



## Curriculum Vitae

Personal information **Barbara Chirullo**

### Work experience

---

1. Employer: Istituto Superiore di Sanità
  - Start date: 11/2017
  - End date:
  - Position: Permanent Researcher
  - Activities: \_ Research activity: the main area of interest is the interaction between infectious disease and immune system. \_ Evaluation of immunological veterinary medicinal products for marketing authorization purposes. This activity concerns the evaluation of technical\_scientific documents relating to the registration of immunological veterinary drugs, prepared in accordance with the EU protocols, presented in support of requests for authorization, to place veterinary medicines on the market.
  - Country: Italy
2. Employer: Istituto Superiore di Sanità
  - Start date: 022013
  - End date: 052017
  - Position: Post\_Doctoral position
  - Activities: Post\_Doctoral position at the unit Prophylaxis and Control of Bacterial Zoonoses, Dept. of Veterinary Public Health and Food Safety, Istituto Superiore di Sanità, Rome, Italy. The main area of interest was the interaction between infectious disease and immune system.
  - Country: Italy

### Education and training

---

1. Subject: First Faculty of Medicine "La Sapienza" Rome
  - Start date: 092009
  - End date: 022013
  - Qualification: PhD student
  - Organisation: Public Health Sciences And Microbiology, at the First Faculty of Medicine "La Sapienza" Rome and work experience in laboratories of the Dept. of Infectious, Parasitic and Immunomediated Diseases (MIPI), Istituto Superiore di Sanità, Rome. The PhD thesis focused on the development of a new strategy that involves the use of compounds able to promote the T cell differentiation from long\_lived central memory (TCM) and transitional memory (TTM) CD4+ T\_cells, which play as reservoirs of human immunodeficiency virus (HIV), to the short\_lived effector CD4+ T\_cells (TEM), thereby contributing to the elimination of the virus from the body. Experimental thesis title: "Pro\_oxidant drug auranofin is able to reduce the lifespan of the central and transitional memory CD4+ T\_cells, thus targeting the viral reservoir in SIVmac251 infected macaques".
  - Country: Italy
2. Subject: University of Study "Roma Tre"
  - Start date: 092003
  - End date: 052009
  - Qualification: Doctor of Bio\_Medical Biology
  - Organisation: Biology\_Immunology; at the Dept. of Virology at the University of Study "Roma Tre", and the Dept. of Infectious, Parasitic and Immunomediated Diseases, ISS. Experimental thesis title: "Novel intracellular antibodies against the E7 oncoprotein in HPV 16\_positive cells: epitope mapping and anti\_proliferative activity in vitro". Graduated with honours (110/110 cum laude).
  - Country: Italy

### Additional information

---

#### Publications

1. Evaluation of attenuated Salmonella Typhimurium (STMΔznuABC) anticancer activity on canine mammary cancer-associated fibroblasts. Chirullo B\*, Fruscione F\*, Del Zotto G, Dell'Anno F, Tarantino M, Porcellato I, Petrucci P, De Ciucis CG, Bufalari A, Guardone L, Cappelli K, Moretti G, Mecocci S, Monti E, De Paolis L, Razzuoli E. Research in Veterinary Science, 2024, Volume 180, 105438, ISSN 0034-5288, <https://doi.org/10.1016/j.rvsc.2024.105438>. \*Corresponding Authors.
2. Animal models of Soft Tissue Sarcoma for alternative anticancer therapy studies: characterization of the A-72 Canine Cell

- Line. Razzuoli E\*, Chirullo B\*, De Ciucis CG, Mecocci S, Martini I, Zoccola R, Campanella C, Varello K, Petrucci P, Di Meo A, Bozzetta E, Tarantino M, Gorla M, Modesto P. *Vet Res Commun*. 2023 Apr 11. doi: 10.1007/s11259-023-10115-z. Epub ahead of print. PMID: 37038001. (\*Contributed equally).
3. Super Shedding in Enteric Pathogens: A Review. Kempf F, La Ragione R, Chirullo B, Schouler C and Velge P. *Microorganisms*. 2022 Oct 22;10(11):2101. doi: 10.3390/microorganisms10112101. PMID: 36363692.
  4. Molecular Characterization of CF33 Canine Cell Line and Evaluation of Its Ability to Respond against Infective Stressors in Sight of Anticancer Approaches. Razzuoli E, De Ciucis CG, Chirullo B, Varello K, Zoccola R, Guardone L, Petrucci P, Rubini D, Bozzetta E, Gorla M, Fruscione F, Modesto P. *Vet Sci*. 2022; 9(10):543. doi: 10.3390/vetsci9100543. PMID: 36288156.
  5. Production of a *Bacillus anthracis* Secretome with Suitable Characteristics as Antigen in a Complement Fixation Test. Galante D.; Manzulli V.; Donatiello A.; Fasanella A.; Chirullo B.; Francia M.; Rondinone V.; Serrecchia L.; Pace L.; Iatarola M.; Tarantino M.; Adone R. *Life* 2022, 12, 312. <https://doi.org/10.3390/life12020312>
  6. Epitope Mapping and Computational Analysis of Anti-HPV16 E6 and E7 Antibodies in Single-Chain Format for Clinical Development as Antitumor Drugs. Amici C, Donà MG, Chirullo B, Di Bonito P, Accardi L. *Cancers* (Basel). 2020;12(7):1803. doi:10.3390/cancers12071803. PMID: 32640530.
  7. Revisiting problems and solutions to decrease *Mycobacterium tuberculosis* pyrazinamide false resistance when using the Bactec MGIT 960 system. Mustazzolu A, Piersimoni C, Iacobino A, Giannoni F, Chirullo B, Fattorini L. *Ann Ist Super Sanita*. 2019;55(1):51-54. doi: 10.4415/ANN\_19\_01\_09.
  8. Growth of *Pseudomonas aeruginosa* in zinc poor environments is promoted by a nicotianamine-related metallophore. Mastropasqua MC, D'Orazio M, Cerasi M, Pacello F, Gismondi A, Canini A, Canuti L, Consalvo A, Ciavardelli D, Chirullo B, Pasquali P, Battistoni A. *Mol Microbiol*. 2017;106(4):543-561. doi: 10.1111/mmi.13834.
  9. Prime-boost vaccination with attenuated *Salmonella* Typhimurium  $\Delta$ znuABC and inactivated *Salmonella* Choleraesuis is protective against *Salmonella* Choleraesuis challenge infection in piglets. Alborali GL, Ruggeri J, Pesciaroli M, Martinelli N, Chirullo B, Ammendola S, Battistoni A, Ossiprandi MC, Corradi A, Pasquali P. *BMC Vet Res*. 2017;13(1):284. doi: 10.1186/s12917-017-120
  10. Lack of AcrB Efflux Function Confers Loss of Virulence on *Salmonella enterica* Serovar Typhimurium. Wang-Kan X, Blair JMA, Chirullo B, Betts J, La Ragione RM, Ivens A, Ricci V, Opperman TJ, Piddock LJV. *MBio*. 2017;8(4). doi: 10.1128/mBio.00968-17.
  11. Zinc is required to ensure the expression of flagella and the ability to form biofilms in *Salmonella enterica* sv Typhimurium. Ammendola S,

D'Amico Y, Chirullo B, Drumo R, Ciavardelli D, Pasquali P, Battistoni A. *Metallomics*. 2016;8(10):1131-1140.

12. Salmonella Typhimurium infection primes a nutriptive mechanism in piglets. Miarelli M, Drumo R, Signorelli F, Marchitelli C, Pavone S, Pesciaroli M, Ruggieri J, Chirullo B, Ammendola S, Battistoni A, Alborali GL, Manuali E, Pasquali P. *Vet Microbiol*. 2016;186:117-25. doi: 10.1016/j.vetmic.2016.02.006.
13. Salmonella enterica Serovar Typhimurium Exploits Inflammation to Modify Swine Intestinal Microbiota. Drumo R, Pesciaroli M, Ruggieri J, Tarantino M, Chirullo B, Pistoia C, Petrucci P, Martinelli N, Moscati L, Manuali E, Pavone S, Picciolini M, Ammendola S, Gabai G, Battistoni A, Pezzotti G, Alborali GL, Napolioni V, Pasquali P, Magistrali CF. *Front Cell Infect Microbiol*. 2016;5:106. doi: 10.3389/fcimb.2015.00106
14. Salmonella Typhimurium exploits inflammation to its own advantage in piglets. Chirullo B, Pesciaroli M, Drumo R, Ruggieri J, Razzuoli E, Pistoia C, Petrucci P, Martinelli N, Cucco L, Moscati L, Amadori M, Magistrali CF, Alborali GL, Pasquali P. *Front Microbiol*. 2015;6:985. doi: 10.3389/fmicb.2015.00985.
15. Attenuated mutant strain of Salmonella Typhimurium lacking the ZnuABC transporter contrasts tumor growth promoting anti-cancer immune response. Chirullo B, Ammendola S, Leonardi L, Falcini R, Petrucci P, Pistoia C, Vendetti S, Battistoni A, Pasquali P. *Oncotarget*. 2015;6(19):17648-60.
16. Pseudomonas aeruginosa capability to recruit zinc under conditions of limited metal availability is affected by inactivation of the ZnuABC transporter. D'Orazio M, Mastropasqua MC, Cerasi M, Pacello F, Consalvo A, Chirullo B, Mortensen B, Skaar EP, Ciavardelli D, Pasquali P, Battistoni A. *Metallomics*. 2015;7(6):1023-35. doi: 10.1039/c5mt00017c.
17. A candidate anti-HIV reservoir compound, auranofin, exerts a selective 'anti-memory' effect by exploiting the baseline oxidative status of lymphocytes. Chirullo B, Sgarbanti R, Limongi D, Shytaj IL, Alvarez D, Das B, Boe A, DaFonseca S, Chomont N, Liotta L, Petricoin EI, Norelli S, Pelosi E, Garaci E, Savarino A, Palamara AT. *Cell Death Dis*. 2013;4:e944. doi: 10.1038/cddis.2013.473.
18. Investigational treatment suspension and enhanced cell-mediated immunity at rebound followed by drug-free remission of simian AIDS. Shytaj IL, Chirullo B, Wagner W, Ferrari MG, Sgarbanti R, Corte AD, LaBranche C, Lopalco L, Palamara AT, Montefiori D, Lewis MG, Garaci E, Savarino A. *Retrovirology*. 2013;10:71. doi: 10.1186/1742-4690-10-71.
19. A highly intensified ART regimen induces long-term viral suppression and restriction of the viral reservoir in a simian AIDS model. \*Shytaj IL, \*Norelli S, \*Chirullo B, Della Corte A, Collins M, Yalley-Ogunro J, Greenhouse J, Iraci N, Acosta EP, Barreca ML, Lewis MG, Savarino A. *PLoS Pathog*. 2012;8(6):e1002774. doi: 10.1371/journal.ppat.1002774. (\* equal contribution).

20. Gold drug auranofin restricts the viral reservoir in the monkey AIDS model and induces containment of viral load following ART suspension. Lewis MG, DaFonseca S, Chomont N, Palamara AT, Tardugno M, Mai A, Collins M, Wagner WL, Yalley-Ogunro J, Greenhouse J, [Chirullo B](#), Norelli S, Garaci E, Savarino A. AIDS. 2011;25(11):1347-56. doi: 10.1097/QAD.0b013e328347bd77.
21. Retinoblastoma-independent antiproliferative activity of novel intracellular antibodies against the E7 oncoprotein in HPV 16-positive cells. Accardi L, Donà MG, Mileo AM, Paggi MG, Federico A, Torreri P, Petrucci TC, Accardi R, Pim D, Tommasino M, Banks L, [Chirullo B](#), Giorgi C. BMC Cancer. 2011;11:17. doi: 10.1186/1471-2407-11-17.
22. Response of a simian immunodeficiency virus (SIVmac251) to raltegravir: a basis for a new treatment for simian AIDS and an animal model for studying lentiviral persistence during antiretroviral therapy. Lewis MG, Norelli S, Collins M, Barreca ML, Iraci N, [Chirullo B](#), Yalley-Ogunro J, Greenhouse J, Titti F, Garaci E, Savarino A. Retrovirology. 2010;7:21. doi: 10.1186/1742-4690-7-21.

**Projects** Research funding and activities: \_Relevant grants as co\_investigator: MoMIR– Monitoring the gut microbiota and immune response to predict, prevent and control zoonoses in humans and livestock in order to minimize the use of antimicrobials. (€ 117.322,30) \_ In the past: Winner of the Marie Skłodowska-curie fellowship and experienced researcher of the BaCTher project, funded by the European Commission, H2020\_MSCA\_IF\_2014 call. It covers the period 01/11/2015 – 31/10/2017 and involves a research period of one year at the National Cancer Institute (NCI), Bethesda, MD USA, and another one year at Istituto Superiore di Sanità (ISS), Rome, Italy. Principal investigator (PI) – (€164.204,00) Patent applications: PASQUALI P., CHIRULLO B., AMMENDOLA S., PESCIAROLI M., BATTISTONI A., 2014. Use of attenuated Salmonella enterica (ΔznuABC) as an anti\_cancer strategy: preparation method and employment (patent pending, Patent N°: RM2014A000305)

**Memberships** **Membership of Professional bodies:**

- **On 8/07/2022**

**Member of the technical-scientific Commission** for the evaluation of projects submitted in application of the Call for the selection of projects aimed at experimenting the use of the product GonaCon by the oral route in wild boars published on 7 June 2022 on the portal of the Ministry of Health. This Commission operated within Office 1 of the Directorate-General for Animal Health and Veterinary Medicines (DGSAF).

- **From 21/04/2022 to present**

**Member of the to the Animal Welfare Board (OPBA) of the Immunity and Immunotherapy area**, established by Decree no. 44/2022 of 21.04.2022.

- **From 2022 to present**

**Professor for the Academic teaching in the annual course of “PET INFECTIOUS DISEASES: FROM ANIMALS TO HUMANS (ZOOLOSES), [ML0389 course] - in the integrated course of “BIOPATHOLOGY AND INTRODUCTION TO MEDICAL THERAPY 2” at the FACOLTA' DI MEDICINA E CHIRURGIA "A. GEMELLI" in the single-cycle degree course in Medicine and surgery at the Rome campus of the Università Cattolica del Sacro Cuore, with a commitment of 6 hours.**

- **From 16/07/2020 to present**

**Member of the Group of Experts no. 15V Veterinary vaccines and sera of European Farmacopea**

- **From 28/09/2019 to 05/12/2019**

**Evaluator for MSCA research projects (H2020):** the assignment includes the evaluation of research projects funded by the Marie Skłodowska-Curie

actions program H2020.

- **From 22/6/2019 to present**

**Appoints as expert for the Technical and scientific Committee for Nutrition and Animal Health**, Veterinary Medicine Advisory Section on veterinary medicines for scientific and technical evaluation on immunological products, (Sezione consultiva del farmaco veterinario).

- **From 22/6/2019 to present**

**Appoints as expert for the Technical and scientific Committee for Nutrition and Animal Health**, Pharmacovigilance of Veterinary Medicinal Products section, on veterinary medicines for scientific and technical evaluation, (Sezione per la farmacovigilanza sui medicinali veterinari).

### **Expert invited by the European Commission for TAIEX events:**

-

- TAIEX Expert Mission on pharmacovigilance and marketing authorisations of the veterinary medicinal products on 04/06/2024 - 07/06/2024 in Podgorica, Montenegro (Reference code: AGR IND/EXP 85400).
- TAIEX Expert Mission on pharmacovigilance and marketing authorisations of the veterinary medicinal products on 10/12/2024 - 13/12/2024 in Skopje, Republic of North Macedonia (Reference code: AGR IND/EXP 84594).

### **Scientific Awards:**

-

- Winner of the Marie Skłodowska-curie fellowship and experienced researcher of the BaCTher project, funded by the European Commission, H2020-MSCA-IF-2014 call. It covers the period 01/11/2015 – 31/10/2017 and involves a research period of one year at the National Cancer Institute (NCI), Bethesda, MD USA, and another one year at Istituto Superiore di Sanità (ISS), Rome, Italy.
- Winner of the travel grant funded by the European Federation of Immunological Societies (EFIS) at the congress of “Cancer: Inflammation and Immunity” (NIBIT) (Finalborgo, September 16-19 2015).
- Winner of the travel Grant funded by the National Network of Veterinary Immunology (Rete Nazionale di Immunologia Veterinaria - RNIV) at the congress of the “Italian Society Of Veterinary Sciences” SISVet (June 15-17 2015).
- Winner of the travel Grant funded by the Società Italiana di Diagnostica di Laboratorio Veterinaria (S.I.D.I.L.V) at the institute of INRA-University of Tours, France (duration: from January 16th 2015 to February 28th 2015)
- Winner of the Young Investigator award at the CN International Workshop: HIV cure and eradication: a feasible option? January 23-25 2013.

- Winner of a scholarship for scientific traineeship funded by FILAS (Financing innovation and research in Lazio) and performed at the Italian National Institute of Health (Istituto Superiore di Sanità), Dept. of Infectious, Parasitic and Immunomediated Diseases, from February 2007 to August 2007.

Other Relevant Information