



Ruggiero Francavilla

Nationality: Italian

Gender: Male

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WORK EXPERIENCE

- [1996-1997] Attended the Department of Pediatric Hepatology at King's College Hospital, London (UK)
- [2002-current] Head of Pediatric Gastroenterology Outpatient Clinic *Azienda Ospedaliera Universitaria Policlinico di Bari*
- [2018-current] Director of Pediatric Gastroenterology, Hepatology and Nutrition Unit *Azienda Ospedaliera Universitaria Policlinico di Bari*
- [2018-Current] Appointed to the National Scientific Committee Board of the Italian Celiac Disease Association
- [March 2021] Full Professor in Pediatrics - Department of Interdisciplinary Medicine - University Aldo Moro - Bari

EDUCATION AND TRAINING

- [1987-1993] Graduation in Medicine and Surgery at the University of Bari - Aldo Moro
- [1994-1999] Specialization in Pediatrics where he received his Specialist Diploma in 1997 with a grade of 50 out of 50 et laude
- [1999-2001] PhD degree in Digestive and Nutritional Pathophysiology University of Naples
- [2002-2006] Specialization in Gastroenterology and Digestive Endoscopy at the University of Bari - Aldo Moro

HONOURS AND AWARDS

- [2001] Award of the Italian Society of Gastroenterology
- [2004] Prize for Young Investigator Award (World Congress of Pediatric Gastroenterology, Hepatology and Nutrition)
- [2012] Consultant Research Team "intestinal microbiota" IRCCS "Saverio De Bellis" Bari.
- [2013] BIOGIA IVAN CASAS PROBIOTICS AWARD.

PATENT

- [2014] Patent on probiotic application. Title of Invention Innovative probiotic mixture for the treatment and prevention of Irritable Bowel type symptoms in celiac patient.
- [2015] INDUSTRIA 2015 "GLUTENFREE" PROGRAM UNDER THE INDUSTRIAL INNOVATION PROJECT "NEW TECHNOLOGIES FOR MADE IN ITALY. Results presented at the project closing meeting (title 52).

BIBLIOMETRY

ORCID number: 0000-0002-4603-974X
Scopus Author ID: 7003676833
Loop profile: 139370
ResearcherID: S-1391-2019
Scopus Author ID: 6507379244
H-index (Scopus): 54
Total Citations (Scopus): 9547
Publications in indexed journals - total: 215

DIRECTION OR PARTICIPATION IN THE ACTIVITIES OF A RESEARCH GROUP CHARACTERIZED BY NATIONAL OR INTERNATIONAL COLLABORATIONS

- [2009] RESEARCH GROUP LEADER: Efficacy of Lactobacillus GG (LGG) in Children with Abdominal Pain (LGGDAR) doi: 10.1542/peds.2010.
- [2010] RESEARCH GROUP LEADER: Control of Helicobacter Pylori Infection by Probiotics.
- [2010] RESEARCH GROUP ACTIVITY PARTICIPATION: Prevention of the Minor Digestive Disorders by Lactobacillus Reuteri Supplementation" - ClinicalTrials.gov Identifier: NCT01235884- doi: 10.1001/jamapediatrics.2013.4367.
- [2012] RESEARCH GROUP LEADER: Probiotic for the Prevention of Functional Disorders in Childhood.
- [2012] RESEARCH GROUP LEADER: Probiotics for the Treatment of Irritable Bowel Syndrome in Celiac Patients (ProCel). Studio multicentrico Italiano. Prodotto: doi: 10.1097/MCG.0000000000001023.

- [2014] RESEARCH GROUP LEADER: Prevalence of Gluten Sensitivity in Irritable Bowel Syndrome: The First Study in Paediatrics. (GS-IBS). Studio multicentrico Italiano. Prodotto: doi: 10.1016/j.jpeds.2013.10.007.
- [2015] RESEARCH GROUP ACTIVITY PARTICIPATION: Effect of Milk Formula Supplemented With *L. Reuteri* on Crying Time in Colicky Infants Less Than 3 Months Old. Doi:10.3390/nu9111181.
- [2016] RESEARCH GROUP ACTIVITY PARTICIPATION: Eradication of *Helicobacter pylori* with a *Lactobacillus reuteri* strain combination (strains DSM 17938 and ATCC PTA 6475) and a Proton Pump Inhibitor In collaborazione con: PRINCIPAL INVESTIGATOR David Graham, MD, PhD; Baylor College of Medicine - Houston, Texas 77030. USA. Prodotto: doi: 10.1155/2019/3409820.
- [2017] RESEARCH GROUP DIRECTOR: Diagnosis of Non-Celiac Gluten Sensitivity in Children. Italian multicenter study. Product: doi: 10.1038/ajg.2017.483.

LOCAL RESPONSIBILITY FOR STUDIES AND SCIENTIFIC RESEARCH ENTRUSTED BY QUALIFIED PUBLIC OR PRIVATE INSTITUTIONS

- [2005] MEDICAL SCIENTIFIC MISSION CAMPO PROFUGHI SAHARAWI TINDOUF (ALGERIA) to research genetic factors associated with celiac disease. PUBLIC INSTITUTION PROMOTER: Italian Celiac Association
- [2001-2006] PUBLIC INSTITUTION PROMOTER: Center For Celiac Research, University of Maryland School of Medicine, Baltimore, MD (CC and AF); the Department of Pediatrics, Marche Polytechnic University, Ancona, Italy SUPPORT: in part by the Italian Celiac Society. International Multicentric Study on Gluten Traces in Patients with Celiac Disease. local person in charge of Centers: the Department of Gastroenterology, Children Hospital, Palermo, Italy (GI); the University Department of Gastroenterology, Catania, Italy (CD); the University Department of Pediatrics, Bari, Italy (RF); the University Department of Gastroenterology, Pavia, Italy (FB); the University Department of Internal Medicine, Bologna, Italy (UV); the University Department of Pediatrics, Palermo, Italy (SA); the Department of Gastroenterology, "La Sapienza" University, Rome, Italy (AP); the Gastroenterology Unit, Catholic University of Sacred Heart, Rome, Italy (ID); the Department of Biostatistics, Polytechnic University of Marche, Ancona, Italy (RG and FC); the Department of Pathology, Polytechnic University of Marche, Ancona, Italy (AM and IB). The collaboration resulted in the attached clinical study (A prospective, double-blind, placebo-controlled trial to establish a safe gluten threshold for patients with celiac disease. *Am J Clin Nutr* 2007; 85: 160).
- [2003-2013] PROMOTER OF PUBLIC INSTITUTION: Celiac Foundation - Italian Celiac Association Head of the Regional Center for the National Multicentric Clinical Study: The Italian Working Group on Weaning and CD Risk CELIPREV ClinicalTrials.gov number, NCT00639444. Product: Introduction of gluten, HLA status, and the risk of celiac disease in children. *N Engl J Med* 2014; 371: 1295-303. DOI: 10.1056/NEJMoa1400697.
- [2008-2015] PROMOTER PRIVATE INSTITUTION: PLADA SRL - PLASMON Multicenter clinical nutritional study on the use of oats in the treatment of celiac disease in children "Code PLA-07- 01 Oat Products in the Treatment of Coeliac Disease in Children. Product: Oats in the diet of children with celiac disease: preliminary results of a double-blind, randomized, placebo controlled multicenter Italian study. *Nutrients*. 2013 Nov 20; 5 (11): 4653-64. doi: 10.3390 / nu5114653).
- [2013] PROMOTER PRIVATE INSTITUTION: TAKEDA TAK-390MR_207 -12-17 yr old - Erosive Esophagitis: A Phase 2 Multicenter, 24-week Study to Assess the Safety and Effectiveness of Daily Oral Administration of Dexlansoprazole Delayed-Release Capsules for Healing of Erosive Esophagitis and Maintenance of Healed Erosive Esophagitis and Relief of Heartburn, in Adolescent Subjects Aged 12 to 17 Years with Erosive Esophagitis.
- [2013] PRIVATE INSTITUTION PROMOTER: TAKEDA TAK-390MR_206 -12-17 yr old - GERD: A Phase 2 Open-Label, Multicenter, 4-week Study to Assess the Safety and Effectiveness of Daily Oral Administration of Dexlansoprazole Delayed-Release Capsules for Relief of Heartburn, in Adolescent Subjects Aged 12 to 17 Years with Symptomatic Non-Erosive Gastroesophageal Reflux Disease).
- [2013-2018] PRIVATE INSTITUTION PROMOTER: ABBVIE A Long-Term Non-Interventional Registry to Assess Safety and Effectiveness of Humira® (Adalimumab) in Pediatric Patients with Moderately to Severely Active Crohn's Disease (CD) - CAPE Product Reference EU/1/03/256/001-010.
- [2015-present] PUBLIC INSTITUTION PROMOTER: Massachusetts General Hospital Celiac Disease Genomic Environmental Microbiome and Metabolomic Study (CDGEMM) With CD GEMM we aim to prospectively follow the evolution of the gut microbiota in children at genetic risk of developing celiac disease. Objectives of the study are: A) To prospectively study changes in the fecal microbiota and metabolome in relation to maternal fecal microbiota and infant feeding pattern (breastfeeding, artificial feeding, introduction of complementary feeding). B) Study blood levels of zonulin in relation to age, infant feeding pattern, and gut microbiota. C) Identify any environmental factors (infections, use of antibiotics, number of cohabitants in the family, presence of pets) associated with the development of celiac disease (assessed in terms of positive specific anti- transglutaminase IgA and anti-gliadin deamidate IgA and IgG antibodies). The protocol includes the collection of some fecal samples from the child, the collection of a single fecal sample from the mother (only one week after delivery), the collection of a sample of breast milk one week after delivery, some blood samples for the child (more detailed later) and the collection of anamnestic information related to diet and antibiotic use. The study includes a 5-year follow-up.
- [2015-present] 2015-Present: PUBLIC/PRIVATE INSTITUTION PROMOTER: Università Politecnica delle Marche and CONAD, cooperative society Title of the study: Early diagnosis of celiac disease: screening project in school- aged children. Study code: 121CELIA14 Identification of the promoter person in charge for the application: SIGENP (Italian Society of Pediatric Gastroenterology, Hepatology and Nutrition) Non- commercial promoter National Scientific Coordinator: Prof. Carlo Catassi Maternal and Child Department - Polytechnic University of Marche.
- [2016] PUBLIC INSTITUTION PROMOTER: Federazione Italiana Medici Pediatri Observational study FIMP nutrition 2016 in association with Azienda Ospedaliera San Paolo Polo Universitario - Milan in collaboration with Family Pediatricians of the regions: Puglia, Campania, Lombardy, Sicily, Emilia- Romagna, Lazio, Piedmont, Tuscany, Veneto.
- [2019] DANONE PUBLIC INSTITUTION PROMOTER: SOLAR study Danone Nutricia Research).
- [2020] PRIVATE INSTITUTION PROMOTER DIFASS INTERNATIONAL: Butyrate in Children with IBS: double blind placebo controlled randomized clinical trial.
- [2020] PRIVATE INSTITUTION PROMOTER: PLADA Heinz Italia SpA. Efficacy of milk fermented with *Lactobacillus paracasei* cba I74 on the prevention of respiratory and gastrointestinal infections in schoolchildren: randomized double-blind controlled trial with placebo).
- [2021] **PNRR** -Project Title: Research and innovation network on food and nutrition Sustainability, Safety and Security –Working ON Foods – Project CUP: H93C22000630001 – Project Code: PE00000003.
- [2022] **PNRR** -Project Title: "Circulating microRNAs as non-invasive biomarkers of celiac disease. Application of novel tools to monitor the adherence to a gluten-free diet" - PNRR-POC-2022-12375779.

EDITORIAL ACTIVITY AND MEMBERSHIPS

- [2005] Member of the Italian Society of Paediatric Gastroenterology Hepatology and Nutrition (SIGENP).
- [2019] Editorial Board of Nutrients.
- [2020] Editorial Board of Frontiers in Gastroenterology.
- [2021] Member of the European Society of Paediatric Gastroenterology Hepatology and Nutrition (ESPGHAN).
- [2022] Working Group on Gut microbiota of the European Society of Paediatric Gastroenterology Hepatology and Nutrition (ESPGHAN).
- [2022] Member of the European Crohn's and Colitis Organisation (ECCO).

RESEARCH AREA

In the last ten years, my research area has expanded to studying microbiomes in health and disease with a particular interest in celiac disease, gluten disorders, cow's milk allergy, and autism spectrum disorder. To this aim have set up collaborations with Prof. Lars Engstrand at the Centre for Translational Microbiome Research (CTMR) - Karolinska Institutet and Prof. Alessio Fasano at Harvard Medical School MassGeneral Hospital for Children. Since 2016 we have been participating in the Celiac Research Program at Harvard Medical School entitled "Celiac Disease Genomic Environmental Microbiome and Metabolomic Study" to investigate the many factors that contribute to the development of celiac disease. This long-term, multi-center study follows infants from birth through childhood. It prospectively collects biological samples for a multi-omics approach to identify a marker of health and illness: a signature predictive for celiac disease to plan preventive measures.

I'm fully involved in researching how nutrition and lifestyles could affect health by influencing the intestinal microbiota to plan a strategy toward eubiosis, especially in children. In this field, I'm collaborating with food industries (international/national/regional) to export the concept of healthy nutrition (Mediterranean diet) from texts to people's tables via the field to guarantee the quality of raw materials and promote awareness of sustainable production. I believe that healthy nutrition plus functional foods/nutraceuticals are the way to reduce a load of non-communicable diseases on the health system.

The Unit that I coordinate has specific expertise in intestinal health, microbiome and diet, with a translational approach. He is PI of several observational and intervention studies in celiac disease, autistic spectrum disorder, functional disorders and has a long-standing established collaboration with Professor Lars Engstrand, the Director for The Clinical Genomics facility at Karolinska University (Department of Microbiology, Tumor and Cell Biology). These laboratories host a platform for genomic epidemiology and network analysis whose main aim is to detect and prevent nosocomial infectious outbreaks through whole-genome sequencing on next-gen platforms. The group has all the experimental, bioinformatic, mathematical and statistical skills required to afford all sequencing applications on Illumina platforms, comprising the metagenomic ones, as required by the present project. Within the CRC there are deep expertise in the characterization of bacterial and fungal consortia (microbiota and mycobiota), especially in the context of immuno-mediated, inflammatory pathologies such as celiac disease, asthma, and atopy. CRC has all the technological facilities required: it has purchased one middle capacity (MiSeq) and one high capacity (NextSeq) Illumina machine. Prof. Francavilla has a long-standing established collaboration with Vassilios Fanos who has specific expertise in Metabolomics, Bioinformatics, Spectroscopy, and Spectrometry techniques.

Bari - 01/12/2023



*People Who Say It Cannot Be Done Should Not Interrupt Those Who Are Doing It
(Chinese Proverb)*