

**PERSONAL INFORMATION****Pennisi Rosamaria**

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Sex Female | Date of birth 23/07/1984 | Nationality Italian

**OCCUPATIONAL FIELD****MOLECULAR VIROLOGY, MYCROBIOLOGY, MOLECULAR BIOLOGY, CELLULAR BIOLOGY.****Current Position**

2019-2021

Post-Doc researcher at Shenzhen International Institute for Biomedical Research (SIIBR)  
140Jinye Ave. Building A10, 2nd Floor, Dapeng New District Shenzhen, Guangdong, China.**Accademic position**

2017/2018

Honorary Fellow in the Molecular Microbiology (SSD BIO/19)  
at the Dep. of Chemical Biological Pharmaceutical and Environmental Sciences,  
University of Messina  
Viale Ferdinando Stagno D'Alcontres, 31  
98166 Messina  
SSD BIO/19

2017/2018

Honorary Fellow in the Virology (SSD BIO/19)  
at the Dep. of Chemical Biological Pharmaceutical and Environmental Sciences,  
University of Messina  
Viale Ferdinando Stagno D'Alcontres, 31  
98166 Messina**WORK****EXPERIENCE**

October 2015-September 2018

PhD in " Applied Biology and Experimental Medicine, XXXI cycle ,  
Molecular Virology Laboratory, Dep. of Chemical Biological Pharmaceutical and Environmental  
Sciences, University of Messina  
Viale Ferdinando Stagno D'Alcontres, 31  
98166 Messina  
Title of project: Study of intracellular signaling network triggered by HSV- 1 and graphene based  
nanomaterials: their use as potential tools in gene therapy.  
Supervisor : Prof.ssa Maria Teresa Sciortino  
Discussion of the doctoral thesis: 15 November 2018  
Thesis evaluation: Excellent

Maggio 2018-Giugno 2018

RESEARCH HOSTING INSTITUTE: International Agency for Research on Cancer World  
Health Organization (IARC) Lyon, France  
Title of project: Regulation of protein kinase R during HSV-1 replication associated to  
development of pathologic processes  
Supervisor: Dr. Tommasino Massimo

August 2017-December 2017	<p><b>RESEARCH</b>  <b>HOSTING INSTITUTE:</b> l'International Institute for Biomedical Research", Shenzhen, China  <b>Component of Research Units:</b> Research &amp; Mobility 2016 " Signalosome complex activation by new Nanotherapeutic agents in viral and cancer treatment.  <b>Supervisor :</b> Professor Grace Zhou</p>
January 2016- February 2016	<p><b>RESEARCH</b>  <b>HOSTING INSTITUTE</b> Department of Virology , University of Turku, Finland  <b>Title of project:</b> HSV-1 INFECTION AND REGULATION OF CELL CYCLE.  <b>Supervisor:</b> Professor Veijo Hukkanen.</p>
November 2014- September 2015	<p><b>RESEARCH</b>  Molecular Virology Laboratory  Dep. of Chemical Biological Pharmaceutical and Environmental Sciences  University of Messina</p> <p><b>Supervisor:</b> Professor Maria Teresa Sciortino</p> <p><b>AREAS OF INTEREST:</b>  Immunological aspects of herpesvirus infections.  Studies of cyclodextrins carriers as drug or nucleic acid delivery system for cancer treatment and imaging.</p>
1 March. 2013–October 2014	<p><b>Master internship</b>  <b>HOSTING INSTITUTE</b>  AOOR PAPARDO-PIEMONTE, Messina (Italia)</p> <p><b>Knowledge , skills and competences acquired:</b>  Molecular diagnostics to detect HCV RNA, HPV, DNA HIV, RNA,HBV DNA, CMV DNA,Entero RNA ,Rosolia RNA, Varicella DNA, HHV 1/2 DNA, EBV DNA,JCV DNA, HHV-6 DNA, HHV8 DNA, mediante Real Time PCR. Elisa Test per HIV Ab, HCV Ab</p>
<b>EDUCATION AND TRAINING</b>	
15 November 2018	<p><b>PhD in " Applied Biology and Experimental Medicine, XXXI cycle ,</b>  Molecular Virology Laboratory, Dep. of Chemical Biological Pharmaceutical and Environmental Sciences, University of Messina, ITALY  <b>Title of project:</b> Study of intracellular signaling network triggered by HSV- 1 and graphene based nanomaterials: their use as potential tools in gene therapy.  <b>Supervisor :</b> Professor Maria Teresa Sciortino  <b>Thesis evaluation:</b> Excellent</p>
January 2015	<p><b>Professional abilitation as Biologist</b>  Dep. of Chemical Biological Pharmaceutical and Environmental Sciences  University of Messina  Viale Ferdinando Stagno D'Alcontres,31  98166 Messina</p>
October 2012 - October 2014	<p><b>Master degree in Biology</b>  Dep. of Chemical Biological Pharmaceutical and Environmental Sciences  University of Messina  Viale Ferdinando Stagno D'Alcontres,31  98166 Messina</p> <p><b>Title of project:</b>IDENTIFICATION OF LATENT TUBERCULOSIS INFECTION  <b>Supervisor</b> Professor Maria Teresa Sciortino  <b>Evaluation:</b> 110/110 cum Laude</p>
September 2008 - October 2012	<p><b>Bachelor Degree in Biological Science</b>  Dep. of Chemical Biological Pharmaceutical and Environmental Sciences  University of Messina  Viale Ferdinando Stagno D'Alcontres,31-98166 Messina  © Unione europea. 2002-2013   <a href="http://europass.cedefop.europa.eu">http://europass.cedefop.europa.eu</a></p>

**Title of project:** The role of miRNA in HCV replication and putative application in antiviral therapy

**Supervisor** Professor Maria Teresa Sciortino

**Evaluation** 104/110

September 1997 - June 2003

**High school diploma**

Liceo classico "Gulli e Pennisi", Acireale (CT)  
(Italy) Evaluation: 77/100

## PERSONAL SKILLS

**Mother tongue** Italian

OTHER LANGUAGE	UNDERSTANDING		SPEAKING		WRITING
	LISTENING	READING	SPOKEN INTERACTION	SPOKEN PRODUCTION	
ENGLISH	B2	B1	B1	B1	B2

Levels: A1/A2: Basic user -B1/B2: Independent user -C1/C2 Proficient user  
Common European Framework of Reference for Languages

## PROFESSIONAL SKILLS –

- ability to produce scholarly high-quality written work and research papers
- ability to use sources effectively, to gather and organize information, to analyze text, data and theory.
- ability to work to high standards, to take initiative and responsibility, to collaborate well with others
- ability to identify and frame key problems, to think critically and analytically.

## BIOSKETCH

Pennisi Rosamaria, PhD, is a Post-Doc researcher at the Shenzhen International Institute for Biomedical Research (China). She received her PhD in " Applied Biology and Experimental Medicine" from the University of Messina (Italy) in 2018. During her PhD, she developed a keen interest in the host-virus interaction and in the innate immune response to viral infection by studying the potential role of Herpes simplex proteins in the regulation of antiviral protein, PKR. She performed her research activity in the Molecular Virology laboratory in Messina collaborating also with a chemical-biology group to the development of potential chemical nanoparticle therapeutics carriers. She spent a considerable time abroad (IARC in Lyon, SIIBR in Shenzhen and Department of Virology, University of Turku in Finland) studying the network of cancer-related cellular signaling pathways activated by viral and non-viral vectors. She has good experience in the production of stable transfected cells and in the molecular biology techniques (western blot analysis, transfection and cell proliferation assay) as well as in cloning, recombinant DNA technology, PCR and qPCR analysis, plasmid purification and viral infection. Additionally, she is able to use the statistical tools to analyze data. She is co-authored of 13 research papers in international peer-review journal. She is currently working on innate immune response to the herpes simplex virus infection.

## JOB RELATED SKILLS

- Cell cultures
  - Production of viral stock
  - Cellular signalling pathways
  - Experimental infection *in vitro*
  - Standard plaque forming assay
  - Trypan blue Assay
  - Acridine Orange Assay
  - DNA recombinant techniques
  - Cloning and production of recombinant proteins
  - Exosome purification
  - Nucleofection and Transfection of eukaryotic cells
  - Extraction, purification and quantitation of nucleic acids and proteins
  - PCR, RT-PCR, real time PCR analysis
  - SDS-PAGE, Western Blotting
  - Immunoprecipitation, Immunofluorescence assay
  - Spectrophotometric analysis
  - NanoDrop spectrophotometer (Thermo Scientific)
  - Thermal cycler and Cepheid Smart Cycler II System (Cepheid Europe, France) for Real-Time PCR, Nucleofector 4D (Lonza)

**COMPUTER SKILL AND COMPETENCE**

Microsoft Office  
Windows XP, Vista, 7, 8, 10.  
Photoshop  
Graphpad Prism  
ImageJ

**DRIVING LICENCE**

B

**Conferences and seminars:**

- SEMINAR : " Malattie infettive : il Laboratorio moderno tra diagnosi, monitoraggio e screening" 22.05.2013 Auditorium Papardo – AOOR Papardo-Piemonte , Messina
- WORKSHOP: Il Biologo: " figura dinamica nel mondo del lavoro" 6.11.13 Aula Magna "Vittorio Ricevuto" University of Messina
- SEMINAR : "Nuove piattaforme genetiche nella ricerca e nella diagnostica." Diatech Labline. 23 Settembre 2015 Aula Magna "Vittorio Ricevuto" University of Messina.
- SEMINAR " Entomologia forense "18.6.2015 Aula Magna "Vittorio Ricevuto" University of Messina
  - WORKSHOP: " L'Università di Messina e il Distretto Tecnologico Sicilia Micro e Nano Sistemi per lo Sviluppo di Micro e Nano-Tecnologie e Sistemi Avanzati per la Salute dell'uomo:Risultati e Prospettive". 4 Dicembre 2015 Aula Magna del Rettorato, University of Messina
- WorkShop: Smart Science 2016 " L'innovazione nelle biotecnologie tra ricerca e diagnostica", Relatrice dell'intervento: "Exploring the First Line of Defense by HSV-1: Sequential Control of the Innate Immune System Mediated by Viral Proteins" , Catania 25-26 Febbraio 2016
- SEMINAR : "A step into gene editing: the CRISPR-Cas9 revolution" 15 Aprile 2016 Dipartimento Di Scienze Biomediche, Odontoiatriche E Delle Immagini Morfologiche E Funzionali. University of Messina . Relator: Prof. Elisabetta Verderio-Edwards della Nottingham Trent University, Nottingham (UK).
- International Retreat : title of the presentation: "A NEW ROLE FOR HSV-1 Us3 AND UL13 PROTEINS IN THE REGULATION OF PKR" 14 November 2017 at the International Institute of Biomedical Research, Shenzhen (China)



## Paper:

1. Venuti A., Pastori C., **Pennisi R.**, Riva A., Sciortino M.T., Lopalco L. . (2016) Class B  $\beta$ -arrestin2-dependent CCR5 signalosome retention with natural antibodies to CCR5. *Sci Rep.* 23;6:39382. doi: 10.1038/srep39382. (IF: 4.36)
2. Conte C., Scala A., Siracusano G., Sortino G., **Pennisi R.**, Piperno A., Miro A., Ungaro F., Sciortino M.T., Quaglia F., Mazzaglia A. (2016) Nanoassemblies based on Non-ionic Amphiphilic Cyclodextrin hosting Zn(II)-Phthalocyanine and Docetaxel: Design, Physicochemical Properties and Intracellular Effects. *Colloids Surf B Biointerfaces.* 1;146:590-7. doi: 10.1016/j.colsurfb.2016.06.047. ( IF: 4.24)
3. Colao I., **Pennisi R.**, Venuti A., Nygårdas M., Heikkilä O., Hukkanen V., Sciortino M. T. (2017). The ERK-1 function is required for HSV-1-mediated G1/S progression in HEP-2 cells and contributes to virus growth. *Scientific Reports* vol. 7, p. 1-13, ISSN: 2045-2322. doi: 10.1038/s41598-017-09529-y (co-first author) ( IF: 4.36)
4. Bisignano C., Mandalari G., Smeriglio A., Trombetta D., Musarra Pizzo M., **Pennisi R.**, Sciortino M. T. (2017) Almond skin extracts exhibited antiviral activity against Herpes Simplex Virus type 1. *Viruses*, 9(7), 178; doi:10.3390/v9070178 (IF: 3.09)
5. Mazzaglia A., Micali N., Villari V., Zagami R., **Pennisi R.**, Mellet C. O., Fernández J. M. G., Sciortino M. T, Scolaro L.M. (2017). A novel potential nanophototherapeutic based on the assembly of an amphiphilic cationic  $\beta$ -cyclodextrin and an anionic porphyrin. *J. Porphyrins Phthalocyanines* 21,398. <https://doi.org/10.1142/S108842461750033X> ( IF: 1.17)
6. Mazzaglia A , Scala A., Sortino G.,Sciortino M.T.,**Pennisi R.**, Pizzo M.,M., Neri G., Grassi G., Piperno A.. (2018) Intracellular trafficking and therapeutic outcome of multiwalled carbon nanotubes modified with cyclodextrins and polyethylenimine. *International journal of molecular sciences.* 19, Issue 11. doi: 10.3390/ijms19113365 ( IF: 4.24)
7. Venuti A, Pastori C, Siracusano G, **Pennisi R.**, Riva A, Tommasino M, Sciortino MT, Lopalco L. (2018). The abrogation of phosphorylation plays a relevant role in the CCR5 signalosome formation with natural antibodies to CCR5. *VIRUSES*, vol. 10, p. 1-14,ISSN:1999-4915,doi:10.3390/v10010009 (IF: 3.09)
8. Piperno A,Scala A, Mazzaglia A ,Neri G, **Pennisi R.**, Sciortino MT, Grassi G. (2018) Cellular Signaling Pathways Activated by Functional Graphene Nanomaterials. *International Journal of Molecular Sciences* 19(11):3365 – doi: 10.3390/ijms19113365 (IF:3.11)
9. Mandalari G., Bisignano C., Smeriglio A., Denaro M., Musarra-Pizzo.M., **Pennisi R.**, Mancuso, F, Ferro S., Trombetta D., Monforte A.M., Sciortino M.T., De Luca L. (2019) Simulated human digestion of N1-aryl-2 arylthioacetamidobenzimidazoles and their activity against Herpes-simplex virus 1 in vitro *PLOS ONE.* . <https://doi.org/10.1371/journal.pone.0216384>. (IF: 2.766)
10. Venuti A, Musarra-Pizzo M, **Pennisi R.**, Tankov S, Medici M A, Mastino A, Rebane A, Sciortino M T. (2019) HSV-1 stimulates miR-146a expression in an NF- $\kappa$ B-dependent manner in monocytic THP-1 cells: enrolment of an HSV-1\EGFP mutant virus. *Scientific Reports* <https://doi.org/10.1038/s41598-019-41530-5>.( IF: 4.36)
11. Piperno A, Zagami R, Cordaro A, **Pennisi R.**, Musarra-PizzoM, Scala A, Sciortino M T, Mazzaglia A. Exploring the entrapment of antiviral agents in hyaluronic acid cyclodextrin conjugates. (2019) *Journal of Inclusion Phenomena and Macrocyclic Chemistry.* doi:10.1007/s10847-018-0829-6. ( IF: 1.316)
12. Piperno A, Mazzaglia A, Scala A, **Pennisi R.**, Zagami R, Neri G,Torcasio S,Rosmini C, Mineo P, Potara M, Focsan M, Astilean S, Zhou G, Sciortino M. (2019) Casting Light on Intracellular Tracking of a New Functional Graphene-Based MicroRNA Delivery System by FLIM and Raman Imaging. *ACS Applied Materials and Interfaces.* doi: 10.1021/acsami.9b15826 (IF: 8.456)
13. Musarra-Pizzo M., Ginestra G., Smeriglio A., **Pennisi R.**, Sciortino M.T., Mandalari G. (2019) The Antimicrobial and Antiviral Activity of Polyphenols from Almond (*Prunus dulcis* L.) Skin. *Nutrients.* <https://doi.org/10.3390/nu11102355>. (IF: 4.51)
14. **Pennisi R.**, Musarra-Pizzo M., Lei Z., Zhou G. Sciortino M.T. VHS, US3 and UL13 are required for Herpes Simplex Virus-Induced modification of protein kinase R. *Sci Rep* 10, 5580 (2020). <https://doi.org/10.1038/s41598-020-62619-2> ( IF: 4.36)

15. Musarra-Pizzo M , **Pennisi R**, Ben-Amor I, Smeriglio A, Mandalari G, Sciortino M T. In vitro anti-HSV-1 activity of polyphenol-rich extracts derived from pistachios kernels (*Pistacia vera* L.). *Plants*. doi: [10.3390/plants9020267](https://doi.org/10.3390/plants9020267)

## Abstract

1. Venuti, C. Pastori, A. Riva, **R. Pennisi**, M.T. Sciortino, L. Lopalco: Ccr5 Modulation Pathway Induced By Antibodies To Ccr5 In Long Term Controlling Hiv Infection. 13<sup>th</sup> Annual Congress Of The Italian Society For Virology. Orvieto 14-16 September 2015
2. **R. Pennisi** , M.G. Ceraolo , D. Lombardo , A. Mastino , B. Roizman and M.T. Sciortino: Regulation of protein kinase R during HSV-1 replication: involvement of viral proteins Us3 and UL13. 43<sup>o</sup> Congresso Nazionale della Società Italiana di Microbiologia (SIM) ,Napoli 27-30 September 2015 (selected among the three best posters for the "micro-organism / guest relations" session)
3. Scala A., Piperno A., Neri G., Grassi G., **Pennisi R.**, Sciortino M.T., Sortino G., Mazzaglia A. (2015). Nanoplatforms based on Cyclodextrin- Polyethyleneimine- Multiwalled Carbon Nanotube Conjugates for Gene and Drug Delivery.XII Congresso Nazionale di Chimica Supramolecolare (Supramol 2015). p. 21, Giardini Naxos (ME), 27-30 September 2015
4. Assunta Venuti , Claudia Pastori , **Rosamaria Pennisi** , Agostino Riva , Maria Teresa Sciortino , Lucia Lopalco .  $\beta$ -arrestins specific siRNA inhibits CCR5 signalosome mediated by human serum antibodies in long-term HIV infected subjects. 8<sup>o</sup> Congresso Nazionale ICAR 2016, Italian Conference on AIDS and Antiviral Research - Milano, 6-8 June 2016 – Università Milano-Bicocca
5. Assunta Venuti , Claudia Pastori , **Rosamaria Pennisi** , Agostino Riva , Maria Teresa Sciortino , Lucia Lopalco . Involvement of  $\beta$ -arrestins in CCR5 modulation pathway mediated by natural human antibodies. Emerging Issues in Oncogenic Virus Research San Pietro in Bevagna, Italy, 15-19 June 2016
6. **Rosamaria Pennisi** Assunta Venuti, Maria Musarra Pizzo, Giusi. Melita, Enrico. Caragliano, Daniele. Lombardo, Veijo Hukkanen, Maria Teresa Sciortino. Cell Cycle progression during HSV- 1 replication require ERK1 function in HEP-2 cells. SIV- ISV 25-28 June 2017. Milano
7. Smeriglio, Antonella, Bisignano, Carlo, Mandalari, Giuseppina, Trombetta, Domenico, Musarra Pizzo, Maria, **Pennisi, Rosamaria**, Sciortino, Maria Teresa (2017). Almond Skin Extracts Exhibited Antiviral Activity Against Herpes Simplex Virus Type 1. In: Abstracts Book. p. 1-2, University of Vienna, 20-21 June 2017
8. G Mandalari, C Bisignano, Maria Musarra Pizzo, **Rosamaria Pennisi**, Anna Maria Monforte, Stefania Ferro, Laura de Luca e MT Sciortino (2017). Novel N1-aryl-2-arylthioacetamido- benzimidazoles were effective against herpes simplex virus 1 (HSV-1) replication in vitro. Genova, Palazzo Ducale 27-30 September 2017
9. A Cordaro, S M Torcasio, A Scala ,A Piperno, G Grassi, R Zagami, A Mazzaglia, P G Mineo, **Rosamaria Pennisi** M Musarra Pizzo, Mt Sciortino. (2018) Micro-RNA nanocarrier based on graphene engineered with cationic cyclodextrins. Catania 9-10 February 2018, Scuola Superiore Di Catania, Villa San Saverio , Università Degli Studi Di Catania
10. **Rosamaria Pennisi**, Assunta Venuti, Maria Musarra Pizzo, Giusi Melita, Maria Teresa Sciortino (2018) -Regulation of PKR expression by HSV-1: Potential approach in cancer therapy -5th Workshop on Emerging Issues in Oncogenic Virus Research- San Pietro in Bevagna, Italy, 30 May to 3 June 2018
11. Maria Musarra-Pizzo, Assunta Venuti, **Rosamaria Pennisi**, Ana Rebane, Maria Teresa Sciortino (2018) Identification the NF- $\kappa$ B-related proteins recruited during EGFP tagged HSV-1 replication in THP-1 cells: contribution of miRNA 146a as regulatory key in NF- $\kappa$ B activation. 13th Mini-Herpesvirus Workshop 5 October 2018 Heinrich Pette Institute, Hamburg.
12. Maria Musarra Pizzo, **Rosamaria Pennisi**, Antonella Smeriglio, Giuseppina Mandalari, Maria Teresa Sciortino, Giuseppe Bisignano: Pistachios (*Pistacia vera* L.) are active against HSV-1 replication. 46<sup>o</sup> Congresso Nazionale della Società Italiana di Microbiologia (SIM), Palermo 27-30 September 2018.
13. Maria Musarra-Pizzo, **Rosamaria Pennisi**, Antonella Smeriglio, Giovanna Ginestra, Maria T. Sciortino, Giuseppina Mandalari. Polyphenol-rich extracts derived from raw pistachios (*Pistacia vera*, L.) exhibited antiviral activity against HSV-1. 47<sup>o</sup> Congresso Nazionale della Società Italiana di Microbiologia (SIM), Roma dal 18 al 21 September 2019.

## ANNEXES

- 
- ECDL Standard CERTIFICATION
- ECDL IT-Security CERTIFICATION



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REFERENCES

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