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CURRENT POSITION

Assistant Professor at University of Trieste – IRCCS “Burlo Garofolo”

EDUCATION

M.Sc., Bioinformatics, ‘Sapienza’ University of Rome, Rome, Italy 2014
Thesis: “Detection and characterization of *Neisseria spp.* DNA uptake sequences from genomes and shotgun metagenomic samples”
Advisor: Prof. Nicola Segata

Postdoctoral Research Associate 2010-2012

- Great Ormond Street, Institute of Child Health, University College London, Infection, Immunity, Inflammation & Physiology Medical Unit, London, UK. Project: Early epigenetic responses after pathogen exposure: role of Gamma- and Epsilon-Proteobacteria in pediatric Inflammatory Bowel Diseases. Advisor: Prof. Mona Bajaj-Elliot
- Umberto I Hospital, ‘Sapienza’ University of Rome, Pediatric Gastroenterology Unit, Rome, Italy – Funded by Broad Medical Research Program (BMRP), Los Angeles. Project: Characterization of *Escherichia coli* isolates from Inflammatory Bowel Diseases pediatric patients. Advisors: Profs. Salvatore Cucchiara, Serena Quattrucci, Serena Schippa

M.Sc., Biostatistics, ‘Sapienza’ University of Rome, Rome, Italy 2012
Thesis: “Metagenomics and metabolomics in Cystic fibrosis patients: a ‘functional metagenomics’ approach”
Advisor: Prof. Luca Tardella

Ph.D., Pediatric Sciences, ‘Sapienza’ University of Rome, Rome, Italy 2006-2010
Dissertation: “Microbiological features in IBD pediatric patients”
Committee: Profs. Francesco Maria Paone, Mario Curione, Roberto Berni Canani

B.S. and M.S., Biological Sciences, *summa cum laude*, ‘Sapienza’ University of Rome 2006
Thesis: “Isocitrate dehydrogenase from hyperthermophile archeobacterium *Aeropyrum pernix*: thermodynamic and kinetic stability”
Advisor: Prof. Valerio Consalvi

RESEARCH EXPERIENCE

Ingénieur de Recherche at Institute Gustave Roussy, Villejuif, France 4/9/2017 – present
Project: Discovery of a fecal metagenomic and metabolomic bacterial signature (GOMS) in patients with breast, kidney and lung cancer, before and after immune checkpoint inhibitors treatment.
Prof. Laurence Zitvogel, Prof. Guido Kroemer

<i>Researcher</i> at Pasteur Institute, Cenci Bolognetti Foundation, Rome, Italy	2016 - 2017
<i>Researcher in Genomics and Proteomics</i> , 'Sapienza' University of Rome and CEINGE Advanced Biotechnologies, Italy Project: Metagenomics and metaproteomics of <i>E. coli</i> -derived Outer Membrane Vesicles (OMVs). Collaboration with Prof. Piero Pucci, Prof. Angela Duilio	2013-2016
<i>Visiting researcher</i> at Swansea University, Institute of Life Sciences 2, Swansea, Galles Advisor: Prof. Steve Conlan Project: Chromatin immuno-precipitation (ChIP) optimization with state-of-the-art protocols and kits. Analysis of ChIP-qPCR and ChIP-Seq data.	1/4/2014 – 30/4/2012
<i>Postdoc Fellow</i> at Institute of Child Health, University College of London. Advisor: Prof. Mona Bajaj-Elliot Project: Early epigenetic responses after pathogen exposure: role of Gamma- and Epsilon-proteobacteria in pediatric Inflammatory Bowel Diseases.	1/3/2012 – 31/8/2012

CURRENT AND PAST RESEARCH SUPPORT

“Role of microbiota, molecular patterns and radiological features on gastrointestinal and hepato-bilio pancreatic diseases: from diagnosis to therapy. Towards the precision medicine and a personalized decision-making approach” University of Trieste, FRA grants Principal Investigator - FUNDING: €30.000	2020-2022
“Cross-talk between Adherent-invasive <i>Escherichia coli</i> (AIEC) and host cell nucleus: role of bacterial and cellular epigenetic mechanisms involved in cell DNA damage and repair systems.” Pasteur Institute - Cenci Bolognetti Foundation, Rome, Italy. - Principal Investigator - FUNDING: €90.000	2014-2019
“Early epigenetic responses after pathogen exposure: role of Gamma- and Epsilon-proteobacteria in pediatric Inflammatory Bowel Diseases.” Italian Society for Pediatric Gastroenterology, Hepatology and Nutrition (SIGENP), Milan, Italy. DICOFARM Prize. - Principal Investigator - FUNDING: €14.000	2012

TEACHING EXPERIENCE (lessons held in English, French, Italian)

Teaching courses (University of Trieste): - Laboratory Technicians (1/3 and 2/3 year) - Technicians of prevention in the workplace (1/3 year) - Dental hygiene (1/3 year)	2020-present
Teaching courses (Sapienza University of Rome): Undergraduate ‘Molecular Methods in Microbiology’ (Teaching Course, Laboratory and Discussion section); Undergraduate ‘Laboratory Microbiology’ (Laboratory section).	2009-2016
Undergraduate Student Instructor (Sapienza University of Rome): Lectures on ‘Microbiome and metagenomic analysis’ for undergraduate students of the Molecular Microbiology course in Medical Biotechnologies.	2010-2017
Undergraduate Student Instructor (Sapienza University of Rome): Bioinformatic training laboratory for undergraduate students of the Molecular Microbiology course in Medical Biotechnologies: use of Linux shell, Python shell, microbial datasets repositories and available pipelines for metagenomic characterization of microbial communities.	2014-2017

Master Lecturer:

- “*Microbiome and probiotics*”. Lecture for Master students in ‘Oral medicine and special needs patients’, Director: Prof. Matteo Biasotto – Trieste, Italy 2021-present
- “*Metagenomic approaches in bacteriology and virology*” for Master students in ‘Medical Virology’, Director: Prof. Guido Antonelli and Prof. Carolina Scagnolari - Rome, Italy 2019-present
- “*Nutrition and cancer: experimental approaches*”. Lecture for Master students in ‘Dietary behavior and related diseases’ Code T4ALIMEA, Director: Prof. Michèle Chabert – Paris, France 2020-present
- “*Nutrition and cancer: experimental approaches*”. Lecture for Master students in ‘Nutraceuticals and modulation of the intestinal microbiota in oncology’, Director: Prof. Massimo Libra – Catania, Italy 2020-present

SUDENT SUPERVISION

- PhD in “Reproduction and developmental sciences”.** Martina Vidmar, BSc, 2020-present
Project: Role of the oral-gut axis microbiome in autism spectrum disorder.

INTERNATIONAL COLLABORATIONS (currently active)

Prof. Laurence Zitvogel, INSERM, U1015 Institut Gustave Roussy, 39 rue Camille Desmoulins, 94805 Villejuif, France.

Prof. Guido Kroemer, UMR1138 équipe 11, Centre de Recherche des Cordeliers, 15 Rue de l'École de Médecine, 75006 Paris, France.

Prof. Nicola Segata, CIBIO - Centre for Integrative Biology, Polo Scientifico e Tecnologico Fabio Ferrari, Polo B, Via Sommarive 9, 38123 Povo, Trento, Italia.

Prof. Mona Bajaj-Elliott, Infectious Diseases and Microbiology Unit, Institute of Child Health, University College London, 30 Guilford Street, London, UK.

Prof. Eliette Touati, Unit of Helicobacter Pathogenesis, Department of Microbiology, Institut Pasteur, 25-28 Rue du Dr Roux, 75015 Paris, France.

Prof. Eric Oswald, Team leader Inserm U1220, Deputy director of the Digestive Health Research Institute (IRSD - Institut de Recherche en Santé Digestif), CHU Purpan Place du Docteur Baylac, Toulouse Cedex 3, Toulouse, France.

AWARDS AND HONORS

Qualification for Assistant Professor in France: qualification #16265292996, Maître de Conférences, 65-Biologie cellulaire, obtained on 03/02/2016 and valid till 31/12/2020 2016

Ben Gustaffson Award for best oral communication, Society for Microbial Ecology and Disease (SOMED), 38th International Congress, 11-13 October 2015, Verona, Italy 2015

Young Investigator Award (Under 40) for one of the four best projects among 80 presented at international level at Italian Pasteur Institute – Cenci Bolognetti Foundation 2014

NOVARTIS Prize 2013 for the Best Scientific Paper on the theme: 'Pathogenic microorganisms: functional genomics, pathogenic mechanisms, vaccines', Italian Society for General Microbiology and Microbial Biotechnology (SIMGBM), XXX National Congress, 18-21 September 2013, Ischia, Italy 2013

DICOFARM Prize 2011 for the Best Young Investigator Research Project, Italian Society for Pediatric Gastroenterology, Hepatology and Nutrition (SIGENP), XVIII National Congress, 13-15 October 2011, Padua, Italy 2011

Poster of Distinction, European Society for Pediatric Gastroenterology, Hepatology and Nutrition (ESPGHAN), 44nd International Congress, 25-28 May 2011, Sorrento, Italy 2011

Best Oral Communication, Italian Society for Pediatric Gastroenterology, Hepatology and Nutrition (SIGENP), XVI National Congress, 22-24 October 2009, Giardini Naxos, Italy 2009

SCOPUS IDENTIFIER

Author ID: 25227680000; Citations: 1474 total citations by 1369 documents; **h-index: 19**; Co-authors: 299

KEYWORDS

Microbiota; Microbiome; Metagenomics; Bioinformatics; Metabolomics; IBD; Social networks; *Bdellovibrio bacteriovorus*; BALOs; Epigenetics; Methylation; *Escherichia coli*; AIEC; DNA damage; DDR; DNA repair; Cancer.

PAPERS CURRENTLY SUBMITTED TO INTERNATIONAL JOURNALS

1. **Iebba, V.**, Totino, V., Cicerone, C., Gagliardi, A., Santangelo, F., Neroni, B., Guerrieri, F., Corazziari, E., Pantanella, F., Schippa, S. (2020) Inactive Crohn's disease ileal microbiota composition relates to methylation of genes involved in inflammation and autoimmunity. Submitted to *Frontiers in Microbiology*.
2. **Valerio Iebba***, Nunzia Zanotta, Giuseppina Campisciano, Verena Zerbato, Stefano Di Bella, Carolina Cason, Roberto Luzzati, Marco Confalonieri, Anna Teresa Palamara and Manola Comar. (2021) Profiling of oral microbiota and cytokines in COVID-19 patients. Submitted to *Frontiers in Microbiology*.

PUBLICATIONS (Total: 43 - First author: 16 - Last author: 2 – **Corresponding: 8**)

1. Ferrere G, Tidjani Alou M, Liu P, Goubet AG, Fidelle M, Kepp O, Durand S, **Iebba V**, Fluckiger A, Daillère R, Thelemaque C, Grajeda-Iglesias C, Alves Costa Silva C, Aprahamian F, Lefevre D, Zhao L, Ryffel B, Colomba E, Arnedos M, Drubay D, Rauber C, Raoult D, Asnicar F, Spector T, Segata N, Derosa L, Kroemer G, Zitvogel L (2021) Ketogenic diet and ketone bodies enhance the anticancer effects of PD-1 blockade. *JCI Insight* Jan 25;6(2):e145207. doi: 10.1172/jci.insight.145207
2. Campisciano G, **Iebba V**, Zito G, Luppi S, Martinelli M, Fischer L, De Seta F, Basile G, Ricci G, Comar M. (2020) *Lactobacillus iners* and *gasseri*, *Prevotella bivia* and HPV Belong to the Microbiological Signature Negatively Affecting Human Reproduction. *Microorganisms*. 9(1):39. doi: 10.3390/microorganisms9010039.
3. Picard M, Yonekura S, Slowicka K, Petta I, Rauber C, Routy B, Richard C, **Iebba V**, Tidjani Alou M, Becharef S, Ly P, Pizzato E, Lehmann CHK, Amon L, Klein C, Opolon P, Gomperts Boneca I, Scoazec JY, Hollebecque A, Malka D, Ghiringhelli F, Dudziak D, Berx G, Vereecke L, van Loo G, Kroemer G, Zitvogel L, Roberti MP. (2020) Ileal immune tonus is a prognosis marker of proximal colon cancer in mice and patients. *Cell Death Differ*. doi: 10.1038/s41418-020-00684-w.
4. Fluckiger A, Daillère R, Sassi M, Sixt BS, Liu P, Loos F, Richard C, Rabu C, Alou MT, Goubet AG, Lemaitre F, Ferrere G, Derosa L, Duong CPM, Messaoudene M, Gagné A, Joubert P, De Sordi L, Debarbieux L, Simon S, Scarlata CM, Ayyoub M, Palermo B, Facciolo F, Boidot R, Wheeler R, Boneca IG, Sztupinszki Z, Papp K, Csabai I, Pasolli E, Segata N, Lopez-Otin C, Szallasi Z, Andre F, **Iebba V**, Quiniou V, Klatzmann

- D, Boukhalil J, Khelaifia S, Raoult D, Albiges L, Escudier B, Eggermont A, Mami-Chouaib F, Nistico P, Ghiringhelli F, Routy B, Labarrière N, Cattoir V, Kroemer G, Zitvogel L. (2020) Cross-reactivity between tumor MHC class I-restricted antigens and an enterococcal bacteriophage. *Science*. 369(6506):936-942. doi: 10.1126/science.aax0701.
5. Pinacchio C, Scagnolari C, **Iebba V**, Santinelli L, Innocenti GP, Frasca F, Bitossi C, Scordio M, Oliveto G, Ceccarelli G, Antonelli G, Mastroianni CM, d'Ettorre G. (2020) High abundance of genus *Prevotella* is associated with dysregulation of IFN-I and T cell response in HIV-1-infected patients. *AIDS*. 34(10):1467-1473. doi: 10.1097/QAD.0000000000002574.
 6. Riganelli L*, **Iebba V***, Piccioni M, Illuminati I, Bonfiglio G, Neroni B, Calvo L, Gagliardi A, Levrero M, Merlino L, Mariani M, Capri O, Pietrangeli D, Schippa S, Guerrieri F. (2020) Structural Variations of Vaginal and Endometrial Microbiota: Hints on Female Infertility. *Front Cell Infect Microbiol*. 10:350. doi: 10.3389/fcimb.2020.00350. eCollection 2020. *These authors contributed equally to this work.
 7. Roberti MP, Yonekura S, Duong CPM, Picard M, Ferrere G, Tidjani Alou M, Rauber C, **Iebba V**, Lehmann CHK, Amon L, Dudziak D, Derosa L, Routy B, Flament C, Richard C, Daillère R, Fluckiger A, Van Seuningen I, Chamaillard M, Vincent A, Kourula S, Opolon P, Ly P, Pizzato E, Becharef S, Paillet J, Klein C, Marliot F, Pietrantonio F, Benoist S, Scoazec JY, Dartigues P, Hollebecque A, Malka D, Pagès F, Galon J, Gomperts Boneca I, Lepage P, Ryffel B, Raoult D, Eggermont A, Vanden Berghe T, Ghiringhelli F, Vandenabeele P, Kroemer G, Zitvogel L. (2020) Chemotherapy-induced ileal crypt apoptosis and the ileal microbiome shape immunosurveillance and prognosis of proximal colon cancer. *Nat Med*. 26(6):919-931. doi: 10.1038/s41591-020-0882-8.
 8. Lisa Derosa*, Bertrand Routy*, Marine Fidelle*, **Valerio Iebba**, Laurie Alla, Edoardo Pasoli, Nicola Segata, Aude Desnoyer, Filippo Pietrantonio, Gladys Ferrere, Jean-Eudes Fahrner, Emmanuelle Le Chatellier, Connie P.M. Duong, Laura Mondragón, Kristina Iribarren, Mélodie Bonvalet, Safae Terrisse, Conrad Rauber, Anne-Gaëlle Goubet, Romain Daillère, Fabien Lamaitre, Anna Reni, Beatrice Casu, Maryam Tidjani Alou, Carolina Alves Costa Silva, Didier Raoult, Karim Fizazi, Bernard Escudier, Guido Kroemer, Laurence Albiges, Laurence Zitvogel (2020) Gut bacteria composition drives primary resistance to cancer immunotherapy in renal cell carcinoma patients. *European Urology*. pii: S0302-2838(20)30307-9. doi: 10.1016/j.eururo.2020.04.044. *These authors contributed equally to this work.
 9. Bruno, G., Gagliardi, A., Oliva, A., Trancassini, M., Macone, A., Cicerone, C., D'Abramo, A., **Iebba, V.**, Auria, S., Bonfiglio, G., Zingaropoli, M.A., D'Ettorre, G., Badiali, D., Vullo, V., Corazziari, E.S., Schippa, S. (2019) Fecal Microbial Transplantation impact on gut microbiota composition and metabolome, microbial translocation and T-lymphocyte immune activation in recurrent *Clostridium difficile* infection patients. *New Microbiol*. 42(4):221-224.
 10. **Iebba, V.**, Guerrieri, F., Di Gregorio, V., Levrero, M., Gagliardi, A., Santangelo, F., Sobolev, AP., Circi, S., Giannelli, V., Mannina, L., Schippa, S., Merli, M. (2018) Combining amplicon sequencing and metabolomics in cirrhotic patients highlights distinctive microbiota features involved in bacterial translocation, systemic inflammation and hepatic encephalopathy. *Sci Rep*. 8(1):8210. doi: 10.1038/s41598-018-26509-y.
 11. Pantanella, F.*, **Iebba, V***, Mura, F., Dini, L., Totino, V., Neroni, B., Bonfiglio, G., Maria, T., Passariello, C., Schippa, S. (2018) Behaviour of *Bdellovibrio bacteriovorus* in the presence of Gram-positive *Staphylococcus aureus*. *New Microbiol*. 41(2):145-152. *These authors contributed equally to this work.
 12. Gagliardi, A., Totino, V., Cacciotti, F., **Iebba, V.**, Neroni, B., Bonfiglio, G., Trancassini, M., Passariello, C., Pantanella, F., Schippa, S. (2018) Rebuilding the Gut Microbiota Ecosystem. *Int J Environ Res Public Health*. 15(8). doi: 10.3390/ijerph15081679.
 13. Sinibaldi, G.*, **Iebba, V.***, Chinappi, M. (2018) Swimming and rafting of *E.coli* microcolonies at air-liquid interfaces. *Microbiologyopen*. 7(1): e00532. doi: 10.1002/mbo3.532. *These authors contributed equally to this work.
 14. Catini, A., Capuano, R., Di Giuseppe, D., **Iebba, V.**, Martinelli, E., Di Natale, C. (2017) Optimizing an array of self-adapted temperature modulated metal oxide sensors for biomedical application. ISOCS/IEEE International Symposium on Olfaction and Electronic Nose, Proceedings5 July 2017, Article number 7968890. doi: 10.1109/ISOEN.2017.7968890

15. Donati, C., Zolfo, M., Albanese, D., Truong, DT., Asnicar, F., **Iebba, V.**, Cavalieri, D., Jousson, O., De Filippo, C., Huttenhower, C., Segata, N. (2016) Uncovering oral *Neisseria* tropism and persistence using metagenomic sequencing. *Nature Microbiology*. 1(7):16070. doi: 10.1038/nmicrobiol.2016.70
16. **Iebba, V.**, Santangelo, F., Totino, V., Pantanella, F., Monsia, A., Di Cristanziano, V., Di Cave, D., Schippa, S., Berrilli, F., D'Alfonso, R. (2016) Gut microbiota related to *Giardia duodenalis*, *Entamoeba spp.* and *Blastocystis hominis* infections in humans from Côte d'Ivoire. *The Journal of Infection in Developing Countries*. 10(9):1035-1041. doi: 10.3855/jidc.8179
17. Fusconi, M., Petrozza, V., Schippa, S., de Vincentiis, M., Familiari, G., Pantanella, F., Cirenza, M., **Iebba, V.**, Battaglione, E., Greco, A., Gallipoli, C., Campo, F., Gallo, A. (2016) Bacterial Biofilm in Salivary Gland Stones: Cause or Consequence? *Otolaryngol Head Neck Surg*. 154(3):449-53. doi: 10.1177/0194599815622425.
18. Di Pasquale, P., Caterino, M., Di Somma, A., Squillace, M., Rossi, E., Landini, P., **Iebba, V.**, Schippa, S., Papa, R., Selan, L., Artini, M., Palamara, A., Duilio, A. (2016) Exposure of *E. coli* to DNA-Methylating Agents Impairs Biofilm Formation and Invasion of Eukaryotic Cells via Down Regulation of the N-Acetylneuraminase Lyase NanA. *Front Microbiol*. 7:147. doi: 10.3389/fmicb.2016.00147.
19. Cicienia, A., Santangelo, F., Gambardella, L., Pallotta, L., **Iebba, V.**, Scirocco, A., Marignani, M., Tellan, G., Carabotti, M., Corazzari, ES., Schippa, S., Severi, C. (2016) Protective Role of Postbiotic Mediators Secreted by *Lactobacillus rhamnosus* GG Versus Lipopolysaccharide-induced Damage in Human Colonic Smooth Muscle Cells. *J Clin Gastroenterol*. 2016 Nov/Dec; 50 Suppl 2, S140-S144.
20. **Iebba, V.**, Totino, V., Gagliardi, A., Santangelo, F., Cacciotti, F., Trancassini, M., Mancini, C., Cicerone, C., Corazzari, E., Pantanella, F., Schippa, S. (2016) Eubiosis and dysbiosis: the two sides of the microbiota. *New Microbiol*. 39(1):1-12.
21. Merli, M., **Iebba, V.**, Giusto, M. (2015) What is new about diet in hepatic encephalopathy. *Metab Brain Dis*. 2015 Sep 29.
22. Schippa, S., Totino, V., Marazzato, M., Lepanto, MS., Santangelo, F., Aleandri, M., Gagliardi, A., Longhi, C., Pantanella, F., **Iebba, V.***, Conte MP.* (2014) *Escherichia coli* Population-Based Study in Pediatric Crohn's Disease. *Advances In Microbiology*, p. 886-889, doi: 10.4236/aim.2014. 413098 82. *These authors contributed equally to this work.
23. **Iebba, V.**, Totino, V., Santangelo, F., Gagliardi, A., Ciotoli, L., Virga, A., Ambrosi, C., Pompili, M., De Biase, RV., Selan, L., Artini, M., Pantanella F., Mura, F., Passariello, C., Nicoletti, M., Nencioni, L., Trancassini, M., Quattrucci, S., Schippa, S. (2014) *Bdellovibrio bacteriovorus* directly attacks *Pseudomonas aeruginosa* and *Staphylococcus aureus* Cystic fibrosis isolates. *Front Microbiol*. doi: 10.3389/fmicb.2014.00280
24. Giannelli, V., Di Gregorio, V., **Iebba, V.**, Giusto, M., Schippa, S., Merli, M., Thalheimer, U. (2014) Microbiota and the gut-liver axis: Bacterial translocation, inflammation and infection in Cirrhosis. *World Journal Of Gastroenterology* 45: 16795-16810. doi: DOI: 10.3748/wjg.v20.i45.0000
25. Trancassini, M. *, **Iebba, V.***, Citerà, N., Tuccio, V., Magni, A., Varesi, P., De Biase, R.V., Totino, V., Santangelo, F., Gagliardi, A., Schippa, S. (2014) Outbreak of *Achromobacter xylosoxidans* in an Italian Cystic fibrosis center: genome variability, biofilm production, antibiotic resistance, and motility in isolated strains. *Front Microbiol*. 5:138. doi: 10.3389/fmicb.2014.00138. *These authors contributed equally to this work.
26. **Iebba, V.**, Santangelo, F., Totino, V., Nicoletti, M., Gagliardi, A., De Biase, R.V., Cucchiara, S., Nencioni, L., Conte, M.P., Schippa, S. (2013) Higher prevalence and abundance of *Bdellovibrio bacteriovorus* in the human gut of healthy subjects. *PLoS One* 8(4):e61608.
27. Schippa, S.*, **Iebba, V.***, Santangelo, F., Gagliardi, A., De Biase, R.V., Stamato, A., Bertasi, S., Lucarelli, M., Conte, M.P., Quattrucci, S. (2013) Cystic fibrosis transmembrane conductance regulator (CFTR) allelic variants relate to shifts in faecal microbiota of cystic fibrosis patients. *PLoS One* 8(4):e61176. *These authors contributed equally to this work.

28. Milioris, E.*, **Iebba, V.***, Klein, NK., Bajaj-Elliott, M. (2013). Sodium butyrate modulates innate immunity to Enteropathogens. *Front. Immunol.* Conference Abstract: 15th International Congress of Immunology (ICI). doi: 10.3389/conf.fimmu.2013.02.00632. *These authors contributed equally to this work.
29. **Iebba, V.**, Nicoletti, M., Schippa, S. (2012) Gut Microbiota and the Immune System: an intimate partnership in health and disease. *International journal of immunopathology and pharmacology* 25: 823-833.
30. Schippa, S.*, **Iebba, V.***, Totino, V., Santangelo, F., Lepanto, M., Alessandri, C., Nuti, F., Viola, F., Di Nardo, G., Cucchiara, S., Longhi, C. and Conte, M.P. (2012) A potential role of *Escherichia coli* pathobionts in the pathogenesis of pediatric inflammatory bowel disease. *Canadian journal of microbiology* 58, 426-432. *These authors contributed equally to this work.
31. **Iebba, V.**, Conte, M.P., Lepanto, M.S., Di Nardo, G., Santangelo, F., Aloï, M., Totino, V., Checchi, M.P., Longhi, C., Cucchiara, S. and Schippa, S. (2012) Microevolution in *fimH* gene of mucosa-associated *Escherichia coli* strains isolated from pediatric patients with inflammatory bowel disease. *Infect Immun* 80, 1408-1417.
32. Passariello, C., Puttini, M., **Iebba, V.**, Pera, P. and Gigola, P. (2012) Influence of oral conditions on colonization by highly toxigenic *Staphylococcus aureus* strains. *Oral diseases* 18, 402-409.
33. Longhi, C., Conte, M.P., Marazzato, M., **Iebba, V.**, Totino, V., Santangelo, F., Gallinelli, C., Pallecchi, L., Riccobono, E., Schippa, S. and Comanducci, A. (2011) Plasmid-mediated fluoroquinolone resistance determinants in *Escherichia coli* from community uncomplicated urinary tract infection in an area of high prevalence of quinolone resistance. *European journal of clinical microbiology & infectious diseases* Epub 31 Dec 2011.
34. Di Leonardo, R., Dell'Arciprete, D., Angelani, L. and **Iebba, V.** (2011) Swimming with an image. *Physical review letters* 106, 038101.
35. Di Giacobbe, A., Pecetta, S., Virga, A., Scazzocchio, F., Aquilanti, L., **Iebba, V.** and Passariello, C. (2011) Diffusion of meticillin-resistant *Staphylococcus aureus* USA300 strains in central Italy. *International journal of antimicrobial agents* 37, 339-346.
36. Scazzocchio, F., Aquilanti, L., Tabacchini, C., **Iebba, V.** and Passariello, C. (2011) Microbiological and molecular characterization of nosocomial and community *Staphylococcus aureus* isolates. *Epidemiol Infect* 139, 613-622.
37. Schippa, S.*, **Iebba, V.***, Barbato, M., Di Nardo, G., Totino, V., Checchi, M.P., Longhi, C., Maiella, G., Cucchiara, S. and Conte, M.P. (2010) A distinctive 'microbial signature' in celiac pediatric patients. *BMC Microbiol* 10, 175. *These authors contributed equally to this work.
38. Bellizzi, A., Barucca, V., Di Nardo, G., Fioriti, F., **Iebba, V.**, Schippa, S., Conte, M.P., Proietti Checchi, M., Colosimo, M.T., Cucchiara, S., Oliva, S., Chiarini, F. and Pietropaolo, V. (2010) JC Viral reactivation in a pediatric patient with Crohn's disease. *International journal of immunopathology and pharmacology* 23, 955-959.
39. Di Leonardo, R., Angelani, L., Dell'arciprete, D., Ruocco, G., **Iebba, V.**, Schippa, S., Conte, M.P., Mearini, F., De Angelis, F. and Di Fabrizio, E. (2010) Bacterial ratchet motors. *Proc Natl Acad Sci U S A* 107, 9541-9545.
40. Magni, A., Trancassini, M., Varesi, P., **Iebba, V.**, Curci, A., Pecoraro, C., Cimino, G., Schippa, S. and Quattrucci, S. (2010) *Achromobacter xylosoxidans* genomic characterization and correlation of randomly amplified polymorphic DNA profiles with relevant clinical features of cystic fibrosis patients. *Journal of clinical microbiology* 48, 1035-1039.
41. Longhi, C., Marazzato, M., Conte, M.P., **Iebba, V.**, Schippa, S., Seganti, L. and Comanducci, A. (2009) Effect of lactoferricin on fluoroquinolone susceptibility of uropathogenic *Escherichia coli*. *The Journal of antibiotics* 62, 109-111.
42. Schippa, S., Conte, M.P., Borrelli, O., **Iebba, V.**, Aleandri, M., Seganti, L., Longhi, C., Chiarini, F., Osborn, J. and Cucchiara, S. (2009) Dominant genotypes in mucosa-associated *Escherichia coli* strains from pediatric patients with inflammatory bowel disease. *Inflamm Bowel Dis* 15, 661-672.

43. Longhi, C., Cossu, A., **Iebba, V.**, Massaro, M.R., Cipriani, D., Chiarini, F., Conte, M.P., Seganti, L., Osborn, J. and Schippa, S. (2008) Virulence traits in *Escherichia coli* strains isolated from outpatients with urinary tract infections. *International journal of immunopathology and pharmacology* 21, 715-723.

ORGANIZED SEMINARS

“*Helicobacter pylori* and gastric oncogenesis, impact of the host genotoxic response”. Prof. Eliette Touati, Unit of Helicobacter Pathogenesis, Department of Microbiology, Institut Pasteur, Paris, France. Seminar of Institut Pasteur Rome – Cenci Bolognetti Foundation, 23 June 2016.

ORAL PRESENTATIONS

“UNICANCER: French prospective cohort study of treatment-related chronic toxicity in women with localised breast cancer (CANTO): Microbiota biologic sub-study”, ONCOBIOME 1st Meeting, 15-17 January, 2019, Palazzo del Rettorato, Turin, Italy

“Cancer - associated intestinal dysbiosis: towards a definition”, EMBO-EMBL Symposium –The Human Microbiome-, September 16-19, 2018, EMBL Training Center, Heidelberg, Germany

“Pancreas insufficiency in cystic fibrosis patients drives a different fecal microbiota and metabolic phenotype”, 3rd World Congress on Targeting Microbiota, October 21-23, 2015 – Institut Pasteur, Paris, France

“Metagenomics and metabolomics in Cirrhotic Hepatitis patients”, Society for Microbial Ecology and Disease (SOMED), 38th International Congress, 11-13 October 2015, Verona, Italy

“Dysbiotic microbiota in liver cirrhosis relates to systemic inflammation”, 2nd World Congress on Targeting Microbiota, October 16-17, 2014 – Institut Pasteur, Paris, France

“Innovative therapeutic strategies based on the dual activity, probiotic and antibiotic, of the bacterial predator *Bdellovibrio bacteriovorus*”, Italian Society for Microbiology (SIM), 41th National Congress, 13-16 October 2013, Riccione, Italy

“Cystic fibrosis transmembrane conductance regulator (*CFTR*) allelic variants relate to shifts in fecal microbiota of cystic fibrosis patients”, European Cystic Fibrosis Society (ECFS), 36th International Congress, 12-15 June 2013, Lisbon, Portugal

“Development of innovative therapeutic strategies based on the antibacterial activities of *Bdellovibrio* predator bacteria”, X Autumn Convention of Italian Cystic Fibrosis Foundation, 29 November – 1 December 2012, Verona, Italy

“*CFTR* allelic variants are related to compositional shifts in fecal microbiota of Cystic Fibrosis patients”, Italian Society for studies on Cystic Fibrosis (SIFC), XVIII National Congress, 14-17 November 2012, Tirrenia, Italy

“Epigenetic responses after bacterial challenge: role of gamma- and epsilon-proteobacteria in IBD pediatric patients”, Italian Society for Pediatric Gastroenterology, Hepatology and Nutrition (SIGENP), XIX National Congress, 11-13 October 2012, Parma, Italy

Cystic Fibrosis transmembrane conductance regulator (*CFTR*) allelic variants relate to shifts in fecal microbiota of cystic fibrosis patients”, Italian Society for Microbiology (SIM), 40th National Congress, 7-10 October 2012, Riccione, Italy

“*Achromobacter xylosoxidans* an emerging pathogen in Cystic Fibrosis patients: from molecular characterization to development of innovative therapeutic strategies based on the antibacterial activities of *Bdellovibrio* predator bacteria”, IX Autumn Convention of Italian Cystic Fibrosis Foundation, 1-3- December 2011, Verona, Italy

“Early Epigenetic Responses After Pathogen Exposure: Role of Gamma- and Epsilon-Proteobacteria in Pediatric Inflammatory Bowel Diseases”, Italian Society for Pediatric Gastroenterology, Hepatology and Nutrition (SIGENP), XVIII National Congress, 13-15 October 2011, Padova, Italy

“Molecular Characterization of Fecal Microbiota and Metabolic Profiles Association in Cystic Fibrosis Patients”,

Italian Society for Microbiology (SIM), 39th National Congress, 3-6 October 2011, Riccione, Italy

“Mucosa-Associated Microbiota in IBD Pediatric Patients, and Metabolic Phenotypes”, European Society for Pediatric Gastroenterology, Hepatology and Nutrition (ESPGHAN), 44nd International Congress, 25-28 May 2011, Sorrento, Italy

“Molecular characterization of mucosa-associated intestinal microbiota and intestinal innate immune response: searching for additional mechanisms in pediatric Crohn’s disease”, Ninth Annual Broad Medical Research Program (BMRP) Investigator Meeting, 10-11 February 2011, Los Angeles, California, USA

“Dominant Intestinal Mucosa-Associated Microbiota in Pediatric Patients with Inflammatory Bowel Disease”, Italian Society for Microbiology (SIM), 38th National Congress, 17-20 October 2010, Riccione, Italy

“Molecular characterization of mucosa-associated intestinal microbiota and intestinal innate immune response: searching for additional mechanisms in pediatric Crohn’s disease”, Eighth Annual Broad Medical Research Program (BMRP) Investigator Meeting, 18-19 February 2010, Los Angeles, California, USA

“Microbiota and Genetic Adaptation in Pediatric Patients with Inflammatory Bowel Disease”, Italian Society for Pediatric Gastroenterology, Hepatology and Nutrition (SIGENP), XVI National Congress, 22-24 October 2009, Giardini Naxos, Italy

“Study of the Pathoadaptive Mutations in *fimH* Gene of *Escherichia coli*”, Italian Society for Microbiology (SIM), 37th National Congress, 11-14 October 2009, Turin, Italy

“Microbiota and Genetic Adaptation in Pediatric Patients with Inflammatory Bowel Disease”, European Society for Pediatric Gastroenterology, Hepatology and Nutrition (ESPGHAN), 42nd International Congress, 3-6 June 2009, Budapest, Hungary

“Dominant Mucosa-Associated Microbiota in Celiac Children at Diagnosis and after Gfd”, Italian Society for Microbiology (SIM), 36th National Congress, 12-15 October 2008, Rome, Italy

INVITED TALKS

“Il microbiota” – Main Lecture during the congress “Hot Topics in Uro-Oncology” - 22 November 2019, Torino, Italy.

“Metagenomics, *E. coli* population and cancer”, IRSD (Institut de Recherche en Santé Digestif), 15 March 2019, Toulouse, France.

“Intestinal microbiota and *Escherichia coli* involvement in inflammation and cancer”, IRCM (Institut de Recherche en Cancérologie de Montpellier), 22 February 2019, Montpellier, France.

“Next generation sequencing applied to microbiota”, Institut Gustave Roussy, 27 October 2017, Villejuif, France.

“La Vita, l’Universo...e quasi tutto il Microbiota”, divulgative presentation at Pint of Science, organized by Institute Pasteur – Cenci Bolognetti Foundation, 15 May 2017, Rome, Italy

“Intestinal microbiota: biological and clinical features”, Italian Federation for Fight Against Cancer, National Congress, 16-17 May 2016, Catania, Italy

“Intestinal microbiota”, Quality of life in the oncologic patient: nutrition and new therapies, Together against the cancer Foundation, National Meeting, 25 November 2015, Rome, Italy

“Next Generation Sequencing (NGS) to evaluate microorganism presence in salivary calculi”, Endoscopic Surgery National Congress, Italian Minister of Health, 25 November 2015, Rome, Italy

“Bacteriome”, 8th International Congress “Probiotics, Prebiotics & New Foods- for microbiota and human health”, Pontifical University Urbaniana, 13th September 2015, Rome, Italy

“Life, the Universe...and almost all of the Microbiota”, Infection and Immunity Theme Seminars, Institute Of Child Health, 17 April 2012, London, United Kingdom

“Mucosa-associated microbiota in Crohn’s disease pediatric patients, and metabolic phenotypes”, Italian Society

for Pediatric Gastroenterology, Hepatology and Nutrition (SIGENP), Young Investigator Forum, 20-21 March 2011, Rome, Italy

“Gut Microbiota: the role of Probiotics”, Italian Federation of Medical Pediatrics (FIMP), 4th National Congress, 30 September – 2 October 2010, Florence, Italy

“Intestinal TM7 bacterial phylogenies in active inflammatory bowel disease”, Italian Society for Pediatric Gastroenterology, Hepatology and Nutrition (SIGENP), Young Investigator Forum, 20-21 March 2009, Rome, Italy

NGS, SEQUENCES, PROBES DEPOSITED (DOI provided if published paper)

Data type	Submission	Title	Accession	Samples	Year
NGS – 16S (.fastq.gz)	SRA: SUB6889912	Structural variations of vaginal and endometrial microbiota: hints on female infertility	BioProject: PRJNA603234	68	2020
NGS – 16S (.fastq.gz)	SRA: SUB4409931	Inactive Crohn’s disease ileal microbiota is linked to promoter methylation of genes involved in inflammation and autoimmunity	BioProject: PRJNA486505	47	2018
NGS – 16S (.fastq.gz)	SRA: SUB4364357	Molecular, immune and microbial determinants of response and toxicity to combination CTLA-4 and PD-1 blockade	BioProject: PRJNA484225	142	2018
NGS – 16S (.fastq.gz)	SRA: SUB4218459 SUB6655852	Ileal Apoptosis and Microbiome Shape Immunosurveillance and Prognosis of Proximal Colon Cancer	BioProject: PRJNA478491	293 107	2018 2019
NGS – 16S (.fastq.gz)	SRA: SUB2881038	Microbiota composition in cirrhotic patients DOI: 10.1038/s41598-018-26509-y	BioProject: PRJNA471972	109	2017
Protein sequence (.fasta)	GI: 694998929 to 694998935	Correlation between genetic features of the <i>mef(A)-msr(D)</i> locus and erythromycin resistance levels in <i>Streptococcus pyogenes</i>	GenBank: AIS76186.1 to AIS76192.1	7	2014
Nucleotide sequence (.fasta)	-	Correlation between genetic features of the <i>mef(A)-msr(D)</i> locus and erythromycin resistance levels in <i>Streptococcus pyogenes</i>	GenBank: KJ809088.1	1	2014
Probe sequence (.fasta)	ID: 28372257 to 28372265	Cystic fibrosis transmembrane conductance regulator (CFTR) allelic variants relate to shifts in faecal microbiota of cystic fibrosis patients. DOI:10.1371/journal.pone.0061176	Pr028372250 to Pr028372265	16	2013

PATENTS

1. “Microbiota composition, as a marker of responsiveness to anti-PD1/PD-L1/PD-L2 antibodies in lung cancer”, Patent No. 18305757.9-1111, European Patent Application. Filed on 18 June 2018, number EP18305757.9. Applicant: Institut Gustave Roussy. Inventors: Laurence Zitvogel, **Valerio Iebba**.
2. “Microbiota composition, as a marker of responsiveness to anti-PD1/PD-L1/PD-L2 antibodies in renal cell cancer”, European Patent Application. Filed on 28 September 2018, number EP18306282.7. Applicant: Institut Gustave Roussy. Inventors: **Valerio Iebba**, Laurence Zitvogel.

BOOKS (Invited books underlined)

1. **Valerio Iebba**. “Il Microbiota: un nuovo mondo inesplorato”. (May 2018) IBSA Foundation (Lugano, Switzerland, <http://www.ibsafoundation.org/it>) and Institut Pasteur – Cenci Bolognetti Foundation (Roma, Italy, <http://www.istitutopasteur.it>). Carocci editor and printing (Roma, Italy, <http://www.carocci.it>). *Synopsis*: Divulcation book (in Italian language) for elementary/middle/high school about the different microbiota inhabiting our body districts and their functions. The book is accompanied by a cartoon designed by the Italian School of Comics and Cartoons, to achieve a better communication and divulgation especially for the kids.

2. **Valerio Iebba.** “A microbial world through social networks”, Cambridge Scholars Publishing (www.cambridgescholars.com). Book proposal with abstract, preface and first chapter submitted for evaluation to the Commissioning Editor. *Synopsis:* The book (in English language) will examine the approach of social network analysis applied to the microbial world, especially focusing on the gut microbiota and its systemic inter-connections with organs and their resident microbiota. A special attention will be paid on the parallels among microbiota dynamics (time series) and real-world phenomena, such as economics.

PROFESSIONAL SOCIETIES

American Society for Microbiology (ASM), European Society for Clinical Microbiology and Infectious Diseases, (ESCMID), Italian Society for Microbiology (SIM), Italian Society for General Microbiology and Microbial Biotechnology (SIMGBM), Italian Society for Pediatric Gastroenterology, Hepatology and Nutrition (SIGENP), European Association for Cancer Research (EACR).

PROFESSIONAL SERVICE

Editorial Board Member: Frontiers in Microbiology (Frontiers, Nature Publishing Group - NPG), Clinical Journal of Microbiology and Pathology (Jacobs Publishers), The Scientific Pages of Infectious Diseases (The Scientific Pages Publisher)

Journal Reviewer: American Journal of Gastroenterology, Applied and Environmental Microbiology, Applied Microbiology, Biochemie, BMC Microbiology, Canadian Journal of Microbiology, Digestive and Liver Disease, Frontiers in Cellular and Infection Microbiology, Infection Genetics and Evolution, Journal of Pediatric Gastroenterology and Nutrition, Scientific Reports, World Journal of Gastroenterology, Frontiers in Microbiology.

Proposal Reviewer: Broad Medical Research Program (BMRP) – 4 proposals; Austrian Science Fund (FWF) – 1 proposal; Pasteur Institute Paris – 1 proposal.

Congress organization and participation: Italian Society for Microbiology (SIM) National Congress 2015, Naples, Italy (Chairman); Young Researchers in Life Sciences YRLS – 2019 edition, Paris, France (Judge)

Other Professional Service: Member of the ‘Pediatric Gut Microbiota Study Group’ of the Italian Society for Gastroenterology (SIGE, 2009); Member of the ‘AIEC Study Group’ established by Enterome Company, Paris, France. Member of the “Fecal Microbiota Transplant (FMT) Group” of Sapienza University of Rome and Policlinico Umberto I, Rome. Member of International Consortia for the following projects: H2020 ONCOBIOME (<https://cordis.europa.eu/project/id/825410/it>); Million Microbiome of Humans Project (MMHP) (<https://db.cngb.org/mmhp/memberships>).

Past Scientific Consultant Activities: DICOFARM S.p.A (Italy), BMR Genomics (Italy)

Present Scientific Consultant Activities: Golden Wave S.p.A. (Italy)

Third mission (University of Trieste):

- Summer Formation Modules for high school students, lesson given the 6th July 2020 on “The role of microbiota in sexually transmitted diseases”, Trieste, Italy
- Intervention as scientific speaker and artistic performer (piano playing) during ESO2020, Trieste, Italy.