

## *CURRICULUM VITAE*

### **VALENTINA PALLOTTINI**

#### **Personal data:**

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- Place and date of birth: Taranto, November 4, 1966
- Marital status: Married, two sons (29 and 25 years old)

#### **Education and Professional Qualifications:**

- 1990 Master Degree in Biological Sciences, University of Rome "Sapienza," Department of Cellular and Developmental Biology. Thesis title: "Study of inositol phosphates in the rat liver during liver regeneration." Supervisor: Prof. M. T. Mangiantini.
- 1991 Professional qualification as a Biologist from the University of Rome "La Sapienza" and registration in the National Register of Biologists (registration number 038446).
- 1991 Master Degree in Neurobiology from the University of Rome "La Sapienza."
- 2013 Qualified as an Associate Professor in BIOS-06/A.
- 2017 Qualified as a Full Professor in BIOS-06/A
- 2017 Ph.D. in Health and Life Sciences: Organism Biology and Physiology from the University of Strasbourg, France

#### **Current Position:**

Full Professor in SSD BIOS-06/A Physiology, at the Department of Sciences, Roma Tre University.  
Director of the Neuroendocrinology, Metabolism, and Neuropharmacology Laboratory, IRCCS Fondazione Santa Lucia, Rome.

#### **Professional Experience:**

- 1990-1991 Internship at the Department of Cellular and Developmental Biology, University of Rome "La Sapienza," focusing on "Hormonal effects on the modulation of inositol phosphates in different differentiating cellular systems."
- 1991-1993 Junior Researcher at the "In Vivo" Bronchopulmonary Pharmacology Laboratory, Dompé S.p.A, Milan.
- 1993-1996 Senior Researcher at the "In Vivo" Respiratory Pharmacology and Inflammation Laboratory, Dompé S.p.A., L'Aquila.

- 1995 "Animal Care" course, Dompé S.p.A., L'Aquila.
- 1996 Professional Training Course in Pathological Anatomy and Histology (Funded by the European Community) at the Department of Experimental Medicine, Pathological Anatomy Section, University of Rome "La Sapienza" (Supervisors: Prof. P. Bianco, Prof. L. Ruco), and at the Department of Experimental Medicine, University of L'Aquila (Supervisor: Prof. A. Teti).
- 2004 "Laboratory Safety" Course: D.Lgs. 626/94; Biological Risk; GMO/MOG Risk; Chemical Risk; Physical Risk, at the Department of Biology, Roma Tre University, and ISPESL - Higher Institute for Prevention and Safety at Work.
- 1997-2006 Technical Assistant at the Department of Biology, Roma Tre University.
- 2006-2014 Researcher in SSD BIO/09, macroarea 05/D1, at the Faculty of Mathematical, Physical, and Natural Sciences, Bachelor's Degree in Biological Sciences, Roma Tre University, now the Department of Sciences.
- 2012-2012 Visiting Professor at the Department of Biochemistry and Biophysics, Polish Academy of Science, Warsaw, Poland.
- Since 2014 Associate professor of Physiology, Department of Science University Roma Tre
- Since 2021 Chief of the neuroendocrinology, Metabolism, and Neuropharmacology Unit, IRCCS (Clinical Research Institute) Santa Lucia Rome.
- Since 2024 Full Professor of Physiology, Department of Science University Roma Tre

### **Management and Organizational Tasks:**

- 1997-2007 Curator of the Animal Facility at the Department of Biology, Roma Tre University.
- 1998-2001 Technical Staff Representative at the Council of the Bachelor's Degree Program in Biological Sciences, Roma Tre University.
- 1999 Member of the Organizing Committee for the 50th Congress of the Italian Society of Physiology.
- 2001-2006 Technical Staff Representative at the Department Council of Biology, Roma Tre University.
- 2001-2006 Technical Staff Representative at the Department Board of Biology.
- 2006-2011 Member of the Department Board of Biology.
- 2006-2011 Member of the Student Guidance Committee of the Faculty of Mathematical, Physical, and Natural Sciences, Roma Tre University.
- Since 2007 Rector's Delegate for University Committees for Animal Experimentation.
- 2008-2013 Member of the Faculty Board for the section "Applied Biology to Human Health" of the Doctoral School in Biology, Roma Tre University.
- 2008-2014 Responsible for the Animal Facility and Animal Experimentation at the Department of Sciences, Roma Tre University.
- 2010-2022 Coordinator of the Orientation Commission for Biology degree programs, Roma Tre University.
- Since 2013 Member of the Faculty Board of the Ph.D. program "Biomedical Sciences and Technologies," Roma Tre University.
- 2013-2019 Elected member of the Permanent Teaching Committee for the Biology courses, Department of Sciences, Roma Tre University.
- 2014-2021 Member of the Orientation Commission of the Department of Sciences, Roma Tre University.

- Since 2014 Secretary of the Animal Welfare Body of the Department of Sciences (OPBA), Roma Tre University.
- Since 2014 Delegate of the Department of Sciences to GLOA (Working Group for University Orientation).
- Since 2014 Member of the committee for drafting and reviewing cyclical RAR (Annual Teaching Reports) for all Biology study programs, Department of Sciences, Roma Tre University.
- Since 2014 Contact person for biology in the organizing committee of the "European Researchers' Night," Roma Tre University.
- 2017-2022 Member of the Department of Excellence Commission, Department of Sciences, Roma Tre University.
- 2019 Member of the Management Committee for TAB (Technical and Administrative Staff) at the Department of Sciences, Roma Tre University.
- 2019-2022 Member of the Working Group for presenting the department's courses in schools affiliated with GLOA (Working Group for University Orientation).
- Since 2021 Member of the Working Group for the promotion of educational offerings designated by the Department Director on October 22, 2021.
- Since 2022 Coordinator of the Master's Degree Program in "Molecular and Cellular Biology of Health," Department of Sciences, Roma Tre University.
- Since 2022 Member of the Permanent Teaching Committee of the Pharmacy program, Department of Sciences, Roma Tre University.
- Since 2023 Responsible of the animal facility of the Department of Science, Roma Tre University

### **Experiences related to animal experimentation**

Years of experience in scientific research, including with animal models as indicated in the CV.

- 1992 Course "Science of Laboratory Animals," Legislative Decree 116/92; Dompé Framaceutici.
- Since 2006 Responsible of the course on Experimental Models in Biology, Master Degree Program in Molecular, Cellular, and Health Biology, Roma Tre University.
- 2022 Online Training Courses on Animal Experimentation provided by the Experimental Zooprophyllactic Institute of Lombardy and Emilia-Romagna (IZSLER), Transitory Discipline Article 8 of Ministerial Decree of August 5, 2021:

- NATIONAL LEGISLATION AND ETHICS LEVEL 1, MODULES 1 AND 2, Ministerial Decree of August 5, 2021, 7.5 ECM; Accreditation ID: 353662.
- BIOLOGY AND MANAGEMENT OF LABORATORY ANIMALS, MODULES 3.1, 4, 5, 6.1, 7. Ministerial Decree of August 5, 2021, RODENTS AND LAGOMORPHS, 19.5 ECM; Accreditation ID: 354452.
- ETHICS AND PROJECT DESIGN, MODULES 9, 10, 11, Ministerial Decree of August 2021, 9 ECM; Accreditation ID: 356007.
- ADVANCED BREEDING PRACTICES, MODULE 23, Ministerial Decree of August 5, 2021, 9 ECM; Accreditation ID: 366106.

2022 TRAINING COURSE AND UPDATES FOR THE PROTECTION OF LABORATORY ANIMALS IN SCIENTIFIC RESEARCH - 7th EDITION (accredited event under Ministerial Decree of August 5, 2021, and Ministerial Decree of March 18, 2022, article 3) obtained at the Catholic University of the Sacred Heart, accreditation number 2463.

### **Member of Committees for academic position competitions:**

2018 Member of the committee to select a post-doc ("Estrogen/Neuroglobin pathway as pharmacological target for breast cancer" - Report 38/2016 Prot 1254 dated 06/06/2016), SSD: BIO/09, starting from July 1, 2018, funded by the Young Researchers' Integration into University Research program as per the resolution adopted by CDD on 14/04/2016, at the Department of Sciences, Roma Tre University.

2019 Member of the committee to select a post-doc position (AIRC SSD: BIO/09) at the Department of Sciences, Roma Tre University.

2019 Member of the committee to select a post-doc position (PRIN-2017 SSD: BIO/14) at the Department of Sciences, Roma Tre University.

2020 Member of the committee to select one position of Associate Professor in the Concourse Sector: 05/D1 - Scientific disciplinary sector BIO/09 Physiology at the Department of Physiology and Pharmacology, Faculty of Pharmacy and Medicine, Sapienza University of Rome.

2021 Member of the committee to select a post-doc position (PRIN-2017 SSD: BIO/14 Pharmacology) at the Department of Sciences, Roma Tre University.

2021 Member of the committee to select a post-doc position (AIRC SSD: BIO/09 Physiology) at the Department of Sciences, Roma Tre University.

2021 Member of the committee to select a post-doc position (Together Strong-NPC SSD: BIO/09 Physiology) at the Department of Sciences, Roma Tre University.

2021 Member of the committee to select a post-doc position (Regional Funds Lazio SSD BIO/14) at the Department of Sciences, Roma Tre University.

2021 Member of the committee to select a position of Research Fellow (RTD-B) in the Concourse Sector: 05/D1 - Scientific disciplinary sector BIO/09 Physiology at the Department of Physiology and Pharmacology, Faculty of Pharmacy and Medicine, Sapienza University of Rome.

2022 President of the Selection Committee for a scholarship at the Department of Sciences, funded by Together Strong-NPC1.

### **Editorial activities**

#### *Reviewer of research projects for:*

2020 AFM-Telethon France

2021 National Science Center Poland

2019 European Joint Programme on Rare Diseases

2014/2018 Israel Science Foundation

2017 Mariani Foundation, Italy

2017 Politecnico di Torino

2016 Polish National Research Centre

2016           Università della Tuscia  
2014           British Medical Research Council

*Selection of some journals for which editorial activities are carried out:*

Journal of Cellular Physiology; Journal of Cellular Biochemistry; Pflugers Archives-European Journal Physiology; International Journal of Molecular Science, Biochimica et Biophysica Acta; Genes & Nutrition; Mediators of Inflammation; Steroids; Pharmacological Research; Chemical Research in Toxicology; World Journal of Hepatology; World Journal of Gastroenterology; Word Journal of Cardiology Febs Letter; British Journal of Nutrition; Biochimie; Journal of Lipid Research; England J of Nutrition; Biology of the Cell; Food and Chemical Toxicology; International J of Food Science and Nutrition; J of Biomedicine and Biotechnology, Brain Research, Biomolecules, International J of Molecular Science, Cells.

*Editorial board member of:*

2013-2017   World Journal of Hepatology  
Since 2014   Oxidative Medicine and Cellular Longevity  
Since 2017   Frontiers Physiology of membrane  
Since 2021   Frontiers in Medicine-Gastroenterology (dal  
Since 2021   International Journal of Molecular Science, section "Molecular Endocrinology and Metabolism"

2013-2014   *Guest Editor* : Special Issue "New Insight into Lipid Disorders" per Current Medicinal Chemistry.

2019/2020   *Guest Editor* : Special Issue "Emerging role of lipid in metabolism and diseases" per International Journal of Molecular Science. First Edition

2020/2021   *Guest Editor* : Special Issue "Emerging role of lipid in metabolism and diseases" per International Journal of Molecular Science. Second Edition.

2020/2021   *Guest Editor* : Special Issue "Emerging role of lipid in metabolism and diseases" per International Journal of Molecular Science (). Third Edition.

**Member of the following Scientific Societies**

- Società Italiana di Fisiologia
- Società Europea di Fisiologia
- Società Italiana di Neuroscienze
- Mediterranean Neuroscience Society

**RESEARCH ACTIVITIES**

From 1991 to 1996, research activity at the two locations of Dompé S.p.A. aimed to study the in vivo antitussive, bronchospasmolytic, and anti-inflammatory activity of synthetic compounds developed by the company.

*Current research interests*

During the last years, my research activity has been focused on the role of the cholesterol biosynthetic pathway and its metabolic products in central nervous system functions. In particular, a characterization of the presence of the protein network that regulates cholesterol

metabolism in different brain areas and under different physiological conditions has been carried out in male and female rats, both in adults and during aging. The role of the cholesterol biosynthetic pathway in emotional reactivity and memory consolidation has been also studied in adult male rats. Furthermore, my research has been focused on the exposure to exogenous substances during prenatal life and their effects on brain cholesterol metabolism, and the association with neurodevelopmental disorders (Autism spectrum disorders). Actually, the role played by cholesterol metabolism in neurodegenerative diseases is under investigation with a special focus on Niemann-Pick disease.

*Other research related to cholesterol metabolism.*

My principal aim, since the beginning of my academic career, is to study the role of the cholesterol biosynthetic pathway, particularly the enzyme 3-hydroxy-3-methylglutaryl coenzyme A reductase (HMGCR), in different physiological and pathological situations.

Specifically, the role and regulation mechanisms of HMGCR have been studied in rat liver or liver-derived cells under various physiological and pathological conditions, including:

- Aging in rats fed different diets (caloric restriction and omega-3 fatty acid-rich diet) capable of delaying aging-related processes.
- Oxidative stress in animal models (rats subjected to diets devoid of antioxidants and rats treated with thioacetamide) and cellular models (human hepatoma HepG2 cells treated with hydrogen peroxide) characterized by elevated levels of reactive oxygen species (ROS experimentally) induced to mimic the ROS levels observed during aging.
- Hypoxia in cellular models (human hepatoma HepG2 cells treated with 2% O<sub>2</sub> or CoCl<sub>2</sub>) to simulate cellular aging and the hypoxic microenvironment of solid tumors.
- Gender differences.

Concurrently, the modulation of cholesterol metabolism by synthetic or naturally derived molecules has been studied. The role of the enzyme HMGCR in muscle differentiation and contractility has also been investigated. The involvement of estrogen hormones during muscle differentiation has been examined, and the role of HMGCR in skeletal muscle physiology has been highlighted by evaluating how modulation of its activity can affect muscle contractility.

The entire research activity has been carried out in collaboration with Italian and foreign scientists, as evidenced by the publications.

**Patents:**

2021 Inventor of Patent No. 102021000015467, BET protein inhibitors for use in the treatment of Niemann-Pick disease. Application filed on June 14, 2021 on behalf of Università degli Studi Roma Tre.

**Granted research projects:**

1999-2001 Prin-MIUR Cell Cycle Control by Nuclear Receptor Ligands. Collaborative project.

2001-2003 Prin-MIUR Identification and Role of Extra-Genomic Pathways in Estrogen-induced Cell Cycle Progression. Collaborative project.

- 2001-2003 Firb-MIUR Activity Study of Estrogen Receptors: Identification of New Mechanisms of Action and Their Role in Modulating Hormonal Effects in Human Cell Lines. Collaborative project.
- 2003-2005 Prin-MIUR Mechanisms underlying the Regulation of 3-Hydroxy-3-Methylglutaryl Coenzyme A Reductase Activity in Aging and Liver Damage. Collaborative project.
- 2004-2006 Prin-MIUR Selective Activation of Extra-Genomic Pathways Induced by Estradiol and Other Modulators of Estrogen Receptor Alpha and Beta: Implications in Cell Cycle Progression and Apoptosis. Collaborative project.
- 2006-2009 Province of Rome Control of Surface Water Pollution through the Use of Biomarkers for Early Detection of Different Environmental Stressors (FITNESS of Brown Trout). PI:Dr. V. Pallottini.
- 2008-2010 Ministry of Health (strategic project): Gender Medicine as a Strategic Objective for Public Health: Appropriateness for Women's Health Protection. Scientific Coordinator: Dr. S. Vella. Higher Institute of Health, Operational Unit Coordinator: Women Health and Work Environment. Collaborative project.
- 2009-2012 Province of Rome Monitoring of Surface Water Pollution by Estrogen-mimetic Compounds Using Molecular Biomarkers. PI:Dr. V. Pallottini.
- 2009-2010 Ministry of Foreign Affairs Chemistry and Biology of Antioxidants, Indo-Italian Research Project, National Coordinator: Prof. Luciano Saso, Sapienza University of Rome. Coordinator for Roma Tre: Dr. V. Pallottini.
- 2010-2011 Ministry of Foreign Affairs Chemistry and Biology of Antioxidants, Renewal of Indo-Italian Research Project, National Coordinator: Prof. Luciano Saso, Sapienza University of Rome. Coordinator for Roma Tre: Dr. V. Pallottini.
- 2011-2012 Ministry of Foreign Affairs Chemistry and Biology of Antioxidants, Renewal of Indo-Italian Research Project, National Coordinator: Prof. Luciano Saso, Sapienza University of Rome. Coordinator for Roma Tre Dr. V. Pallottini.
- 2016-2019 PRIN-MIUR From Mother to Child Health Flow: The Impact of the Endocrine Disruptor Chemical Bisphenol A (BPA). PI:Prof. V. Pallottini.
- 2016-2017 Fattorie Umbre Bibliographic Research for the Development of a New Food Product Composed of Vegetables Containing Nutraceuticals. PI:Prof. V. Pallottini.
- 2020-2023 Together Strong-NPC Foundation "A New Epigenetic Approach to Treat Niemann-Pick Type C Disease." PI:Prof. V. Pallottini.
- 2021-2022 Jerome Lejeune Foundation "BET Inhibition as a Novel Approach to Counteract Cholesterol Metabolism Defects in Rett Syndrome." Collaborative project.
- 2021-2023 Niemann-Pick Selbsthilfegruppe Foundation "Exploring BET proteins and TMEM 97 as new therapeutic targets for NPC1 disease." PI: Prof. V. Pallottini.
- 2022-2023 Minerva Neuroscience (USA) "In vitro study to evaluate the effects of sigma2 receptor/TMEM97 inhibitors on Niemann-Pick type C 1 disease." PI: Prof. V. Pallottini.
- 2023-2025 PNRR-Ministry of Health "Involvement of neuroprotective mechanism(s) of neuroglobin on aberrant functions related to chronic neurological diseases." Collaborative project.
- 2023 Telethon "Exploring a new therapeutic target for Niemann-Pick C1 disease: the BET proteins". PI: Prof. V. Pallottini

## Publications

1. Parente M, Barthelemy A, Tonini C, Caputo S, Sacchi A, Leone S, Segatto M, Pfrieder FW, Pallottini V. Exploration of Bromodomain Proteins as Drug Target for Niemann-Pick Type C Disease. *Int J Mol Sci.* 2025 Jun 16;26(12):5769. doi:10.3390/ijms26125769. PMID: 40565243; PMCID: PMC12192928.
2. Parente M, Tonini C, Caputo S, Fiocchetti M, **Pallottini V**. Mechanisms of Sigma-2/TMEM97 Involvement in Cholesterol Metabolism. *J Cell Biochem.* 2024 Oct;125(10):e30645. doi: 10.1002/jcb.30645. Epub 2024 Sep 20. PMID: 39300897. **IF 4.0**
3. Parente M, Barthelemy A, Tonini C, Sacchi A, Segatto M, Pfrieder FW, **Pallottini V**. Reversal of pathologic changes in fibroblasts from Niemann-Pick type C disease patients by inhibition of bromodomain and extraterminal proteins. Deposited to BioRxiv
4. Parente M, Tonini C, Segatto M, **Pallottini V**. Regulation of cholesterol metabolism: New players for an old physiological process. *J Cell Biochem.* 2023 Oct;124(10):1449-1465 **IF 4.0**
5. Muto V, Benigni F, Magliocca V, Borghi R, Flex E, **Pallottini V**, Rosa A, Compagnucci C, Tartaglia M. CRISPR/Cas9 and piggyBac transposon-based conversion of a pathogenic biallelic TBCD variant in a patient-derived iPSC line allows to correct PEBAT-related endophenotype. *Int. J. Mol. Sci.* 2023, 24, 7988. **IF 6.2.**
6. **Pallottini V**, Segatto, M, Acconcia F, Fiocchetti, M, Marino M. Mechanism Underlying Naringenin Hypocholesterolemic Effects: Involvement of Estrogen Receptor  $\alpha$  Subtype. *Int. J. Mol. Sci.* 2022, 23, 15809. **IF 6.2.**
7. Segatto M, Cutone A, **Pallottini V**. Fat Checking: Emerging Role of Lipids in Metabolism and Disease. *Int J Mol Sci.* 2022 Nov 10;23(22):13842. **IF 6.2.**
8. Spagnuolo MS, Mazzoli A, Nazzaro M, Troise AD, Gatto C, Tonini C, Colardo M, Segatto M, Scaloni A, **Pallottini V**, Iossa S, Cigliano L. Long-Lasting Impact of Sugar Intake on Neurotrophins and Neurotransmitters from Adolescence to Young Adulthood in Rat Frontal Cortex. *Mol Neurobiol.* 2022 Nov 17. **IF 5.6.**
9. Colardo M, Petraroia M, Lerza L, Pensabene D, Martella N, **Pallottini V**, Segatto M. NGF Modulates Cholesterol Metabolism and Stimulates ApoE Secretion in Glial Cells Conferring Neuroprotection against Oxidative Stress. *Int J Mol Sci.* 2022 Apr 27;23(9):4842. **IF 6.2.**
10. Parente M, Tonini C, Buzzelli V, Carbone E, Trezza V, **Pallottini V**. Brain Cholesterol Biosynthetic Pathway Is Altered in a Preclinical Model of Fragile X Syndrome. *Int J Mol Sci.* 2022 Mar 21;23(6):3408. **IF 6.2.**
11. Acconcia F, Fiocchetti M, Busonero C, Fernandez VS, Montalesi E, Cipolletti M, **Pallottini V**, Marino M. The extra-nuclear interactome of the estrogen receptors: Implications for physiological functions. *Mol Cell Endocrinol.* 2021 Sep 6:111452. doi: 10.1016/j.mce.2021.111452. Epub ahead of print. **IF 5.**
12. Barthelemy A, Demais V, Stancu IC, Vasile E, Houben T, Reber M, **Pallottini V**, Perraut M, Reibel S, Pfrieder FW. Glial contribution to cyclodextrin-mediated reversal of cholesterol accumulation in murine NPC1-deficient neurons in vivo. *Neurobiol Dis.* 2021 Aug 5:105469. **IF 5.3.**

13. Tonini C, Segatto M, Bertoli S, Leone A, Mazzoli A, Cigliano L, Barberio L, Mandalà M, **Pallottini V**. Prenatal Exposure to BPA: The Effects on Hepatic Lipid Metabolism in Male and Female Rat Fetuses. *Nutrients*. 2021 Jun 8;13(6):1970. **IF 5.7**.
14. Colardo M, Martella N, Pensabene D, Siteni S, Di Bartolomeo S, **Pallottini V**, Segatto M. Neurotrophins as Key Regulators of Cell Metabolism: Implications for Cholesterol Homeostasis. *Int J Mol Sci*. 2021 May 26;22(11):5692. **IF 5.9**.
15. Tonini C, Segatto M, Martino F, Cigliano L, Nazzaro M, Barberio L, Mandalà M, **Pallottini V**. Effects of Late-Life Caloric Restriction on Age-Related Alterations in the Rat Cortex and Hippocampus. *Nutrients*. 2021 Jan 15;13(1):232. **IF 5.7**.
16. **Pallottini V, Pfrieder F.W**. Understanding and curing Niemann-Pick type C disease: models matter. *Int J Mol Sci*. 2020 Int. J. Mol. Sci. 21(23). **IF 5.9**.
17. **Pallottini V**, Colardo M, Tonini C, Martella N, Strimpakos G, Colella B, Tirassa P, Bartolomeo SD, Segatto M. ProNGF/p75NTR Axis Drives Fiber Type Specification by Inducing the Fast-Glycolytic Phenotype in Mouse Skeletal Muscle Cells. *Cells*. 2020 Oct 2;9(10):E2232. **IF 6.6**.
18. Segatto M, **Pallottini V**. Facts about Fats: New Insights into the Role of Lipids in Metabolism, Disease and Therapy. *Int J Mol Sci*. 2020 Sep 11;21(18):E6651. **IF 5.9**.
19. Schiavi S, Carbone E, Melancia F, Buzzelli V, Manduca A, Campolongo P, **Pallottini V**, Trezza V. Perinatal supplementation with omega-3 fatty acids corrects the aberrant social and cognitive traits observed in a genetic model of autism based on FMR1 deletion in rats. *Nutr Neurosci*. 2020 Sep 11:1-14. **IF 4.02**.
20. Spagnuolo MS, **Pallottini V**, Mazzoli A, Iannotta L, Tonini C, Morone B, Ståhlman M, Crescenzo R, Strazzullo M, Iossa S, Cigliano L. A Short-Term Western Diet Impairs Cholesterol Homeostasis and Key Players of Beta Amyloid Metabolism in Brain of Middle Aged Rats. *Mol Nutr Food Res*. 2020 Jun 24:e2000541 **IF 5.3**.
21. Tonini C, Segatto M, **Pallottini V**. Impact of Sex and Age on the Mevalonate Pathway in the Brain: A Focus on Effects Induced by Maternal Exposure to Exogenous Compounds. *Metabolites*. 2020 Jul 25;10(8):304. **IF 4.7**.
22. Claudia Tonini, Marco Segatto, Simone Gagliardi, Simona Bertoli, Alessandro Leone, Laura Barberio, Maurizio Mandalà, **Valentina Pallottini**. Maternal Dietary Exposure to Low-Dose Bisphenol A Affects Metabolic and Signaling Pathways in the Brain of Rat Fetuses. *Nutrients* 2020 May 17;12(5):1448. **IF 5.7**.
23. Claudia Tonini, Mayra Colardo, Barbara Colella, Sabrina Di Bartolomeo, Francesco Berardinelli, Giuseppina Caretti, **Valentina Pallottini** and Marco Segatto. Inhibition of bromodomain and extraterminal domain (BET) proteins by JQ1 unravels a novel epigenetic modulation to control lipid homeostasis. *Int J Mol Sci*. 2020 Feb 14;21(4). **IF 5.9**.
24. Claudia Tonini, Sara Schiavi, Fabrizio Macca, Marco Segatto, Viviana Trezza, **Valentina Pallottini**. Long-lasting impact of perinatal dietary supplementation of Omega 3 fatty acids on mevalonate pathway: potential role on neuron trophism in male offspring hippocampal formation. *Nutritional Neuroscience*, 2020 Feb 9:1-12. **IF 4.02**.
25. Fabio Gionfra, Paolo De Vito, **Valentina Pallottini** , Hung-Yun Lin, Paul J. Davis Jens Z. Pedersen and Sandra Incerpi. The Role of Thyroid Hormones in Hepatocyte Proliferation and Liver Cancer. *Frontiers Endocrinology* 2019 Aug 30;10:532. **IF 4.85**.
26. Segatto M, Tonini C, Pfrieder FW, Trezza V, **Pallottini V**. Loss of Mevalonate/Cholesterol Homeostasis in the Brain: A Focus on Autism Spectrum Disorder and Rett Syndrome. *Int J Mol Sci*. 2019 Jul 5;20(13) **IF 5.9**.

27. Schiavi S, Manduca A, Segatto M, Campolongo P, **Pallottini V**, Vanderschuren LJMJ, Trezza V. Unidirectional opioid-cannabinoid cross-tolerance in the modulation of social play behavior in rats. *Psychopharmacology* (Berl). 2019 Mar
22. **IF 3.97.**
28. Cartocci V, Tonini C, Di Pippo T, Vuono F, Schiavi S, Marino M, Trezza V, **Pallottini V**. Prenatal exposure to valproate induces sex-, age- and tissue-dependent alterations of cholesterol metabolism: potential implications on autism. *J. Cell Physiol.* 2019 Apr;234(4):4362-4374 **IF 5.54.**
29. Melancia F, Schiavi S, Servadio M, Cartocci V, Campolongo P, Palmery M, **Pallottini V**, Trezza V. Sex-specific autistic endophenotypes induced by prenatal exposure to valproic acid involve anandamide signalling. *Br J Pharmacol.* 2018 Sep;175(18):3699-3712 **IF 7.73.**
30. Cartocci V, Catallo M, Tempestilli M, Segatto M, Pfrieger FW, Bronzuoli MR, Scuderi C, Servadio M, Trezza V, **Pallottini V**. Altered Brain Cholesterol/Isoprenoid Metabolism in a Rat Model of Autism Spectrum Disorders. *Neuroscience.* 2018 Jan 6;372:27-37 **IF 3.05.**
31. Fracassi A, Marangoni M, Rosso P, **Pallottini V**, Fioramonti M, Siteni S, Segatto M. Statins and the Brain: More than Lipid Lowering Agents? *Curr Neuropharmacol.* 2017 Jul 3. **IF 4.66.**
32. Servadio M, Melancia F, Manduca A, di Masi A, Schiavi S, Cartocci V, **Pallottini V**, Campolongo P, Ascenzi P, Trezza V. Targeting anandamide metabolism rescues core and associated autistic-like symptoms in rats prenatally exposed to valproic acid. *Transl Psychiatry.* 2016 Sep 27;6(9):e902 **IF 5.28.**
33. Cartocci V, Servadio M, Trezza V, **Pallottini V**. Can Cholesterol Metabolism Modulation Affect Brain Function and Behavior? *J Cell Physiol.* 2017 Feb;232(2):281-286 **IF 5.54.**
34. Cartocci V, Segatto M, Di Tunno I, Leone S, Pfrieger FW, **Pallottini V**. Modulation of the Isoprenoid/Cholesterol Biosynthetic Pathway During Neuronal Differentiation In Vitro. *J Cell Biochem.* 2016 Sep;117(9):2036-44 **IF 4.23.**
35. Acconcia F, **Pallottini V**, Marino M. Molecular Mechanisms of Action of BPA *Dose Response* 2015 Oct-Dec 1-9. **IF 2.28.**
36. Pesiri V, Totta P, Segatto M, Bianchi F, **Pallottini V**, Marino M, Acconcia F. Estrogen receptor  $\alpha$  L429 and A430 regulate  $17\beta$ -estradiol-induced cell proliferation via CREB1. *Cell Signal.* 2015 Sep 5;27(12):2380-2388. **IF 3.96.**
37. **Pallottini V**. 3-hydroxy-3-methylglutaryl-coenzyme A reductase modulators: toward age- and sex- personalized medicine. *Expert Opinion in Therapeutic patents* 2015 Oct 25(10):1079-83 **IF 5.61.**
38. Pisanti S, Picardi P, **Pallottini V**, Martini C, Petrosino S, Proto MC, Vitale M, Laezza C, Gazzo P, Di Marzo V, Bifulco M. Anandamide Drives Cell Cycle Progression through CB1 Receptors in a Rat Model of Synchronized Liver Regeneration. *J Cell Physiol.* 2015 Feb 12. **IF 5.54.**
39. Segatto M, Trapani L, Di Tunno I, Sticozzi C, Valacchi G, Hayek J, **Pallottini, V**. Cholesterol metabolism is altered in Rett syndrome: a study on plasma and primary cultured fibroblasts derived from patients. *PLoS One.* 2014 12;9(8):e104834. **IF 2.74.**
40. Pellegrini M, Bulzomi P, Galluzzo P, Lecis M, Leone S, **Pallottini V**, Marino M. Naringenin modulates skeletal muscle differentiation via estrogen receptor  $\alpha$  and  $\beta$  signal pathway regulation. *Genes Nutr.* 2014 9(5):425. **IF 4.2.**

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### **Oral Communications at National and International Conferences, Conference and Symposium Organization, Invited Seminars, and Expert Invitations**

- 2016 Symposium Organization: "Emerging role of lipids in metabolism and disease" within the SIF Conference, Catania.
- 2018 Invited as an expert in cholesterol metabolism in the panel of consultants at CHDI Foundation (Cure Huntington's Disease Initiative), "Cholesterol Metabolism and Huntington disease," November 15-16, 2018, Boston (MA), USA
- 2022 Symposium Organization: "Understanding Brain Cholesterol homeostasis: from Basic Mechanisms to the Effects of Environmental and Nutritional factors" within the Mediterranean Neuroscience Society MNS Congress, Dubrovnik, Croatia.
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- 1994 European Society of Neuropeptides, Verona: "Levodropropizine: new anti-inflammatory effects." Invited speaker.
- 1999 50th Autumn Meeting of the Italian Society of Physiology, Rome: "Estrogen induces DNA synthesis in HepG2 and MCF7 cells by using different pathways." Selected speaker.
- 2002 3rd European Congress of Biogerontology, Florence and Montecatini Terme: "Age-related changes of isoprenoid biosynthesis in rat liver and brain." Invited speaker.
- 2003 54th Autumn Meeting of the Italian Society of Physiology, Chieti: "Age-related hypercholesterolemia and HMG-CoA reductase deregulation are reversed by diet restriction." Selected speaker.
- 2004 University of L'Aquila, Department of Basic and Applied Biology: "Metabolism of isoprenoid compounds and its implications during aging." Invited speaker.

- 2004 Department of Biology, Roma Tre University, 14th Week of Scientific Culture: "Aging and caloric restriction: what animal experimentation teaches us." Invited speaker.
- 2006 Dompé Farma, L'Aquila: "Molecular mechanisms underlying hypercholesterolemia in the elderly." Invited speaker.
- 2007 2nd Indo-Italian Workshop on Chemistry and Biology of Antioxidants, CNR Rome: "Prevention by caloric restriction of ROS-induced HMG-CoA reductase deregulation during aging." Invited speaker.
- 2007 Roma Tre University, Department of Biology, Workshop on Determinants of Health - A gender approach: "In vivo approach to gender differences." Invited speaker.
- 2007 University of Salerno (Fisciano), Faculty of Pharmacy: "HMG-CoA reductase: A new regulatory mechanism that sheds light on an old problem." Invited speaker.
- 2009 Physiology 2009, University College of Dublin, Dublin, Ireland: "3-hydroxy 3-methylglutaryl Coenzyme A reductase role in rat skeletal myoblast differentiation." Invited speaker.
- 2009 Indo-Italian Workshop on Chemistry and Biology of Antioxidants, Delhi: "Omega-3 supplemented diets are able to prevent hypercholesterolemia by controlling ROS production." Invited speaker.
- 2012 Polish Academy of Science, Warsaw, Poland: "Are products and enzymes of the cholesterol biosynthetic pathway important in muscle tissue functions?" Invited speaker
- 2014 FEPS 2014, Hungary, Budapest, *Cholesterol homeostasis in the brain: A sex and age viewpoint*" Invited speaker
- 2014 FEPS 2014, Hungary, Budapest: "Cholesterol homeostasis in the brain: A sex and age viewpoint." Invited speaker.
- 2014 SIF, Anacapri, Naples: "Mechanism underlying Naringenin hypocholesterolemic effects: the role of estrogen receptors." Selected speaker.
- 2015 SIF, Genoa: "Role of the Mevalonate pathway in neurite outgrowth." Selected speaker.
- 2016 SIF Catania: "Role of the Mevalonate pathway in the Central Nervous System." Speaker.
- 2017 SIF Pavia: "Sex-dependent differences in cholesterol metabolism modulation in rats prenatally exposed to xenobiotics: the example of valproate." Selected speaker.
- 2018 SIF Florence: "Prenatal exposure to Bisphenol A induces alterations in cholesterol homeostasis in rat fetuses." Selected speaker.
- 2019 Mediterranean Neuroscience Society, Marrakech (Morocco): "Sex-, age-, and region-dependent alterations of brain cholesterol metabolism: potential implications for autism." Invited speaker.
- 2019 SIF-FEPS, Bologna, Italy: "Ω3 Fatty Acids Administration During Pregnancy and Lactation Induces a Long-lasting Modulation of the Mevalonate Pathway in the rat brain." Invited speaker.
- 2020 Roma Tre, Workshop on Identification of pollutants in the workplace interfering with estrogen hormone action: "Alterations of the mevalonate pathway induced by prenatal exposure to Bisphenol A." Invited speaker.
- 2021 University of Molise, Department of Biosciences and Territory: "Environmental Pollution and Health: Effects of prenatal exposure to Bisphenol A on cholesterol metabolism." Invited speaker.
- 2021 SIF, Milan, Italy: "Maternal exposure to a very low dose of BPA induces alterations in the mevalonate pathway in the liver and brain of rat fetuses." Invited speaker and Chairman.

- 2021 Niemann-Pick Selbsthilfesgruppe, Kassel, Germany: "Are BET proteins new therapeutic targets for Niemann-Pick disease?" Invited speaker.
- 2022 University of Naples Federico II, Department of Biology: "Prenatal exposure to Bisphenol A and lipid metabolism alterations in fetuses." Invited speaker.
- 2022 INCI, CNRS University of Strasbourg: "Cholesterol biosynthetic pathway in the brain: physiological and pathological aspects." Invited speaker.
- 2023 Niemann-Pick Selbsthilfesgruppe, Kassel, Germany: "New insights on BET proteins as therapeutic targets for Niemann-Pick disease." Invited speaker.
- 2023 University of Bari Aldo Moro: "Cholesterol biosynthetic pathway in the brain and its implications in diseases." Invited speaker.

### **Teaching Activities**

As a technical collaborator, I contributed to the preparation and execution of practical exercises for the Physiology courses.

As a researcher, I participated in the design, organization, and execution of practical exercises for the Physiology courses.

### *Courses*

Academic year 2007/2008:

Coordinator of the Thematic Integrated Laboratory Course for the Bachelor Degree in Biology.

Academic year 2007/2008:

Cellular Functions Regulation Course for the Master's Degree in Biology (2 CFU-16 hours)

Lecture cycles within the General and Ocular Physiology Course for the Bachelor's Degree in Optics and Optometry (Course Coordinator: Prof. M. Marino).

Experimental Models in Biology Course (6 CFU) for the Master's Degree in Biology.

Academic year 2008/2009:

Experimental Models in Biology Course (BIO/09) (6 CFU-48 hours) for the Master's Degree in Biology.

General and Ocular Physiology Course (BIO/09) for the Bachelor's Degree in Optics and Optometry (8-64 hours CFU).

Lecture cycles within the Physiology Course for the Bachelor's Degree in Biology (Course Coordinator: Prof. M. Marino).

From 2010-2014: Aggregate Professor of Physiology

Since 2009:

Experimental Models in Biology Course (6 CFU-48 hours) for the Master's Degree in Molecular and Cellular Biology of Health.

General and Ocular Physiology Course for the Bachelor's Degree in Optics and Optometry (8 CFU-64 hours).

Since 2025 Human Physiology Course for the Master Degree Pharmacy (8 CFU-64 hours).

Chairman of the examination boards for the Experimental Models in Biology and General and Ocular Physiology courses.

Member of the examination boards for the courses of: Physiology Neurophysiology, Biophysics and Human Physiology, Pharmacology, Toxicology, and Ocular Pathology.

*Bachelor and Master student supervisions:*

From 2007 to present,

As a supervisor, has presented:

- 80 Bachelor's theses in Biology and Optics and Optometry.
- 50 Master's theses in Biological Sciences.

*Ph.D. Supervisions:*

- Supervisor of 2 Ph.D. students (XXIV cycle: Laura Trapani; XXVI cycle: Marco Segatto) in the Section of Biology Applied to Human Health at the Doctoral School of Biology, Roma Tre University.
- Supervisor of 7 Ph.D. students (XXX cycle: Veronica Cartocci; XXXIII cycle: Claudia Tonini; XXXVI cycle: Martina Parente, Federica Benigni, XXXVII cycle: Silvia Soddu, XXXVIII cycle; Sara Capuuto XXXIX cycle; Ludovica Lionetti XD cycle), in the Ph.D. program in Biomedical Sciences and Technologies, Roma Tre University.
- Co-supervisor of a PhD student (Juliana Trevisan da Rocha) from the Universidade Federal de Santa Maria, Brazil, Centro de Ciencias Naturais e Exatas, Programa de pos-Graduacao em Ciencias Biologica, 2012.
- External expert for a thesis titled "Biochemical effects of Marine algae on experimental animals" (Basant Mahmoud Mohamed Morsy) at Beni Suef University, Egypt.
- External expert for a thesis titled "Characterization of the role of SLC15A4/PHT1 (Solute carrier family 15 member A4/Peptide histidine transporter 1) gene product in the intestinal epithelium and in pathogenesis of inflammatory bowel diseases " (Aurora Mazzei) at the University of Salento, Department DISTEBA.
- External expert for a thesis titled " "Effects of lipid and fructose rich diets on oxidative stress, inflammation and insulin-resistance" (Cristina Gatto) at the University of Naples Federico II.
- External expert for a thesis titled " "Sugar and brain disfunction: persistence of molecular alterations induced by a high-fructose diet in a juvenile rodent model " (Martina Nazzaro) at the University of Naples Federico II.

*PhD Commitee*

- Member of the selection committee for the recruitment of Ph.D. students in the XXV cycle of the Section of Biology Applied to Human Health at the Doctoral School of Biology, Roma Tre University.
- Member of the examination board for the final exams of the Ph.D. program in Neurophysiology (XXVI cycle) at Sapienza University of Rome.

- Member of the examination board for the final exams of the Ph.D. program in Life Sciences (XXVIII cycle) at the University of Siena.
- Member of the examination board for the final exams of the Ph.D. program in Medical Sciences and Biotechnology (XXXI cycle) at the University of Eastern Piedmont (Novara).
- Member of the examination board for the final exams of the Ph.D. program in Clinical and Experimental Neuroscience and Psychiatry (XXXII cycle) at Sapienza University of Rome.
- Member of the examination board for the final exams of the Ph.D. program in Psychobiology (XXXIII cycle) at Sapienza University of Rome.
- Chairman of the examination board for the final exams of the Ph.D. program in Life Sciences (XXXV cycle) at Sapienza University of Rome.
- Chairman of the examination board for the final exams of the Ph.D. program in Clinical-Experimental Neurosciences and Psychiatry (XXXVI cycle) at Sapienza University of Rome.
- Member of the examination board for the final exams of the Ph.D. program in Biological and Environmental Sciences and Technologies (XXXVII cycle) University of Salento (Lecce) Italy.
- Member of Evaluation Committee for the National PhD Research Program in Theoretical and Applied Neuroscience (University Roma Tre).

### **Commitment to general public:**

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|------------|---|
| Since 2006 | Numerous lectures and small laboratory activities for primary and secondary school students.  |
| Since 2010 | Organization of University Open Days for the Bachelor's and Master's courses in Biology (Roma Tre).   |
| 2014-2022  | Organizing Committee for the European Researchers' Night at Roma Tre University.  |
| 2015       | Seminar titled "Cholesterol: Benefactor or Killer?" at the European Researchers' Night (Roma Tre).  |
| 2017       | Lecture entitled "Does the Diversity of Experimental Models Guarantee Their Use?" within the project "The Pleasure of Knowledge" open to citizens at Argiletum, Roma Tre. |
| 2018       | Seminar entitled "Cholesterol: Benefactor or Killer?" at the European Researchers' Night (Roma Tre).  |
| 2018-2020  | School-Work program (When I Grow Up, I'll Be a Research Biologist) at Roma Tre.   |
| 2021       | Seminar entitled "Pollution and Health: Effects of Prenatal Bisphenol A Exposure" at the European Researchers' Night (Roma Tre).  |
| 2021       | Participation in the television program "Futuro24" (Rai News24): interviewed about the danger of endocrine disruptors on human health.                                    |
| 2021       | Seminar entitled "Pollution and Health" at the Student Salon.   |
| 2022       | Seminar entitled "Pollution and Health: Effects of Plastic Exposure During Pregnancy" at the European Researchers' Night.   |
| 2022       | Participation in the event "Science in the Neighborhood," CSA Casale Ceribelli, Rome, organized by "Comune di Roma VIII Municipio". Activity                              |

- title: "Neuroscience (Un)Balanced: How Dance Helps Keep the Brain Young."
- 2023 Organizing Committee for the Final Contest of the Italian Neuroscience Olympiad.
- 2024 Interview on the news of national television (RAI 1) about research conducted on Niemann-Pick disease.
- 2025 Interview on the news of national television (RAI News 24) about research conducted on Niemann-Pick disease.
- 2025 Organizing Committee for the Final Contest of the Italian Neuroscience Olympiad.
- 2024: Meeting with the Niemann-Pick patient association, titled "Pleasure to Meet You", organized by the Telethon Foundation.
- 2025: Participation in the Congress of the Italian Niemann-Pick Association, meeting with patients' families.

***Autorizzo il trattamento dei dati personali contenuti nel mio curriculum vitae, in conformità all'art. 13 del D. Lgs. 196/2003 e all'art. 13 del Regolamento UE 2016/679 relativo alla protezione delle persone fisiche con riguardo al trattamento dei dati personali.***

**Roma 20th April 2026**

