

Curriculum vitae Barbara Peracino

Personal details

Born in Turin on 18/09/1968

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Educations

- **1992 Graduate in Biological Sciences with 110/110 cum laude** with graduation thesis in biotechnology.
- **1998 PhD in Immunology and Cell biology**

Professional experiences and current position

From 2001 to present: Research technician in Department of Clinical and Biological Sciences

1992-1993: Training post-degree at Cell Biology Laboratory, Department of Clinical and Biological Sciences, University of Turin, under Prof. Salvatore Bozzaro supervision.

1994: License to practice as Biologist after Biology qualification exam at University of Turin

1993-1997: PhD student in Immunology and Cell biology

1996-1997: During PhD, permanence at Max Planck Institut für Biochemie in Munich, Cell Biology department, under Prof. Gunter Gerisch supervision.

Academic Year 1997/1998: Teaching Fellowship in Cellular biology for Nursing Course (Aosta) at the Medical School, University of Turin.

1998-2000: post-doc fellowship.

From 1999 to 2001: Teaching Fellowship in Cellular Biology at Nursing Course at the Department of Clinical and Biological Sciences in the S. Luigi Hospital for the Medical School, University of Turin.

From 2001 to 2017: Staff Scientist in Cellular Biology Prof. Bozzaro's Laboratory.

From 2018: Scientific collaborator of Prof. Luca Primo laboratory of Cell Migration; Department of Oncology.

From 2001 to present: Responsible of Confocal and fluorescence microscopes for the Department of Clinical and Biological Sciences.

From 2011 to present: Deputy of the Department Director for the special waste management.

From 2019 to present: member of Department council and Departmental board as a research technician deputy.

Research main topics

Signal transduction analysis during phagocytosis.

Cloning and analysis of genes involved in phagocytosis by generation and analysis of insertional mutagenesis mutants.

Cloning and Identifications of Nramp family genes, by PCR techniques; generations of Knock-out multiples mutants by using recombinase technique and generation and analysis of GFP-chimera proteins expressing cells lines.

Analysis of *L. pneumophila* infection mechanisms in *D.discoideum* and mammalian cells;

Cloning of genes involved in cellular iron omeostasis.

Mammalian genome editing to generate of Knock in fluorescent tagged proteins using CRISPR-Cas9 Technique.

Experiences in cellular biology techniques, in molecular biology and immunology techniques; in fluorescence and confocal microscopy.

Bibliometry (1996-present) (www.scopus.com)

Publications 22; H-index 12; citations 641

Publications

1: Palmiero M, Cantarosso I, di Blasio L, Monica V, **Peracino B**, Primo L, Puliafito A. Collective directional migration drives the formation of heteroclinal cancer cell clusters. Mol Oncol. 2023 Jan 1. doi: 10.1002/1878-0261.13369. Epub ahead of print. PMID: 36587372.

2: **Peracino B**, Monica V, Primo L, Bracco E, Bozzaro S. Iron metabolism in the social amoeba Dictyostelium discoideum: A role for ferric chelate reductases.

Eur J Cell Biol. 2022 Jun-Aug;101(3):151230. doi: 10.1016/j.ejcb.2022.151230. Epub 2022 Apr 28. PMID: 35550931.

3: Cinquetti R, Imperiali FG, Bozzaro S, Zanella D, Vacca F, Roseti C, **Peracino B**, Castagna M, Bossi E. Characterization of Transport Activity of SLC11 Transporters in *Xenopus laevis* Oocytes by Fluorophore Quenching. SLAS Discov. 2021 Jul;26(6):798-810. doi: 10.1177/24725552211004123. Epub 2021 Apr 7. PMID: 33825579.

4: Chiaverina G, di Blasio L, Monica V, Accardo M, Palmiero M, **Peracino B**, Varas-Messler M, Puliafito A, Primo L. Dynamic Interplay between Pericytes and Endothelial Cells during Sprouting Angiogenesis. Cells. 2019 Sep 19;8(9):1109. doi: 10.3390/cells8091109. PMID: 31546913; PMCID: PMC6770602.

5: Bozzaro S, Buracco S, **Peracino B**, Eichinger L. Dictyostelium Host Response to Legionella Infection: Strategies and Assays. Methods Mol Biol. 2019;1921:347-370. doi: 10.1007/978-1-4939-9048-1_23. PMID: 30694504.

6: Buracco S, **Peracino B**, Andreini C, Bracco E, Bozzaro S. Differential Effects of Iron, Zinc, and Copper on Dictyostelium discoideum Cell Growth and Resistance to Legionella pneumophila. Front Cell Infect Microbiol. 2018 Jan 11;7:536. doi: 10.3389/fcimb.2017.00536. PMID: 29379774; PMCID: PMC5770829.

7: Monica V, Lo Iacono M, Bracco E, Busso S, Di Blasio L, Primo L, **Peracino B**, Papotti M, Scagliotti G. Dasatinib modulates sensitivity to pemetrexed in malignant pleural mesothelioma cell lines. Oncotarget. 2016 Nov 22;7(47):76577-76589. doi: 10.18632/oncotarget.10428. PMID: 27391433; PMCID: PMC5363531.

8: Panuzzo C, Volpe G, Cibrario Rocchietti E, Casnici C, Crotta K, Crivellaro S, Carrà G, Lorenzatti R, **Peracino B**, Torti D, Morotti A, Camacho-Leal MP, Defilippi P, Marelli O, Saglio G. New alternative splicing BCR/ABL-OOF shows an oncogenic role by lack of inhibition of BCR GTPase activity and an increased of persistence of Rac activation in chronic myeloid leukemia. Oncoscience. 2015 Nov 11;2(10):880-91. doi: 10.18632/oncoscience.260. PMID: 26682280; PMCID: PMC4671955.

9: Buracco S, **Peracino B**, Cinquetti R, Signoretto E, Vollero A, Imperiali F, Castagna M, Bossi E, Bozzaro S. Dictyostelium Nramp1, which is structurally and functionally similar to mammalian DMT1 transporter, mediates phagosomal iron efflux. J Cell Sci. 2015 Sep 1;128(17):3304-16. doi: 10.1242/jcs.173153. Epub 2015 Jul 24. PMID: 26208637; PMCID: PMC4582194.

10: Bozzaro S, Buracco S, **Peracino B**. Iron metabolism and resistance to infection by invasive bacteria in the social amoeba Dictyostelium discoideum. Front Cell Infect Microbiol. 2013 Sep 19;3:50. doi: 10.3389/fcimb.2013.00050. PMID: 24066281; PMCID: PMC3777012.

11: Bozzaro S, **Peracino B**, Eichinger L. Dictyostelium host response to legionella infection: strategies and assays. Methods Mol Biol. 2013;954:417-38. doi:

10.1007/978-1-62703-161-5_26. PMID: 23150412.

12: **Peracino B**, Buracco S, Bozzaro S. The Nramp (Slc11) proteins regulate development, resistance to pathogenic bacteria and iron homeostasis in *Dictyostelium discoideum*. *J Cell Sci.* 2013 Jan 1;126(Pt 1):301-11. doi: 10.1242/jcs.116210. Epub 2012 Sep 19. PMID: 22992462.

13: Balest A, **Peracino B**, Bozzaro S. *Legionella pneumophila* infection is enhanced in a RacH-null mutant of *Dictyostelium*. *Commun Integr Biol.* 2011 Mar;4(2):194-7. doi: 10.4161/cib.4.2.14381. PMID: 21655438; PMCID: PMC3104577.

14: **Peracino B**, Balest A, Bozzaro S. Phosphoinositides differentially regulate bacterial uptake and Nramp1-induced resistance to *Legionella* infection in *Dictyostelium*. *J Cell Sci.* 2010 Dec 1;123(Pt 23):4039-51. doi: 10.1242/jcs.072124. Epub 2010 Nov 2. PMID: 21045112.

15: Colucci AM, **Peracino B**, Tala A, Bozzaro S, Alifano P, Bucci C. *Dictyostelium discoideum* as a model host for meningococcal pathogenesis. *Med Sci Monit.* 2008 Jul;14(7):BR134-40. PMID: 18591912.

16: Sillo A, Bloomfield G, Balest A, Balbo A, Pergolizzi B, **Peracino B**, Skelton J, Ivens A, Bozzaro S. Genome-wide transcriptional changes induced by phagocytosis or growth on bacteria in *Dictyostelium*. *BMC Genomics.* 2008 Jun 17;9:291. doi: 10.1186/1471-2164-9-291. PMID: 18559084; PMCID: PMC2443395.

17: **Peracino B**, Wagner C, Balest A, Balbo A, Pergolizzi B, Noegel AA, Steinert M, Bozzaro S. Function and mechanism of action of *Dictyostelium* Nramp1 (Slc11a1) in bacterial infection. *Traffic.* 2006 Jan;7(1):22-38. doi: 10.1111/j.1600-0854.2005.00356.x. PMID: 16445684.

18: Pergolizzi B, **Peracino B**, Silverman J, Ceccarelli A, Noegel A, Devreotes P, Bozzaro S. Temperature-sensitive inhibition of development in *Dictyostelium* due to a point mutation in the *piaA* gene. *Dev Biol.* 2002 Nov 1;251(1):18-26. doi: 10.1006/dbio.2002.0809. PMID: 12413895.

19: Bracco E, Pergolizzi B, **Peracino B**, Ponte E, Balbo A, Mai A, Ceccarelli A, Bozzaro S. Cell-cell signaling and adhesion in phagocytosis and early development of *Dictyostelium*. *Int J Dev Biol.* 2000;44(6):733-42. PMID: 11061438.

20: **Peracino B**, Borleis J, Jin T, Westphal M, Schwartz JM, Wu L, Bracco E, Gerisch G, Devreotes P, Bozzaro S. G protein beta subunit-null mutants are impaired in phagocytosis and chemotaxis due to inappropriate regulation of the actin cytoskeleton. *J Cell Biol.* 1998 Jun 29;141(7):1529-37. doi: 10.1083/jcb.141.7.1529. PMID: 9647646; PMCID: PMC2133009.

21: Bracco E, **Peracino B**, Noegel AA, Bozzaro S. Cloning and transcriptional regulation of the gene encoding the vacuolar/H⁺ ATPase B subunit of *Dictyostelium discoideum*. *FEBS Lett.* 1997 Dec 8;419(1):37-40. doi: 10.1016/s0014-5793(97)01425-7. PMID: 9426215.

22: Rivero F, Köppel B, **Peracino B**, Bozzaro S, Siegert F, Weijer CJ, Schleicher M, Albrecht R, Noegel AA. The role of the cortical cytoskeleton: F-actin crosslinking proteins protect against osmotic stress, ensure cell size, cell shape and motility, and contribute to phagocytosis and development. *J Cell Sci*. 1996 Nov;109 (Pt 11):2679-91. doi: 10.1242/jcs.109.11.2679. PMID: 8937986.