MARINA PORCELLI CURRENT ACADEMIC POSITION

Full Professor of Biochemistry (BIO/10)
Department of Precision Medicine, University of Campania “Luigi Vanvitelli”
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EDUCATION

2006 -present	Full Professor of Biochemistry at the Department of Biochemistry, Biophysics and General Pathology, Second University of Naples now Department of Precision Medicine, University of Campania "Luigi Vanvitelli
2000-2005	Associate Professor of Biochemistry at the Department of Biochemistry and Biophysics "F. Cedrangolo" School of Medicine, Second University of Naples, now University of Campania "Luigi Vanvitelli"
1982-2000	University Researcher at Faculty of Medicine and Surgery, Second University of Naples.
1977-1982	Research grant in Biochemistry at the Institute of Biochemistry of Macromolecules, School of Medicine, University of Naples "Federico II"
1976-1977	Professor of Chemistry and Biochemistry.
1975	Degree in Biological Sciences (110/110 cum laude) at University of Naples "Federico II".

CLINICAL ACTIVITY

1995-present	First level Health Manager, in application of art. 102 of D.P.R.382/80 at the Azienda Universitaria Policlinicol of the University of Campania "Luigi Vanvitelli"

TEACHING ACTIVITY

Biochemistry courses at: - degree course in Medicine and Surgery, in the Master's Degree Course in Dentistry and Dental Prosthetics, in the Three-Year Degree in "Medical Scientific Informer", in the Three-Year Degree in "Medical Radiology Techniques for Images and Radiotherapy ", and in the three-year degree course in "Biomedical Laboratory Techniques"of the University of Campania. Teaching of Biochemistry in the Schools of Specialization in "Food Science" and in "Clinical Biochemistry and Clinical Pathology". Professor of the course "Guide to the critical reading of scientific papers" and of the "Seminars of Biochemistry and Innovative Biomedical Technologies" course for PhD students in "Cellular Biochemistry" and for PhD students in "Biochemical and Biotechnological Sciences".

ACADEMIC AND COORDINATION ACTIVITIES

2020	Elected Member of the Board of Directors of the Italian Society of Biochemistry and Molecular Biology with function from January 2021
2015-present	Member of the quality section of Research in the University Quality Presidium.
2014-2019	Coordinator of the PhD in "Biochemical and Biotechnological Sciences".
2011-present	Delegate of the Rector of the Second University of Naples and after of the Rector of University of Campania “Luigi Vanvitelli” for PhD Courses with the function of

	Coordinator of the Permanent Commission of Doctorates and member of the University Commission for Internationalization.
2011-2014	Coordinator of the PhD in "Cellular Biochemistry".
2011-present	Academic Coordinator of the Integrated Biochemistry Course.
2010-present	Member of the Research Area Committees (CAR) and of the Lifelong Learning Center of the Second University of Naples.
2002-present	Member of the Regional Competence Center in Industrial Biotechnology - BioTekNet.
2002-2006	Secretary of the Presidential Council of the Faculty of Medicine and Surgery.
2002-2003	Member of the Commission for the Visibility of the Faculty of Medicine.
2000-2006	Member of the "University Research" Commission of the Faculty of Medicine and Surgery.
1998-1999	Member of the Second Advisory Commission in charge of analyzing the research projects of the University EE.FF. 96, 97 and 98 and the analysis of research projects of relevant national interest, co-financed by E.F. 99.1994-2000 Member of the Board of Directors of the Second University of Naples.
1993-1996	Member of the Second Scientific Commission according to article 65 of the D.P.R. No. 382/80, expression of disciplinary area 05-Biological Sciences for the Second University.
1992-2010	Member of the teaching staff of the PhD in Cellular Biochemistry "and didactic-scientific secretary of this PhD.
1992	Elaboration of the statute of the research doctorate in "Digestive and nutritional physiopathology" Consortium universities of Naples and Bari and of the statute of the doctorate in "Cellular biochemistry" University of Naples.
1983-1996	Collaboration in the organization of the PhD courses in "Biochemical Sciences", in the final tests and in the organizational meetings of the Teaching Body and Course Coordinators.
1981-1983	Collaboration in the elaboration of the statute of the research doctorate in "Biochemical Sciences" Consortium University of Naples and Bari.

ORGANIZATION OF CONFERENCES AND COURSES.

Organizing Committee of the 59 National Congress of the Italian Society of Biochemistry and Molecular Biology September 2017 Caserta.
Scientific Secretariat of the International Conference "New Trends in Biotechnology: Science and Education", Capri 1996.
Organizing Secretariat of the "8th International Congress on Nutrition and Metabolism in Renal Disease", Naples 1996.
Promoting Committee and Scientific Secretariat of the Round Table "The point on scientific-technological parks in Campania" 1992.
Editorial Committee of volume 17 of the Acta Neapolitan series of the Editors Guide 1992.
Scientific Secretariat of the Interdisciplinary Conference "The coordinates of a modern scientific-technological park: purposes, settlement logics, typologies, relations with the territory" Naples 1991.
Scientific Committee and Organizer of the Conference "International Symposium on Polyamines in Biochemical and Organizing Committee Clinical Research", Sorrento, June 13-17, 1988.
Organization of the course "Fast protein liquid chromatography: technical aspects and biochemical applications" and of the course: "High-pressure liquid chromatography: instrumental aspects and applications in biochemistry" for PhD students, 1984.
Organization of the International Symposium "Adenosylmethionine and Central Nervous System", Naples, 1977.

SCIENTIFIC ACTIVITY

From 1972 to 1975 she carried out scientific research at the Institute of Biology of the Faculty of Science of the University of Naples. From 1975 she carries out research activities at the Department of Biochemistry, Biophysics and General Pathology of the Second University of Naples, now Department of Precision Medicine of the University of Campania "Luigi Vanvitelli". The scientific activity is documented by more than 90 articles published in international journals, 20 contributions in books of international relevance and by about 130 communications at national and international conferences many of which presented as "invited speaker". Intense "referee" activity for high impact international journals. She has been a member of the Italian Society of Biochemistry and Molecular Biology since 1977 and of the National Institute of Biostructures and Biosystems and has been scientific director of the research unit in PRIN of MIUR and of projects aimed at the Campania Region and the University. She has participated in the Editorial Boards of international journals and has been a reviewer of numerous manuscripts.

LIBRARY INDEXES

H Index 21; total citations 1230 (Scopus);
Total impact factor of the 20 selected papers for PRIN 2020, 80.32;
4.016 average of FI of the 20 selected papers;
i10-index 39 (works with more than 10 citations);
34 numbers of papers in the last 10 years (2011-today)

MAIN SCIENTIFIC INTERESTS

Major research fields are: a) metabolism of S-adenosylmethionine and natural sulfur-nucleosides in Eukarya, Bacteria and Archaea; b) methylthioadenosine metabolism and its relationship with cell growth and differentiation; c) purification and kinetic characterization of enzymes of polyamine biosynthesis and inhibition studies; d) enzymes of sulfur-nucleosides metabolism in Archaea as model system for the study of structure-function-stability relationship of proteins from hyperthermophilic Archaea and analysis of disulfide bounds as molecular stabilization strategy against the extreme temperatures; e) characterization and biosynthesis studies on 5'-methylthioxylofuranosyl adenine, a natural analogous of 5'-methylthioadenosine; f) structural and functional characterization of aminopropyl transferase from Archaea and roles of polyamines in thermal stress adaptation; g) biochemical and structural characterization of purine nucleoside phosphorylases, nucleoside hydrolases and adenosylmethionine synthetase thermostable and thermoactive from Archaea: enzymes of biotechnological interest; h) role of elevated homocysteine levels in endothelial dysfunction and cardiovascular diseases.
Current research projects regard on the effect of S-adenosylmethionine and nutraceutics on cell growth, apoptosis and cancer processes.

SCIENTIFIC COLLABORATIONS WITH NATIONAL AND INTERNATIONAL RESEARCH LABORATORIES

- Laboratory for the Chemistry of Molecules of Biological Interest of the CNR of Naples.
- Section of Biochemistry, Molecular and Cell Biology of Cornell University, Ithaca, New York.
- Department of Biophysics, Institute of experimental Physics, University of Warsaw, Poland.
- Department of Biochemistry & Molecular Biology "of the University of Georgia.

- Laboratory of Bioinformatics and Computational Biology, Institute of Food Science of CNR Avellino.
- Unit of Bio-crystallography Fondazione San Raffaele, Milan.
- Laboratory for Mass Spectrometry, Physical Chemistry Division of Rudier Boskovic Institute, Zagreb.
- Technology Park of Bizkaia, Bizkaia, País Vasco, Spain.

- Principali pubblicazioni scientifiche

1. Coppola A, IlissoCP, Stellavato A, Schiraldi C, Caraglia M, Mosca L, Cacciapuoti G, **Porcelli M.**
S-Adenosylmethionine Inhibits Cell Growth and Migration of Triple Negative Breast Cancer Cells through Upregulating MiRNA-34c and MiRNA-449a.
*Int. J. Mol. Sci.***2021**, *22*, 286; https://doi.org/10.3390/ijms22010286IF 4,556.

2. Pagano M, Mosca L, Vitiello F, Ilisso CP, Coppola A, Borzacchiello L, Mele L, Caruso FP, Ceccarelli M, Caraglia M, Cacciapuoti G, **Porcelli M.**
Mi-RNA-888-5p Is Involved in S-Adenosylmethionine Antitumor Effects in Laryngeal Squamous Cancer Cells. *Cancers*. **2020,** 12(12):3665. doi: 10.3390/cancers12123665. IF 6,126

3. Mosca L, Vitiello F, Coppola A, Borzacchiello L, Ilisso CP, Pagano M, Caraglia M, Cacciapuoti G, **Porcelli M.**
Therapeutic Potential of the Natural Compound S-Adenosylmethionine as a Chemoprotective Synergistic Agent in Breast, and Head and Neck Cancer Treatment: Current Status of Research.
Int J Mol Sci. **2020** Nov 13;21(22):8547. doi: 10.3390/ijms21228547IF 4,556
4. Mosca, L.; Pagano, M.; Pecoraro, A.; Borzacchiello, L.;Mele, L.; Cacciapuoti, G.; Porcelli,M.; Russo, G.; Russo,A.
S-Adenosyl-L-Methionine Overcomes uL3-Mediated Drug Resistance in p53 Deleted ColonCancer Cells.
Int. J. Mol. Sci. **2020**, 22,103. https://dx.doi.org/10.3390/ijms22010103 IF 4,556
5. Di Domenico M, Feola A, Ambrosio P, Pinto F, GalassoG, Zarrelli A, Di Fabio G, **Porcelli M**, Scacco S, Inchingolo F,Quagliuolo L, Ballini A, Boccellino M.

Antioxidant effect of beer polyphenols and their bioavailability in Dental-derived Stem Cells (D-dSCs) and human intestinal epithelial lines (Caco-2) cells. *Stem Cells Int.***2020**, 8835813. doi: 10.1155/2020/8835813. IF 3.869

6. Mosca L, Minopoli M, Pagano M, Vitiello F, Carriero MV, Cacciapuoti G, **Porcelli M.**
Effects of S-adenosyl-L-methionine on the invasion and migration of head and neck squamous cancer cells and analysis of the underlying mechanisms.
Int J Oncol. **2020** May;56(5):1212-1224. doi: 10.3892/ijo.2020.5011. Epub 2020 Mar 12. I F 3,899

7. Vuoso DC, D'Angelo S, Ferraro R, Caserta S, Guido S, Cammarota M, **Porcelli M**, Cacciapuoti G.

Annurca apple polyphenol extract promotes mesenchymal-to-epithelial transition and inhibits migration in triple-negative breast cancer cells through ROS/JNK signaling.
Sci Rep. **2020** Sep 28;10(1):15921. doi: 10.1038/s41598-020-73092-2. IF 3,998

8. Minici C, Mosca L, Ilisso CP, Cacciapuoti G, **Porcelli M**, Degano M.J.
Structures of catalytic cycle intermediates of the Pyrococcus furiosus methionine adenosyltransferase demonstrate negative cooperativity in the archaeal orthologues.
J Struct Biol. **2020** Apr 1;210(1):107462. doi: 10.1016/j.jsb.2020.107462. Epub 2020 Jan 18. 3,479

9. Di Stasio D, Mosca L, Lucchese A, Cave DD, Kawasaki H, Lombardi A, **Porcelli M**, Caraglia M.
Salivary mir-27b Expression in Oral Lichen Planus Patients: A Series of Cases and a Narrative Review of Literature.
Curr Top Med Chem. **2019**;19(31):2816-2823. doi: 10.2174/1568026619666191121144407. If 3.218

10. Cossu AM, Mosca L, Zappavigna S, Misso G, Bocchetti M, De Micco F, Quagliuolo L, **Porcelli M**, Caraglia M, Boccellino M.
Long Non-coding RNAs as Important Biomarkers in Laryngeal Cancer and Other Head and Neck Tumours.
Int J Mol Sci. **2019** Jul 12;20(14):3444. doi: 10.3390/ijms20143444. If 4.556

11. Mosca L, Pagano M, Ilisso CP, Cave DD, Desiderio V, Mele L, Caraglia M, Cacciapuoti G, **Porcelli M.**
AdoMet triggers apoptosis in head and neck squamous cancer by inducing ER stress and potentiates cell sensitivity to cisplatin.
J Cell Physiol. **2019** Aug;234(8):13277-13291. doi: 10.1002/jcp.28000. Epub 2018 Dec 21. IF 4.552

12. Martino E, Vuoso DC, D'Angelo S, Mele L, D'Onofrio N, **Porcelli M**, Cacciapuoti G.
Annurca apple polyphenol extract selectively kills MDA-MB-231 cells through ROS generation, sustained JNK activation and cell growth and survival inhibition.
Sci. Rep. **2019** 9(1):13045. doi: 10.1038/s41598-019-49631-x.IF 3,998

13. Ilisso CP, Delle Cave D, Mosca L, Pagano M, Coppola A, Mele L, Caraglia M, Cacciapuoti G, **Porcelli M.**
S-Adenosylmethionine regulates apoptosis and autophagy in MCF-7 breast cancer cells through the modulation of specific microRNAs.
Cancer Cell Int. **2018** Dec 4; 18:197. doi: 10.1186/s12935-018-0697-6. IF 4.1745

14. Grassia V, Lombardi A, Kawasaki H, Ferri C, Perillo L, Mosca L, Delle Cave D, Nucci L, **Porcelli M**, Caraglia M.

Salivary microRNAs as new molecular markers in cleft lip and palate: a new frontier in molecular medicine. Oncotarget. **2018** Apr 10;9(27):18929-18938. doi: 10.18632/oncotarget.24838. IF 4.79

15. Cave DD, Desiderio V, Mosca L, Ilisso CP, Mele L, Caraglia M, Cacciapuoti G, **Porcelli M.**
S-Adenosylmethionine-mediated apoptosis is potentiated by autophagy inhibition induced by chloroquine in human breast cancer cells.
J. Cell. Physiol, **2018**, 233(2) 1370-1383 ISSN: 0021-9541, doi: 10.1002/jcp.26015. IF 4.552

16. D'Angelo S, Martino E, Ilisso CP, Bagarolo ML, **Porcelli M**, Cacciapuoti G.
Pro-oxidant and pro-apoptotic activity of polyphenol extract from Annurca apple and its underlying mechanisms in human breast cancer cells.
Int J Oncol. **2017** Sep;51(3):939-948. doi: 10.3892/ijo.2017.4088. Epub 2017 Jul 31.I F 3,899

17. Stiuso P, Bagarolo ML, Ilisso CP, Vanacore D, Martino E, Caraglia M, **Porcelli M**, Cacciapuoti G.
Protective Effect of Tyrosol and S-Adenosylmethionine against Ethanol-Induced Oxidative Stress of Hepg2 Cells Involves Sirtuin 1, P53 and Erk1/2 Signaling.
Int J Mol Sci. **2016** Apr 26;17(5):622. doi: 10.3390/ijms17050622.IF 4,556

18. Cacciapuoti G, Bagarolo ML, Martino E, Scafuri B, Marabotti A, **Porcelli M.**
Efficient Fludarabine-Activating PNP From Archaea as a Guidance for Redesign the Active Site of E. Coli PNP.
J Cell Biochem. **2016** May;117(5):1126-35. doi: 10.1002/jcb.25396. IF 3.348

19. Ilisso CP, Sapio L, Delle Cave D, Illiano M, Spina A, Cacciapuoti G, Naviglio S, **Porcelli M.**
S-Adenosylmethionine Affects ERK1/2 and Stat3 Pathways and Induces Apotosis in Osteosarcoma Cells.
J Cell Physiol. **2016** Feb;231(2):428-. IF 4.552

20. Ilisso CP, Castellano M, Zappavigna S, Lombardi A, Vitale G, Dicitore A, Cacciapuoti G, Caraglia M, **Porcelli M.**
The methyl donor S-adenosylmethionine potentiates doxorubicin effects on apoptosis of hormone-dependent breast cancer cell lines.
Endocrine. **2015** Sep;50(1):212-22. doi: 10.1007/s12020-014-0484-7. Epub 2015 Jan 11.PMID: 25577236 IF 3.878

21) Delle Cave, D., Ilisso, C. P., Mosca, L., Pagano, M., Martino, E., **Porcelli, M**., Cacciapuoti, G. (**2017**). The anticancer effects of S-Adenosylmethionine on Breast Cancer cells. JSM Chemistry, 5: 1049-1056, ISSN: 2334-1831.12)

22) Bagarolo ML, **Porcelli M**, Martino E, Feller G, Cacciapuoti G. (2015). Multiple disulfide bridges modulate conformational stability and flexibility in hyperthermophilic archaeal purine nucleoside phosphorylase. Biochim Biophys Acta, 1854:1458-1465, ISSN: 0006-3002, doi: 10.1016/j.bbapap.**2015**.06.010.

23) Barbarisi M, Marino G, Armenia E, Vincenzo Q, Rosso F, **Porcelli M**, Barbarisi A (**2015**). Use of polycaprolactone (PCL) as scaffolds for the regeneration of nerve tissue. J. Biomed. Mater. Res. A, 103(5):1755-1760. ISSN: 1549-3296, doi: doi: 10.1002/jbm.a.35318.

24. **Porcelli M**, Ilisso CP, Mosca L, Cacciapuoti G,
A thermostable archaeal S-adenosylmethionine synthetase: a promising tool to improve the synthesis of adenosylmethionine analogs of biotechnological interest.
Bioengineered. **2015**;6(3):184-6. doi: 10.1080/21655979.2015.1045170.PMID: 25932775 IF 2.2

25. **Porcelli M**, Ilisso CP, De Leo E, Cacciapuoti G.
Biochemical characterization of a thermostable adenosylmethionine synthetase from the archaeon Pyrococcus furiosus with high catalytic power.
Appl Biochem Biotechnol. **2015** Mar;175(6):2916-33. doi: 10.1007/s12010-015-1476-7. IF 1.638

26. Dell'Annunziata F, Ilisso CP, Dell'Aversana C, Greco G, Coppola A, Martora F, Dal Piaz F, Donadio G, Falanga A, Galdiero M, Altucci L, Galdiero M, **Porcelli M**, Folliero V, Franci G. Outer Membrane Vesicles Derived from Klebsiella pneumoniae Influence the miRNA Expression Profile in Human Bronchial Epithelial BEAS-2B Cells. *Microorganisms.***2020,** 8(12):1985. doi: 10.3390/microorganisms8121985. IF 4.167

27. Short Survey
Biological activity of melannurca flesh apple biophenols. Vuoso, D.C., **Porcelli, M.**, Cacciapuoti, G., D'Angelo, S., Current Nutrition and Food Science, 2020, 16(8), pp. 1149–1162

28. Vuoso D.C., **Porcelli M.**, Cacciapuoti G., D'Angelo S.

Biological Activity of MelAnnurca Flesh Apple Biophenols. *Current Nutrition & Food Science* (**2020**) 16(8), pp. 1149–1162

16: 1149.

https://doi.org/10.2174/1573401316666200217113808

29. Mosca L., Pagano M., Vitiello F., Ilisso C.P., Coppola A., Borzacchiello L., Cacciapuoti G., **Porcelli M.**

AdoMet Synergistically Enhances the Chemotherapeutic Action of Cisplatin and Improves Drug Efficacy in JHU-SCC-011 Laryngeal Squamous Cell Carcinoma. *Nov Appro in Can Study. 5(1). NACS.000603*. **2020**. doi: 10.31031/NACS.2020.05.000603