Lorenzo Fabbri

Summary

I am a PhD student at the Barcelona Institute for Global Health (ISGlobal). I work under the supervision of Prof. Martine Vrijheid. My main topic of interest is the use of modern Causal Inference methods to answer questions in the broad field of Environmental Neuroepidemiology. I am also profoundly interested in Open Science and Reproducible Research.

I received my Bachelor's degree in Biotechnology and my Master's degree in Quantitative and Computational Biology.

My personal webpage can be found here. You can also find me on Bluesky and GitHub.

Working Experience

PhD Student
Barcelona Institute for Global Health (Barcelona, ES) 2021 - Present

Student Research Assistant Fellowship
Università della Svizzera italiana (Lugano, CH) 2017 - 2017

Research Visits

Visiting PhD Student
Harvard Pilgrim Health Care (Boston, US) 2024 - 2024

Funding

Causal Inference for Environmental Mixtures
Società Unione Mutuo Soccorso (San Marino, SM) 2024

Causal Inference for Environmental Mixtures
ATHLETE (Barcelona, ES) 2024

Causal Inference for Environmental Mixtures
Centro de Investigación Biomédica en Red (Madrid, ES) 2024

Meritatamente 2022
Società Unione Mutuo Soccorso (San Marino, SM) 2022

Erasmus+ Traineeship Programme Scholarship
University of Trento (Trento, IT) 2019

Faculty of Informatics Scholarship
Università della Svizzera italiana (Lugano, CH) 2016

Erasmus Traineeship Programme Scholarship
University of Parma (Parma, IT) 2015

Honors and Awards

Outstanding Abstract by a Student
International Society for Environmental Epidemiology 2022

Publications

My ORCiD is 0000-0003-3031-322X.

Journal Articles

1. **Fabbri L**, Garlantézec R, Audouze K, et al. Childhood exposure to non-persistent endocrine disrupting chemicals and multi-omic profiles: A panel study. *Environment International*. Published online February 26, 2023:107856. doi:10.1016/j.envint.2023.107856

2. Thiel C, Cordes H, **Fabbri L**, et al. A Comparative Analysis of Drug-Induced Hepatotoxicity in Clinically Relevant Situations. *PLOS Computational Biology*. 2017;13(2):e1005280. doi:10.1371/journal.pcbi.1005280

Articles under review and revising

1. Childhood exposure to non-persistent endocrine disruptors, glucocorticosteroids, and attentional function: A study based on the parametric g-formula. *First author*
2. Multi-omics architecture of obesity and metabolic dysfunction in childhood: identifying biological pathways and prenatal determinants. *Co-author*
3. Diet among European children and its association with adiposity-related outcomes: a multi-country study. *Co-author*

Software Packages

myphd: R package for "my" PhD.
https://github.com/isglobal-cep/myphd 2024

Conference Presentations

The posters can be found here.

Childhood exposure to non-persistent endocrine disrupting chemicals and multi-omic profiles: a panel study
ISEE Annual Conference, Athens (GR) 2022

Childhood exposure to non-persistent endocrine disrupting chemicals and multi-omic markers in a population-based child cohort
EURION Cluster Annual Meeting (online) 2022

Childhood exposure to non-persistent endocrine disrupting chemicals and multi-omic markers in a population-based child cohort
International Prenatal Programing and Toxicity Meeting (online) 2022

Efficient and Portable MPI Support for Approximate Bayesian Computation
Platform for Advanced Scientific Computing Conference, Lugano (CH) 2017

Education

Postgraduate Diploma in Global Health Policy
London School of Hygiene and Tropical Medicine (London, GB) 2024 - Present

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Graduate Certificate in Theoretical Statistics and Probability
The Open University (Milton Keynes, GB) 2024 - Present

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PhD Programme in Biomedicine
Universitat Pompeu Fabra (Barcelona, ES) 2021 - Present

- Supervisor: Prof. Martine Vrijheid.

M.Sc. in Quantitative and Computational Biology
Università degli Studi di Trento (Trento, IT) 2017 - 2019

- Thesis (FBK, Trento (IT)): Machine Learning for Predictive Drug Induced Hepatotoxicity. Supervised by: Dr. Cesare Furlanello, Dr. Marco Chierici, Prof. Enrico Domenici.
- Internship (HITS, Heidelberg (DE)): Machine and Deep Learning for Predictive Unbinding Kinetics of Kinases. Supervised by: Prof. Rebecca Wade, Dr. Daria Kokh, Prof. Raffaello Potestio.
- Final mark: 110/110 With Honors.

M.Sc. Student in Computational Science
Università della Svizzera italiana (Lugano, CH) 2016 - 2017

- Project (USI, Lugano (CH)): Investigation by Computational Techniques of Channelopaties related to Sodium Channels. Supervised by: Prof. Vittorio Limongelli, Prof. Daniele Di Marino.

B.Sc. in Biotechnology
University of Parma (Parma, IT) 2012 - 2016

- Thesis (RWTH, Aachen (DE)): Whole Body PBPK Modeling of Valproic Acid. Supervised by: Prof. Elena Maestri, Prof. Lars M. Blank, Dr. Henrik Cordes.

- Final mark: 103/110.

Continuing Education

Spring School in Causal Inference with Observational Data
Causal Insights, Leeds (UK) — Apr 2022

Computational Bayesian methods using brms in R
Physalia Courses, online — Feb 2022

ELIXIR Omics Integration and Systems Biology
National Bioinformatics Infrastructure Sweden, online — Sep 2021

Fundamentals of Epidemiology (EPM101)
LSHTM, online — Sep 2021

Advanced Statistics: Statistical Modelling
Swiss Institute of Bioinformatics, online — Aug 2021

Alpine Exposome Summer School
Inserm and ATHLETE, online — Jun 2021

Metabolomics Data Processing and Data Analysis
University of Birmingham, online — Feb 2021

Mendelian Randomisation
Imperial College London, online — May 2020

Image Analysis and Modeling of Complex Biological Dynamics
University of Wurzburg, Wurzburg (DE) — Sep 2017

Effective High Performance Computing Summer School
CSCS and University of Lugano, Lugano (CH) — Jul 2017

MARVEL School on Variationally Enhanced Sampling
University of Lugano, Lugano (CH) — Feb 2017

Advanced Course in Alternatives to Animal Experimentation
University of Genova, Genoa (IT) — Nov 2015

Service

Students and New Researchers Network
International Society for Environmental Epidemiology — 2022 - 2023

Early Career Scientist Working Group
COnsortium of METabolomics Studies — 2022 - 2022

Skills

Languages	Italian (native), English (C1, IELTS 7.0), Spanish (basic)
Programming Languages	R, Python, MATLAB, C
Markup Languages	LaTeX, RMarkdown
Software Development	git, SLURM, High Performance Scientific Computing