

CV SIMONA PALADINO

CURRENT POSITION

Associate Professor of Applied Biology at University of Naples Federico II - School of Medicine & Surgery

URL for web site: <https://www.docenti.unina.it/simona.paladino>

EDUCATION

at University of Naples Federico II:

October 1997: Doctor degree summa cum laude in Biological Sciences

February 2003: PhD in Cellular and Molecular Biology & Pathology

October 2007: Specialty Diploma summa cum laude in Clinical Pathology

BRIEF CAREER OVERVIEW

2003-2004: Postdoctoral Fellow, Pasteur Institute, Dept. Biologie Cellulaire et Infection, Paris

2005-10/2007: Senior Research Fellow, CEINGE Institute, Naples

11/2007-10/2014: Researcher of Applied Biology, University of Naples Federico II, Naples
Assistant Professor of Cell and Molecular Biology, School of Medicine and Surgery

2007-2018: Co-Director of Imaging Microscopy facility at CEINGE Institute

Since 11/2014 - : Associate Professor of Applied Biology, University of Naples Federico II

2007-2018: Co-Director of Imaging Microscopy facility at CEINGE Institute

2014-2019: Member of Council of School of Medicine & Surgery, University of Naples Federico II

Since 2019- : Visiting Professor, “Dip. Studi Europei Jean Monnet” in partnership with International University of Gorazde (IUG) – Course of Medicine & Surgery

Since 03/2019 : Member of faculty board of the doctorate in Molecular Medicine, University of Naples Federico II

Since 03/2019- : Member of faculty board of the doctorate in System Medicine, European School of Molecular Medicine (SEMM)

Since 11/2019- : Member of faculty board of the Specialty School in Medical Genetics, University of Naples Federico II

Since 11/2019- : Coordinator of Teaching Course in “Molecular and Cellular Biology”, 1st year of Medicine and Surgery Course, University of Naples Federico II

Since 11/2021- : Coordinator of Teaching Course in “Molecular and Cellular Biology” at University of Naples Federico II for:

- Medicine and Surgery Course technological curriculum

- Medicine and Surgery Course, English curriculum

Since 11/2021- : Coordinator of Integrated Teaching Course in “Biomolecular Fundamentals of life”, Nursing Course, University of Naples Federico II

Since 11/2021- : Member of faculty board of the Specialty School in Medical Physics, University of Naples Federico II

Personal statement

My scientific activity was mostly dedicated to study the molecular mechanisms regulating membrane trafficking and organelle biogenesis. Currently, the interest of my research group is to study these mechanisms in pathophysiological contexts to understand how their dysfunction may lead to the development of diseases. Recently, we have highlighted

the role of the inositol-phosphatases, Synj1 and Fig4 (whose mutations have been associated with the hereditary form of Parkinson's and with the motor and sensory CMT4J neuropathy, respectively) in regulating, at different steps, homeostasis and functions of the endolysosomal and exocytic compartments, identifying the cellular pathways altered in these neurological disorders. Recently, we have shown that endolysosomal trafficking is altered in Down syndrome at early stages of development, pointing out the critical role of Synj1 in DS pathogenesis.

In addition, we take advantage of our huge experience in confocal microscopy and in advanced imaging techniques for studying cellular and molecular dynamics.

Finally, she established a close collaboration with the group of neurologists at the Univ. of Naples Federico II (C Criscuolo, G De Michele, L Santoro), the Univ. of Salerno (P Barone and MT Pellecchia), and the Univ. of Campania L Vanvitelli (M Melone) and with the cell biology group led by P. Remondelli (Univ. Salerno) and two chemistry groups of Federico II led by prof Prof. Giancola and Prof D. Montesarchio creating a network in which clinicians and basic researchers work in perfect synergy obtaining fruitful results and aiming to develop novel therapeutic approaches for neurological disorders.

RESEARCH EXPERIENCE

1996-1997: Training student, University of Naples Federico II Dept. of Cell and Molecular Biology & Pathology. Prof. L. Nitsch

Subject of Study: The role of caveolin1 in the sorting of GPI-anchored proteins.

1999-02/2003: PhD student, University of Naples Federico II, Dept. of Cell and Molecular Biology & Pathology. Dr. Zurzolo

Subject of Study: Mechanisms of protein sorting and trafficking in polarized epithelial cells.

05/2002-07/2002: Visiting scientist, University of Massachusetts Medical School, Biomedical imaging group. Prof. K. Fogarty

Subject of Study: Imaging of protein trafficking in living cells.

2003-2004: Post-Doctoral fellow, Pasteur Institute (Paris), Dept. Biologie Cellulaire et Infection: Unité de Traffic Membranaire et Pathogenese, Dr. C. Zurzolo; Dynamic Imaging Microscopy platform, Dr. S. Shorte.

Subject of Study: The role of lipids microdomains (rafts) in the sorting, trafficking and membrane organization of GPI-anchored proteins in polarized epithelial cells through an imaging approach.

09/2004-10/2004: Visiting scientist National Centre for Biological Sciences, Bangalore, India. Dr. S. Mayor.

Subject of Study: Studying protein dynamics in epithelial cells using FRET techniques.

2005-10/2007: Senior research fellow, CEINGE Institute (Naples).

Subject of Study: Protein trafficking in living polarized epithelial cells.

Implementation of an imaging microscopy facility.

11/2007-11/2014: Researcher, Univeristy of Naples Federico II

Subject of Study: Mechanisms of membrane trafficking and epithelial cell polarity.

11/2014 - today: Associate Professor of Applied Biology, Univeristy of Naples Federico II

Main research interest: Membrane trafficking in health and disease.

ACHIEVEMENTS

Scientific outputs: 74 publications in international peer-review journals including 1 book chapter (edited by Elsevier and ranked by Scopus) citations: 2983 (Scopus)/2495 (wos); H-index 30 (Scopus)/ 30 (wos).

Awards:

- 2 JCB Highlights for quality and novelty of studies (by R Tuma, N Lebrasseur)

- Comment by S. Schuck & K. Simons (JCB 2006 vol 172(7) p. 963-965)
 - Classification top 0.5% in cell Biology for the article "Paladino et al JCB 2006" by Faculty of 1000 (F1000), which assigns the most important research in Biology and Medicine (<https://facultyopinions.com/prime/1003073>)
- 2020:** National Scientific Qualification as Professor of Applied Biology

GRANTS AS PI

2007-2010 My first AIRC Grant (MFAG): "Role of rafts and caveolins in the sorting and signalling of growth factor receptor involved in thyroid cancer"

2012 FARO (Finanziamenti per l'Avvio di Ricerche Originali): "Studio dei meccanismi molecolari della neuropatia Charcot-Marie-Tooth mediante nuovi approcci biotecnologici".

2017 STAR (Sostegno Territoriale alle Attività di Ricerca): "LipEREx, Lipids in ER export, co-PI with Dr. Rossella Venditti".

2019-2023 POR Funding from Campania Region "Realizzazione di Progetti di Sviluppo/Potenziamento del sistema regionale delle infrastrutture di ricerca per la lotta alle patologie oncologiche", approved on February 2018, Coordinator Dr. D. Corda (CNR IBP), Responsabile for Ceinge Institute Prof. F. Salvatore, co-Responsible for the enhancement of technological infrastructures in the field of cellular imaging.
Project title: "Campania Imaging Infrastructure for Research in Oncology (CIRO)".

2014-2020 POR Campania FESR "SATIN" to DMMBM as Unit's PI

2014-2020 PON "PROSCAN" to DMMBM, as Unit's PI

OTHER ACHIEVEMENTS

- Editorial evaluation activity

Since 2010: Ad hoc Reviewer for international Journals

2016-05/2020: Review Editor of Frontiers in Cell and Developmental Biology and Frontiers in Molecular Biosciences, Section: Cellular Biochemistry

Since 06/2020: Associate Editor of Frontiers in Cell and Developmental Biology and Frontiers in Molecular Biosciences, Section: Cellular Biochemistry

Since 2008: Ad hoc Reviewer for international Journals

- Scientific and evaluation boards:

Since 2010: Member of scientific evaluation Committee for research fellowship assignment

Since 2012: Cineca referee for project evaluation

Since 2018: Referee for European project evaluation

Since 2018: Managing board member of ABCD (Italian Scientific community of Cell Biology and Development)

Since 2018: Member of Scientific Advisory Board of Neapolitan Brain Group Association

Since 2018: Component of Commissions for assignment of Academic Researcher position (RTDA, RTDB) and "First Technologist" at CNR

- Meeting organizer

2009: ABCD meeting "Membrane trafficking and organelle biogenesis", Bertinoro, 3-4 April, Co-organizer

2010: ABCD "Membrane trafficking and organelle biogenesis", Siena, 16-17 April, Co-organizer

2011: "1st French-Italian Joint Meeting on Subcellular Trafficking", Padua, 25-28 May, Member of the Organizing Committee

2014: XVI AIBG meeting, Naples, 27-28 September, Member of the Organizing Committee

2018: ABCD meeting “Membrane trafficking and organelle biogenesis”, Sorrento, Co-organizer

2020: ABCD-SIBBM National PhD meeting, Salerno, 19-21 march, Co-organizer, dismissed for COVID-19

2022: ABCD-SIBBM National PhD meeting, Salerno, 24-26 march, Co-organizer

- Oral communications

Speaker at international conferences and workshops, in departmental seminars and in other institutes (Pasteur, CEINGE, University of Salerno, IBP CNR, University of Rome La Sapienza).

- Professional Membership

Since 2007: ABCD (Italian Scientific community of Cell Biology and Development)

Since 2009: AIBG (Italian Scientific community of Biology and Genetics)

Since 2014: CIRN (Interuniversity Centre of Research in Neuroscience)

Since 10/2015: CIB (Interuniversity Biotechnologies Consortium)

TEACHING ACTIVITIES

- For *undergraduate students*:

Since 2007: Teacher in different bachelor and master courses, School of Medicine and Surgery, University of Naples Federico II

Since 2006: Supervisor of bachelor and master students

Since 2010: Member of committee of bachelor and master graduation

Since 2019: Coordinator of Molecular and Cellular Biology course, master in Medicine and Surgery, University of Naples Federico II

Since 2021: Coordinator of Molecular and Cellular Biology course, master in Medicine and Surgery (English Course), University of Naples Federico II

Since 2021: Coordinator of Molecular and Cellular Biology course, master in Medicine and Surgery (Technological curriculum), University of Naples Federico II

Since 2021: Coordinator of Coordinator of Integrated Teaching Course in “Biomolecular Fundamentals of life”, 1st year of Nursing Course, University of Naples Federico II

- For *graduate students*:

Since 2003: Tutor of PhD Students

2005: Teacher in the course “Biologie Moleculaire de la Cellule” for PhD programme, Pasteur Institute (Paris)

Since 2009: Teacher in different PhD Courses (Univ. of Naples Federico II, SEMM, Univ. of Catanzaro Magna Grecia)

Since 2013: Supervisor of PhD Students

Since 2013: External referee for PhD thesis evaluation in different PhD programmes

Since 2013: Member of the committee of PhD graduation

Full list Publications at:

<https://pubmed.ncbi.nlm.nih.gov/?term=paladino+s&sort=date&size=50&filter=simsearch1.fha>