

## FABIO FORMENTI

### Current position:

**2022 – to date** Coordinator of Molecular Diagnostics, Centre for Tropical Diseases and Microbiology, IRCCS Sacro Cuore Don Calabria Hospital, Negrar, Verona, Italy



**2019 – 2022** Coordinator of Covid-19 Molecular Diagnostics, Centre for Tropical Diseases and Microbiology, IRCCS Sacro Cuore Don Calabria Hospital, Negrar, Verona, Italy.

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Date of birth: 26/09/1988

### Education

2019 - 2022 MPhil (Master of Philosophy) in Molecular Parasitology at the Department of Veterinary Medicine, University of Cambridge, UK. Thesis: “Fluorescent *in situ* hybridisation uncovers evidence of a *Schistosoma mansoni*-associated microbiota throughout its life cycle.

2012-2013 Laurea Specialistica (MSc) Molecular Biology, University of Ferrara, Italy (110/110 cum laude). University of Oxford, UK, Thesis: “*Role of OGFOD1-catalysed RPS23 hydroxylation on the decoding function of the mammalian ribosome*”

2007-2011 Laurea (BSc) Molecular Biology, University of Ferrara, Italy (98/110). Thesis “*New antagonist of A<sub>3</sub> adenosine receptor; evaluation of affinity and selectivity*”

2002-2007 Secondary school: scientific lyceum “P. Levi”, Verona, Italy (70/100)

### **Prize and Award**

- 2020 Queens' College President's letter for outstanding academic achievement
- 2020 I was awarded £ 450 from the Ian E. Linington Travel Award
- 2019 Prize for the best poster presentation at the Research Afternoon, Department of Veterinary Medicine. Title: "*S. mansoni* – associated microbiota revealed by deep sequencing".

### **Publications**

\*Corresponding author

- 2024 Treggiari D., Pomari C., Zavarise G., Piubelli C., **Formenti F.**, Perandin F. (2024). Characteristics of Respiratory Syncytial Virus Infections in Children in the Post-COVID Seasons: A Northern Italy Hospital Experience. *Viruses MDPI*.  
<https://doi.org/10.3390/v16010126>
- 2023 Paradies P., Digiario S., Colella A., Greco B., Recchia A., Prato MG, Mazzi C., Losurdo G, Di Leo A., **Formenti F.**, Buonfrate D. (2023). Strongyloidiasis in humans and dogs in Southern Italy: an observational study. *Parasitology research*.
- 2023 **Formenti F.**, Cortès A., Deiana M., Salter S., Parkhill J., Berriman M., Rinaldi G., Cantacessi C. (2023). The human blood fluke, *Schistosoma mansoni*, harbors bacteria throughout the parasite's life cycle. *The journal of infectious diseases*.  
<https://doi.org/10.1093/infdis/jiad288>
- 2022 Treggiari D., Piubelli C., **Formenti F.**, Silva R., Perandin F. (2022). Resurgence of respiratory virus after relaxation of COVID-19 containment measures: a real-world data study from a regional hospital of Italy. *International Journal of Microbiology*.  
<https://doi.org/10.1155/2022/4915678>
- 2022 Bianchini E., Rossignolo F., Perfranceschi M., Cazzin C., Silva R., **Formenti F.**, Perandin F., Griffante C., Remelli R., Padovani M., Scarso S., Leonardi M., Piubelli C.

(2022). Technical note: RNA extraction alternative method for SARS-CoV-2 molecular diagnosis. *Annals of Clinical & Laboratory Science*.

- 2021 Umbrello G., Pinzani R., Bandera A., **Formenti F.**, Zavarise G., Arghittu M., Girelli D., Maraschini A., Muscatello A., Marchisio P., Bosis S. (2021). Hookworm infection in infants: a case report and review of literature. *Italian Journal of Pediatrics*.  
<https://doi.org/10.1186/s13052-021-00981-1>
- 2021 Mori A., Pomari E., Deiana M., Perandin F., Caldrier S., **Formenti F.**, Mistretta M., Orza P., Ragusa A., Piubelli C. (2021). Molecular techniques for the genomic viral RNA detection of West-nile, Dengue, Zika and Chikungunya arboviruses: a narrative review. *Expert review of molecular diagnostics*. <https://doi.org/10.1080/14737159.2021.1924059>.
- 2021 **Formenti F\***., Ta Tang TH., Tamarozzi F., Silva R., La Marca G., Pajola B., Piubelli C., Perandin F., Rubio JM., Escolar EM., Bisoffi Z., Gobbi F. (2021). Preliminary comparison between an in-house real-time PCR vs microscopy for the diagnosis of *Loa loa* and *Mansonella perstans*. *Acta Tropica*. <https://doi.org/10.1016/j.actatropica.2021.105838>
- 2021 **Formenti F.**, Rinaldi G., Cantacessi C., Cortés A. (2021). Helminth microbiota profiling using bacterial 16S rRNA gene amplicon sequencing: from sampling to sequence data mining. (2021). *Parasite genomics*.
- 2021 Piubelli C., Deiana M., Pomari E., Silva R., Bisoffi Z., **Formenti F.**, Perandin F., Gobbi F., Buonfrate D. (2021). Overall decrease in SARS-CoV-2 viral load and reduction in clinical burden: the experience of a hospital in northern Italy. *Clinical Microbiology and Infection*. <https://doi.org/10.1016/j.cmi.2020.10.006>.
- 2020 Longoni S., Pomari E., Antonelli A., **Formenti F.**, Silva R., Tais S., Scarso S., Rossolini GM., Angheben A., Perandin F. (2020). Performance evaluation of a commercial real-time PCR assay and of an in-house real-time PCR for *Trypanosoma cruzi* DNA detection in a tropical medicine reference center, northern Italy. (2020). *Microorganisms*.  
<https://doi.org/10.3390/microorganisms8111692>
- 2020 Olivari L., Riccardi N., Rodari P., Buonfrate D., Diodato S., **Formenti F.**, Angheben A.,

- Salgarello M. (2020). Accidental diagnosis of COVID-19 pneumonia after 18F FDG PET/CT: a case series. *Clinical and translational imaging*. <https://doi.org/10.1007/s40336-020-00388-8>
- 2020 **Formenti F.**, Cortés A., Brindley PJ., Cantacessi C., Rinaldi G. (2020). A bug's life: Delving into the challenges of helminth microbiome studies. *Plos Neglected Tropical Diseases*. <https://doi.org/10.1371/journal.pntd.0008446>.
- 2020 Bisoffi Z., Pomari E., Deiana M., Piubelli C., Ronzoni N., Beltrame A., Bertoli F., Riccardi N., Perandin F., **Formenti F.**, Gobbi F., Buonfrate D., Silva R. (2020). Sensitivity, specificity and predictive values of molecular and serological tests for COVID-19: a longitudinal study in emergency room. *Diagnostics*, 2020, 10(9), 669; <https://doi.org/10.3390/diagnostics10090669>.
- 2019 Barratt J. Ln., Lane M., Talundzic E., Richins T., Robertson G., **Formenti F.**, Pritt B., Verocai G., De Souza J N., Soares N M., Traub R., Buonfrate D., Bradbury R S. (2019). A global genotyping survey of *Strongyloides stercoralis* and *Strongyloides fuelleborni* using deep amplicon sequencing . *Plos Neglected Tropical Diseases*. <https://doi.org/10.1371/journal.pntd.0007609>
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- 2019 Beltrame A., Ragusa A., Perandin F., **Formenti F.**, Fenollar F., Edouard S., Laroche M., Zavarise G., Doro F., Giorli G., Raoul D. and Bisoffi Z. (2019) *Tropheryma whipplei* intestinal colonization in Italian and migrant population: a retrospective observational study. *Future Microbiology*. <https://doi.org/10.2217/fmb-2018-0347>
- 2019 Piubelli C., Soleymanpoor H., Giorli G., **Formenti F.**, Buonfrate D., Bisoffi Z., Perandin F. (2019) Blastocystis prevalence and subtypes in autochthonous and immigrant patients in a referral centre for parasitic infections in Italy. *PloS One*. [doi:10.1371/journal.pone.0210171](https://doi.org/10.1371/journal.pone.0210171)
- 2019 **Formenti F.\***, La Marca G., Perandin F., Pajola B., Romano M., Santucci B., Silva R., Giorli G., Bisoffi Z and Buonfrate D. (2018) A diagnostic study comparing conventional and real-time PCR for *Strongyloides stercoralis* on urine and on faecal samples. *Acta Trópica*. <https://doi.org/10.1016/j.actatropica.2018.12.001>
- 2019 Guevara Á, Vicuña Y, Costales D, Vivero S, Anselmi M, Bisoffi Z and **Formenti F.** (2018). Use of Real-Time Polymerase Chain Reaction to Differentiate between Pathogenic *Entamoeba histolytica* and the Nonpathogenic *Entamoeba dispar* in Ecuador.

- The American Journal of Tropical Medicine & Hygiene. doi: 10.4269/ajtmh.17-1022.
- 2018 Jenkins T.P., **Formenti F.**, Castro C., Piubelli C., Perandin F., Buonfrate D., Otranto D., Griffin J.L., Krause L., Bisoffi Z., Cantacessi C. (2018) A comprehensive analysis of the faecal microbiome and metabolome of *Strongyloides stercoralis* infected volunteers from a non-endemic area. Scientific Report. Volume 8, Article number: 15651.
- 2018 **Formenti F\***, Piubelli C., Narra R., Buonfrate D., Pajola B., Lunghi G., Bisoffi Z., Perandin F. (2018) Preliminary comparison of an in-house real-time PCR with the automated BD Max Enteric Parasite Panel for the detection of *Giardia intestinalis*. The Journal of Parasitology. Doi: <https://doi.org/10.1645/17-149>
- 2018 Perandin F., Pomari E., Bonizzi C., Mistretta M., **Formenti F.**, Bisoffi Z. (2018) Assessment of Real-Time Polymerase Chain Reaction for the Detection of *Trichostrongylus* spp. DNA from Human Fecal Samples. The American Journal of Tropical Medicine & Hygiene. doi: <https://doi.org/10.4269/ajtmh.17-0733>
- 2017 **Formenti F.\***, Valerio M., Guerriero M., Perandin F., Pajola B., Mistretta M., Tais S., Degani M., Bisoffi Z. (2017) Molecular biology can change the classic laboratory approach for intestinal protozoan infections. *Frontiers in Microbiology*. doi: 10.3389/fmicb.2017.02191
- 2017 Gobbi F., **Formenti F.**, Perandin F., Buonfrate D., Angheben A., Paiano S., Bisoffi Z. (2017) Real-Time Polymerase Chain Reaction Assay on Bronchoalveolar Lavage: An Alternative Method for Diagnosing Chronic Pulmonary Schistosomiasis? The American Journal of Tropical Medicine & Hygiene. doi: <https://doi.org/10.4269/ajtmh.17-0499>
- 2017 Beltrame A., Guerriero M., Angheben A., Gobbi F., Mendez A.R., Zammarchi L., **Formenti F.**, Perandin F., Buonfrate D., Bisoffi Z. (2017). Accuracy of parasitological and immunological tests for the screening of human schistosomiasis in immigrants and refugees from African countries: An approach with Latent Class Analysis. *PLoS Neglected Tropical Diseases*. doi: 10.1371/journal.pntd.0005593
- 2017 Buonfrate D., Paradies P., Iarussi F., **Formenti F.**, Perandin F., Otranto D., Bisoffi Z. (2017) Serological and molecular tests for the diagnosis of *Strongyloides stercoralis* infection in dogs. *Parasitology Research*.
- 2017 Buonfrate D., Perandin F., **Formenti F.**, Bisoffi Z. (2017). A retrospective study comparing agar plate culture, indirect immunofluorescence and real-time PCR for the

diagnosis of *Strongyloides stercoralis* infection. *Parasitology*.

doi:10.1017/s0031182016002559

- 2016 **Formenti F.\***, Buonfrate D., Prandi R., Marquez M., Caicedo C., Rizzi E., Guevara A., Vicuña Y., Huerlo F., Perandin F., Bisoffi Z., Anselmi M. (2016). Comparison of *S. stercoralis* Serology Performed on Dried Blood Spots and on Conventional Serum Samples. *Frontiers in Microbiology*. doi: 10.3389/fmicb.2016.01778
- 2015 **Formenti F.\***, Perandin F., Bonafini S., Degani M., Bisoffi Z. (2015). Evaluation of the new ImmunoCard STAT!® CGE test for the diagnosis of Amebiasis. *Bulletin de la Société de pathologie exotique*. DOI 10.1007/s13149-015-0434-5
- 2015 Buonfrate D., **Formenti F.**, Perandin F., Bisoffi Z. (2015). Novel approaches to the diagnosis of *Strongyloides stercoralis*. *Clinical Microbiology and Infection*. doi:10.1016/j.cmi.2015.04.001
- 2014 Singleton RS, Liu-Yi P, **Formenti F**, Ge W, Sekirnik R, Fischer R, Adam J, Pollard PJ, Wolf A, Thalhammer A, Loenarz C, Flashman E, Yamamoto A, Coleman ML, Kessler BM, Wappner P, Schofield CJ, Ratcliffe PJ, Cockman ME (2014). OGFOD1 catalyses prolyl hydroxylation of RPS23 and is involved in translation control and stress granule formation. *Proceedings of the National Academy of Sciences of the United States of America (PNAS Journal)*, 4031–4036.

### **Reviewer activity**

Ad hoc reviewer for PLoS One (2017 onward)

Ad hoc reviewer for Journal of the Brazilian Society of Tropical Medicine (2018 onward)

Ad hoc reviewer for Acta Tropica (2018 onward)

### **Further Education**

2024 “Diagnostica del CMV, stato dell’arte”. Prof.ssa Lazzarotto.

2019 International English Language Testing System (IELTS)

Listening 8 (C1), Reading 8 (C1), Writing 6.0 (B2), Speaking 7.5 (C1). Overall Score C1

2019 “Intestinal Microbiota in Medicine”, Verona.

- 2018 BLSD – Basic Life Support Defibrillation course. IRCCS Sacro Cuore Don Calabria Hospital, Negrar, Verona, Italy.
- 2017 Sperimentazione clinica: il CESC delle province di Verona e Rovigo e i Nuclei di Ricerca Clinica si confrontano con gli attori coinvolti. Sacro Cuore Don Calabria Hospital, Negrar, Verona, Italy.
- 2017 Ivermectin days: l’accesso ai farmaci essenziali per le malattie tropicali in Italia. Verona, Italy.
- 2017 “Ion Torrent Personal Genome Machine Dx Instrument System and associated reagents and consumables” (ThermoFischer). Sacro Cuore Don Calabria Hospital, Negrar, Verona, Italy.
- 2016 GA 3500 Sanger Sequencing instrument operation and application training course. (ThermoFischer). Sacro Cuore Don Calabria Hospital, Negrar, Verona, Italy.
- 2016 Clinical studies: methodology and critical issues. (Aiom) Sacro Cuore Don Calabria Hospital, Negrar, Verona, Italy.
- 2015 Clinical diagnosis in Bacteriology. Sacro Cuore Don Calabria Hospital, Negrar, Verona, Italy.
- 2015 Evidence Based Medicine and STATA Software Course, Sacro Cuore Don Calabria Hospital, Negrar, Verona, Italy.
- 2014 Controlling the congenital transmission of Chagas disease in the Veneto region.
- 2014 Real-Time Quantitative PCR Workshop, *Guy's Campus, King's College London, UK* (Physiological Society, London).
- 2014 Evidence Based Medicine Course, Sacro Cuore Don Calabria Hospital, Negrar, Verona, Italy.
- 2013 Epidemiology and Biostatistics Course, Sacro Cuore Don Calabria Hospital, Negrar, Verona, Italy.
- 2011 International English Language Testing System (IELTS), University of Auckland, New Zealand; Listening C1, Reading B2, Writing B2, Speaking C1. Overall Score B2
- 2011 European Computer Driving Licence (ECDL), Verona, Italy.
- 2005 Cambridge ESOL: Preliminary English Test, Nantwich, England.

### **Work experience**

- 2018 Visiting researcher at the National Microbiology Center, Instituto de Salud Carlos III, Madrid, Spain, for a project on “Molecular diagnosis of *Filaria*”

- 2018 Visiting researcher at the Biological Science Department of Veterinary Medicine, Cambridge, UK, for a project on “A comprehensive analysis of the faecal microbiome and metabolome of *Strongyloides stercoralis* infected volunteers from a non-endemic area”.
- 2017 Principal supervisor for the thesis of the student Nadia Lucchetta, “Prima indagine epidemiologica svolta su Dried Blood Spot per la ricerca di anticorpi anti – *S. stercoralis* nella comunità di Borbon, Ecuador”. University of Verona
- 2016 Instructor in the Theoretical and Pratical seminar: “Molecular Parasitology”. Scientific Research Institute of Biomedicine. Universidad Central, Quito, Ecuador.
- 2016 Principal supervisor for the thesis of the student Eleonora Rizzi, “Use of Dried Blood Spot for the detection of antibody anti *S. stercoralis* in the comunity of Borbon, Ecuador”. University of Verona.
- 2013- .... Molecular Biologist, Department of Tropical Medicine, Sacro Cuore Don Calabria Hospital, Negrar (Verona) Italy
- 2012-2013 Graduate research assistant, Wellcome Trust Centre for Human Genetics University of Oxford, UK. Supervisors: Dr Matthew E Cockman; Prof. Peter J Ratcliffe, Nobel Prize in Medicine 2019, Nuffield Professor of Clinical Medicine. Part of my dissertation resulted in a research article publication in PNAS.
- 2011 Research assistant in the Department of Molecular and Cellular Pharmacology, University of Ferrara, Italy. Undergraduate dissertation thesis involving measurements of adenosine receptor binding, cell cultures, cell diluition (3months)

**Conference Oral Presentations:**

- 2019 29<sup>th</sup> European Congress of Clinical Microbiology and Infectious Diseases (ECCMID), Amsterdam, Netherlands, 13-16 April 2019. Oral presentation: “*Comparison between an in-house real-time PCR vs microscopy for the diagnosis of human filariasis in sub Saharan African immigrants*”.
- 2014 XXVIII National Congress of the Italian Society of Parassitology, Rome (24-25-26-27 June). Oral presentation: “*Evaluation of a rapid antigen detection test compared to in house Real Time PCR system for the diagnosis of amebiasis*”.



- 2013 7<sup>o</sup> National Congress of the Italian Society of Tropical Medicine, Turin (28-29-30 November). Oral presentation: “*Evaluation of two Real Time PCR techniques for the diagnosis of Entamoeba histolytica and Entamoeba dispar infectious*”

**Conference Poster:**

- 2019 Research Afternoon, Department of Veterinary Medicine, University of Cambridge, UK. Poster presentation: “*Schistosoma mansoni*-associated microbiota revealed by deep sequencing”. Awarded as Best Poster.
- 2017 27<sup>th</sup> European Congress of Clinical Microbiology and Infectious Diseases (ECCMID), Vienna, Austria, April 2017. Poster: “Evaluation of an automated Real-Time PCR platform in comparison with an in house Real-Time PCR for detection of *Giardia duodenalis*.”
- 2014 XLIII National Congress AMCLI, Rimini 4-7 November.  
Poster: “Amebiasis: towards a molecular approach”
- 2014 International Congress “ From the tropical diseases to the global health”. Verona, 16-18 September. Poster: “Evaluation of two Real-Time PCR commercial kit for the diagnosis in of *T.cruzi*”

**Professional membership:**

- 2019 - British Society for Parasitology.
- 2018 -.... ESCMID (*European Society of Clinical Microbiology and Infectious Diseases*) Member
- 2014 - 2017 Associate Member of the *Physiological Society of London*
- 2013 - .... Member of the *Italian Society of Tropical Medicine*

**Volunteering**

- 2007 - 2018 Member of Council, Blood Donours association FIDAS Parona, Verona, Italy
- 2003 – 2010 Elderly care volunteering (part-time)
- 2004-2006 Disabled patients’ carer at Don Calabria Institute (part-time), Verona, Italy

Il presente curriculum è redatto ai sensi e nel rispetto degli artt. 19, 46 e 47 del D.P.R. 445/2000 e nella consapevolezza delle sanzioni penali, nel caso di dichiarazioni non veritiere, di formazione o uso di atti falsi, richiamate dall'art. 76 del D.P.R. 445 del 28 dicembre 2000.

Autorizzo il trattamento dei dati personali contenuti nel presente C.V., ai sensi del Regolamento UE 2016/679 e del Codice della Privacy (Decreto Legislativo n. 196/2003 e ss.mm.ii.).

Verona, 01/02/2024

A handwritten signature in black ink, reading "Fabio Formenti". The signature is written in a cursive style with a large, sweeping initial 'F' that extends across the top of the name.