

Name & title	Donatella Taramelli, PhD Immunologist, parasitologist Full professor of Pathology Dipartimento di Scienze farmacologiche e Biomolecolari Università di Milano https://parviruslab.unimi.it/
Date and Place of birth	-omissis- donatella.taramelli@unimi.it orcid.0000-0001-5108-4492 ResearcherID is: H-5768-2017
Brief chronology of employment	1976 PhD in Biological Sciences (110/110 cum laude) University of Perugia(Italy) 1978-81 Visiting Fellow , NCI, NIH, Bethesda, MD, USA 1982-85 Research Associate, National Cancer Institute, Milan, Italy 1985-87 Research Associate, Dept. Exp. Medicine University of Rome "La Sapienza" 1987-89 Visiting Scientist, Div. of Rheum Clinical Immunol. Univ. of Maryland at Baltimore,USA 1987-99 Associate Professor of Pathology, School of Pharmacy, University of Milan. 2000- present Full Professor of Pathology, School of Pharmacy, University of Milan. 2007- 2014 Full Professor of Pathology, School of Pharmacy, UNSBC- Tirana 2012- 2014 President of the Bachelor Class in Pharmaceutical biotechnology and of the Master Class in Biotechnology of the Drug 2014- 2020 President of the Inter-departmental Bachelor Class in Biotechnology. 2017-present member of the UNIMI Strategic team on International Cooperation 2019-2021 President of the Centro Interuniversitario per la ricerca sulla Malaria-Italian Malaria Network-ISS 2021- present Member of the Italian Network on NTDs (Neglected Tropical Diseases) 2022- present Member of the Scientific Technical Committee of the IRCCS for Infectious and Tropical Diseases Hospital Sacro Cuore-Don Calabria, Negrar (VR). Facoltà di Scienze del Farmaco, Dipartimento di Scienze farmacologiche e Biomolecolari, Università di Milano, Via Pascal 36, 20133 Milano. Italy Phone +39 02 5031 5071, Fax +39 02 5031 5093 Email: donatella.taramelli@unimi.it
Affiliation/ Contact	
Research Grants	1992-93- P.I. project "Pathogenesis of opportunistic mycosis in neutropenic patients treated with anti-tumor chemotherapy" from Italian Cancer Res. Ass. 1996-99 – Associated Partner EU with JRC, Environment and Climate DGXII-ESCY for research on "Early indicators of contact sensitisation to heavy metals" 1996 - P.I. -WHO/ TDR grant entitled "Anti -malarial activity of Fe2+-porphyrins: pilot study for the development of a screening method for new drugs" 1997 – 98 P.I. WHO/TDR grant entitled "Oxidation of Fe(II) protoporphyrin IX and depolymerisation of plasmodia haemozoin: new targets for antimalarial drugs" 1997-99-00 P.I. Nat Res Progr on AIDS, ISS "New in vitro human models for studies on the pathogenicity of <i>P. marneffei</i> , an opportunistic fungus in AIDS 1997 - P.I. PRIN MURST Cofinanziamento 1997-99 on malaria 2001 - P.I. National Projects PRIN 2000 "Molecular, immunological and pharmacological analysis of the interactions between parasites, hosts and vectors." with prof M.Coluzzi. 2001 – Int. Coop. Italy- South Africa, Project on "Identification of new molecular targets for the synthesis and screening of new drugs active during the intraerythrocytic stage of malaria parasites" with Prof. T. J. Egan , University of Cape Town, South Africa. 2003- P.I. National Projects PRIN 2003 " 2003-07 Italian representative in the EU COST Action B22 -Drug development for parasitic diseases 2005-2011 WP manager- EU IP Project 18834- ANTIMAL- Development of New Drugs for the treatment of Malaria (ANTIMAL). 2006-2008 Cluster head-Italian Malaria Network , financed by Compagnia di San

Paolo-Torino Italy

2008-2011 Italian representative in the **EU COST Action BM0802** Life or death of protozoan parasites

2008- 2011 Research participant **PRIN 2008** Leads ad attività antimalarica di origine naturale: progettazione e sintesi di molecole multitarget derivate dalla statina o dall'acido usnico. PI Sergio Romeo

2009-2011 WP manager- **EU Project CRIMALDDI-** Coordination rationalization intergration of antimalarial drug discovery initiatives

2009-2014- PI **NIH-RO1** Research Grant with Univ. Massachusetts on Innate Immunity to Malaria

2011-2015 WP manager **Gametocyte Assay for Malaria (GAM) for Novel Anti-Transmission Drugs** financed by the **Bill & Melinda Gates Foundation**

2012-2015 PI National project **PRIN 2011** on "The skin inflammatory responses to infectious agents and injury: a transcriptomic, post-transcriptomic and functional study at the single-cell level. (SKINFLAM)"

2014-2018 Italian Representative MC Substitute **to COST Action CM1307**. Targeted chemotherapy towards diseases caused by endoparasites.

2015-2018 PI International Cooperation MAECI (Italian Minister of Foreign Affairs)- Fight against malaria in Burkina Faso: Training and research in malariology

2015-2018 PI National project **PRIN 2015** on Towards multi-stage drugs to fight poverty related and neglected parasitic diseases: synthetic and natural compounds, directed against Leishmania, Plasmodium and Schistosoma life stages and assessment of their mechanisms of action (LeishPlaSch).

2018-2021- Partner with ISS (PI Dr P. Alano) MAECI- SA Bilateral cooperation Italy-South Africa, projects of high relevance

2022-present Research participant **EU COST Action CA21111-** One Health Drugs.

Research subjects/ platforms

1-Drug discovery & screening. in vitro chemosensitivity assays against *P. falciparum* strains and different *Leishmania* species for the identification of new compounds with anti-parasitic activity transmission blocking activity and SAR studies. Development of novel screening assays against different parasite stages using transgenic (fluorescent or luminescent) parasites. Preclinical tests of new antimalarials. Screening assays against *Leishmania* spp (pro and amastigotes)

2-Studies on the mechanism of action of antimalarials active during the intraerythrocytic stage of malaria parasites

- Identification of inhibitors of the haem detoxification process and the formation of haemozoin using a spectrophotometric microassay (BHIA, beta-haematin inhibitory activity) developed for medium /low throughput screening, recently adapted for robotic platforms.

3-Pathophysiology of parasite-host relationships (effects of parasite products on the host innate immune response, immunomodulatory role of HZ, mechanisms of accelerated senescence of RBC in relationship to anemia, Effects of *Leishmania* products on neuroinflammation, and NLRP3 activation)

5- Effects of artemisinin derivatives on angiogenesis and erythroid differentiation (K562, CD34+, human precursors)

Products

- **Italian patent application** N MI 2003A002044 for novel quinoline derivatives with antimalarial activity, under PCT extension
- **Bibliography:** 202 papers in international journals, 16 book chapters.
- **H index 44; total citation 6101**

Organization of National and International meetings

2021- Annual Meeting Italian Malaria Network (IMN) "Malaria, a pandemic from a spillover of 10,000 years ago: present situation and challenges" Milan (Italy) June 28-29, 2021

2021- Co-Organizer Symposium on Italian Malaria Network, XXXI National Conference of the Italian Society Parasitology " Parasites of the third millennium, June 19, 2021

2019 Joint Workshop within the ASVIS festival (Italian Alliance for Sustainable Development) and Italy-South Africa Joint Research Programme (ISARP) "New Tools for a Sustainable Control/Elimination of Malaria Transmission" Milan, May 24, 2019

2018- Co- Organizer XXX National Conference of the Italian Society Parasitology " Environmental changes and parasites" Milan, June 26-29, 2018. Round Table 5 The road toward malaria eradication: challenges and successes.

2012- IV Annual Meeting COST Action BM0802-Life or Death of Protozoan Parasites and V Annual Meeting Italian Malaria Network (IMN), Milan 19-21 gennaio 2012.

2011- FP7- CRIMALDDI (Co-ordination, Rationalisation, & Integration of Antimalarial Drug Discovery & Development Initiatives) MC Meeting , Milan, Italy 26 January 2011

2010 FP7- CRIMALDDI WORKSHOP Stage-specific screening methods, WHO/TDR, Geneva, 26 May 2010

2008 FP6- IP ANTIMAL Cluster Meeting. Milan 8 luglio 2008

2007 Expert Meeting COST ACTION B22 DRUG DEVELOPMENT FOR PARASITIC DISEASES Università degli Studi di Modena e Reggio Emilia, 19-20 February 2007

2006 – Joint Meeting COST ACTION B22 DRUG DEVELOPMENT FOR PARASITIC DISEASES and EU- IP ANTIMAL In vitro and in vivo screenings of new antiparasitic compounds: State-of-the-art and new Developments, Basel University Hospital, Nov 20-21, 2006

2006- FP6- IP AntiMal Cluster 1 Meeting. Department of Public Health-Microbiology-Virology, Milan, 23rd October 2006

2005 - 2nd Annual Meeting of COST Action B22 Drugs Development for Parasitic Diseases, Siena, Italy, September 29th - October 1st, 2005

List of Publications (2018- 2023)

1. Scaccabarozzi D, Deroost K, Corbett Y, Lays N, Corsetto P, Salè FO, Van den Steen PE, Taramelli D. - Differential induction of malaria liver pathology in mice infected with *Plasmodium chabaudi* AS or *Plasmodium berghei* NK65- Malar J. 2018 Jan 9;17(1):18. doi: 10.1186/s12936-017-2159-3.
2. Vallone A, D'Alessandro S, Brogi S, Brindisi M, Chemi G, Alfano G, Lamponi S, Lee SG, Jez JM, Koolen KJM, Dechering KJ, Saponara S, Fusi F, Gorelli B, Taramelli D, Parapini S, Caldelari R, Campiani G, Gemma S, Butini S. Antimalarial agents against both sexual and asexual parasites stages: structure-activity relationships and biological studies of the Malaria Box compound 1-[5-(4-bromo-2-chlorophenyl)furan-2-yl]-N-[(piperidin-4-yl)methyl]methanamina (MMV019918) and analogues. Eur J Med Chem. 2018 Apr 25;150:698-718. doi: 10.1016/j.ejmech.2018.03.024. Epub 2018 Mar 10. PubMed PMID: 29571157; PubMedCentral PMCID: PMC5902032.
3. Coertzen D, Reader J, van der Watt M, Nondaba SH, Gibhard L, Wiesner L, Smith P, D'Alessandro S, Taramelli D, Ning Wong H, du Preez JL, Wu RWK, Birkholtz LM, Haynes RK. Artemisone and artemiside - potent pan-reactive antimalarial agents that also synergize redox imbalance in *P. falciparum* transmissible gametocyte stages. Antimicrob Agents Chemother. 2018 Jul 27;62(8). pii: e02214-17. doi: 10.1128/AAC.02214-17. Print 2018 Aug
4. Wu Y, Parapini S, Williams ID, Misiano P, Wong HN, Taramelli D, Basilico N, Haynes RK. Facile Preparation of N-Glycosylated 10-Piperazinyl Artemisinin Derivatives and Evaluation of Their Antimalarial and Cytotoxic Activities. Molecules. 2018 Jul 13;23(7). pii: E1713. doi: 10.3390/molecules23071713. PubMed PMID: 30011856.
5. D'Alessandro S, Corbett Y, Parapini S, Perego F, Cavicchini L, Signorini L, Delbue S, Perego C, Ferrante P, Taramelli D, Basilico N. Malaria pigment accelerates MTT - formazan exocytosis in human endothelial cells. Parasitology. 2019, 146:(3) 399-406 doi: 10. 1017/S0031182018001579.
6. Cullia G, Bruno S, Parapini S, Margiotta M, Tamborini L, Pinto A, Galbiati A, Mozzarelli A, Persico M, Paladino A, Fattorusso C, D Taramelli, Paola Conti. Covalent Inhibitors of *Plasmodium falciparum* Glyceraldehyde 3-Phosphate Dehydrogenase with Antimalarial Activity in Vitro. ACS Med Chem Lett. 2019;10:590-595. doi: 10.1021/acsmchemlett.8b00592. IF 4.345
7. D'Alessandro S, Alfano G, Di Cerbo L, Brogi S, Chemi G, Relitti N, Brindisi M, Lamponi S, Novellino E, Campiani G, Gemma S, Basilico N, Taramelli D, Baratto MC, Pogni R, Butini S. Bridged bicyclic 2,3-dioxabicyclo[3.3.1]nonanes as antiparasitic agents: Synthesis, structure-activity relationships and studies on their biomimetic reaction with Fe(II). Bioorg Chem. 2019 Aug;89:103020. doi: 10.1016/j.bioorg.2019.103020

8. Lopatriello A, Soré H, Habluetzel A, Parapini S, D'Alessandro S, **Taramelli D**, Tagliatela-Scafati O. Identification of a potent and selective gametocytocidal antimalarial agent from the stem barks of *Lophira lanceolata*. *Bioorg Chem*. 2019 Dec;93:103321. doi: 10.1016/j.bioorg.2019.103321. Epub 2019 Sep 26.
9. Bassanini I, Parapini S, Galli C, Vaiana N, Pancotti A, Basilico N, **Taramelli D**, Romeo S. Discovery and Pharmacophore Mapping of a Low-Nanomolar Inhibitor of *P. falciparum* Growth. *ChemMedChem*. 2019 Dec 4;14(23):1982-1994. doi: 10.1002/cmdc.201900526. Epub 2019 Nov 12.
10. Oluyemi WM, Samuel BB, Kaehlig H, Zehl M, Parapini S, D'Alessandro S, **Taramelli D**, Krenn L. Antiplasmodial activity of triterpenes isolated from the methanolic leaf extract of *Combretum racemosum* P. Beauv. *J Ethnopharmacol*. 2020 Jan 30;247:112203. doi: 10.1016/j.jep.2019.112203.
11. Cava C, Pini S, **Taramelli D**, Castiglioni I. Perturbations of pathway co-expression network identify a core network in metastatic breast cancer. *Comput Biol Chem*. 2020 Jun 20;87:107313. doi: 10.1016/j.compbiolchem.2020.107313. Epub ahead of print. PMID: 32590221.
12. Malebo HM, D'Alessandro S, Ebstie YA, Soré H, Tenoh Guedoung AR, Katani SJ, Parapini S, **Taramelli D**, Habluetzel A. In vitro Multistage Malaria Transmission Blocking Activity of Selected Malaria Box Compounds. *Drug Des Devel Ther*. 2020 Apr 28;14:1593-1607. doi: 10.2147/DDDT.S242883. PMID: 32425505; PMCID: PMC7196193.
13. Nodari R, Corbett Y, Varotto-Boccazzi I, Porretta D, **Taramelli D**, Epis S, Bandi C. Effects of combined drug treatments on *Plasmodium falciparum*: In vitro assays with doxycycline, ivermectin and efflux pump inhibitors. *PLoS One*. 2020 Apr 23;15(4):e0232171. doi: 10.1371/journal.pone.0232171. PMID: 32324826; PMCID: PMC7179878.
14. D'Alessandro S, Menegola E, Parapini S, Taramelli D, Basilico N. Safety of Artemisinin Derivatives in the First Trimester of Pregnancy: A Controversial Story. *Molecules*. 2020 Jul 31;25(15):3505. doi: 10.3390/molecules25153505. PMID: 32752056; PMCID: PMC7435965.
15. Saresella M, Basilico N, Marventano I, Perego F, La Rosa F, Piancone F, **Taramelli D**, Banks H, Clerici M. Leishmania infantum infection reduces the amyloid β 42-stimulated NLRP3 inflammasome activation. *Brain Behav Immun*. 2020 Aug;88:597-605. doi: 10.1016/j.bbi.2020.04.058. Epub 2020 Apr 23. PMID: 32335194. IF 7.217
16. Bassanini I, Parapini S, Ferrandi EE, Gabriele E, Basilico N, **Taramelli D**, Sparatore A. Design, Synthesis, and In Vitro Investigation of Novel Basic Celastrol Carboxamides as Bio-Inspired Leishmanicidal Agents Endowed with Inhibitory Activity against *Leishmania Hsp90*. *Biomolecules*. 2021 Jan 5;11(1):E56. doi: 10.3390/biom11010056. PMID: 33466300. IF = 4.569
17. Corbett Y, Parapini S, Perego F, Messina V, Delbue S, Misiano P, Falchi M, Silvestrini F, **Taramelli D**, Basilico N, D'Alessandro S. Phagocytosis and activation of bone marrow-derived macrophages by *Plasmodium falciparum* gametocytes. *Malar J*. 2021 Feb 10;20(1):81. doi: 10.1186/s12936-021-03589-2. PMID: 33568138; PMCID: PMC7874634. IF 2.979
18. Relitti N, Federico S, Pozzetti L, Butini S, Lamponi S, Taramelli D, D'Alessandro S, Martin RE, Shafik SH, Summers RL, Babij SK, Habluetzel A, Tapanelli S, Caldelari R, Gemma S, Campiani G. Synthesis and biological evaluation of benzhydryl-based antiplasmodial agents possessing *Plasmodium falciparum* chloroquine resistance transporter (PfCRT) inhibitory activity. *Eur J Med Chem*. 2021 Apr 5;215:113227. doi: 10.1016/j.ejmech.2021.113227. Epub 2021 Feb 6. PMID: 33601312. IF 6.514
19. Woodley CM, Nixon GL, Basilico N, Parapini S, Hong WD, Ward SA, Biagini GA, Leung SC, Taramelli D, Onuma K, Hasebe T, O'Neill PM. Enantioselective Synthesis and Profiling of Potent, Nonlinear Analogues of Antimalarial

- Tetraoxanes E209 and N205. ACS Med Chem Lett. 2021 Jun 24;12(7):1077-1085. doi: 10.1021/acsmchemlett.1c00031. PMID: 34267877; PMCID: PMC8274084. [IF 4.345](#)
20. Galbiati A, Aureliano Zana, Consuelo Coser, Lucia Tamborini, Nicoletta Basilico, Silvia Parapini, Donatella Taramelli, and Paola Conti . Development of Potent 3-Br-isoxazoline-Based Antimalarial and Antileishmanial Compounds ACS Medicinal Chemistry Letters 2021: <https://doi.org/10.1021/acsmchemlett.1c00354> [IF 4.345](#)
 21. D'Alessandro S, Parapini S, Corbett Y, Frigerio R, Delbue S, Modenese A, Gramiccia M, Ferrante P, Taramelli D, Basilico N. *Leishmania* Promastigotes Enhance Neutrophil Recruitment through the Production of CXCL8 by Endothelial Cells. Pathogens. 2021 Oct 26;10(11):1380. doi:10.3390/pathogens10111380. PMID: 34832536; PMCID: PMC8623338. [IF= 3.41](#)
 22. Jaromin A, Gryzłó B, Jamrozik M, Parapini S, Basilico N, Cegła M, Taramelli D, Zagórska A. Synthesis, Molecular Docking and Antiplasmodial Activities of New Tetrahydro- β -Carbolines. Int J Mol Sci. 2021 Dec 17;22(24):13569. doi:10.3390/ijms222413569. PMID: 34948361; PMCID: PMC8707145. [IF= 5,924](#)
 23. Ilboudo DP, D'Alessandro S, Parapini S, Calvo Alvarez E, Misiano P, Taramelli D, Basilico N. A rapid spectrophotometric method to identify inhibitors of human erythropoiesis. J Pharmacol Toxicol Methods. 2022 Jan-Feb;113:107134. doi: 10.1016/j.vascn.2021.107134. [IF 1.95](#)
 24. Pozzetti L, Ibba R, Rossi S, Tagliatela-Scafati O, Taramelli D, Basilico N, D'Alessandro S, Parapini S, Butini S, Campiani G, Gemma S. Total Synthesis of the Natural Chalcone Lophirone E, Synthetic Studies toward Benzofuran and Indole-Based Analogues, and Investigation of Anti-Leishmanial Activity. Molecules. 2022 Jan 11;27(2):463. doi: 10.3390/molecules27020463. PMID:35056779; PMCID: PMC8778746. [IF 4.148](#)
 25. Dolci M, Signorini L, D'Alessandro S, Perego F, Parapini S, Sommariva M, Taramelli D, Ferrante P, Basilico N, Delbue S. In Vitro SARS-CoV-2 Infection of Microvascular Endothelial Cells: Effect on Pro-Inflammatory Cytokine and Chemokine Release. Int J Mol Sci. 2022 Apr 6;23(7):4063. doi:10.3390/ijms23074063. PMID: 35409421; PMCID: PMC8999888.
 26. Calvo-Alvarez, E.; Dolci, M.; Perego, F.; Signorini, L.; Parapini, S.; D'Alessandro, S.; Denti, L.; Basilico, N.; Taramelli, D.; Ferrante, P.; Delbue, S. Antiparasitic Drugs against SARS-CoV-2: A Comprehensive Literature Survey. *Microorganisms* **2022**, *10*, 1284. <https://doi.org/10.3390/microorganisms10071284>
 27. Bassanini I, Parapini S, Basilico N, Taramelli D, Romeo S. From DC18 to MR07: A Metabolically Stable 4,4'-Oxybisbenzoyl Amide as a Low-Nanomolar Growth Inhibitor of *P. falciparum*. ChemMedChem. 2022 Nov 4;17(21):e202200355. doi: 10.1002/cmdc.202200355. Epub 2022 Sep 26. PMID: 36089546; PMCID: PMC9827966.
 28. Calvo Alvarez E, D'Alessandro S, Proverbio D, Spada E, Perego R, Taramelli D, Basilico N, Parapini S. In Vitro Antiparasitic Activities of Monovalent Ionophore Compounds for Human and Canine Leishmaniasis. Animals (Basel). 2022 Sep 8;12(18):2337. doi: 10.3390/ani12182337. PMID: 36139198; PMCID: PMC9495262.
 29. Basilico N, Parapini S, D'Alessandro S, Misiano P, Romeo S, Dondio G, Yardley V, Vivas L, Nasser S, Réna L, Russell BM, Suwanarusk R, Nosten F, Sparatore A, Taramelli D. Favorable Preclinical Pharmacological Profile of a Novel Antimalarial Pyrrolizidinylmethyl Derivative of 4-amino-7-chloroquinoline with Potent In Vitro and In Vivo Activities. Biomolecules. 2023 May 14;13(5):836. doi: 10.3390/biom13050836. PMID: 37238706; PMCID: PMC10216263.