZEISSLSM500 and OlympusFV100), Epifluorecence (Zeiss Axiovert, Leica DMI 6000)
Flow Cytometry: (Partec CyFlo ML with Flomax software and BD Facscalibur with Cell Quest software).
Immunohistochemistry and Immunocytochemistry: Microtome and Cryostate. Processing and staining of tissues and cells samples. Immunofluorescence.
Transgenic mice models: (Knock out and knock in).
Computer: competent with most common writing and elaborating and imaging computer software.

Patent:

M.F. Tomasello, J. Dessolin, L. Lartigue, L. Schembri, P. Piazza, F. De Giorgi, F. Ichas. *Method for the demonstration of a molecular event in a cell by means of fluorescent marker proteins*. International Patent extension. Publication number: US2007042445. Date of publication: 22 /02/2007