Lorenzo Fabbri

Postdoctoral Fellow

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Research Interests

- Environmental and social determinants of **cancer**.
- Transparent **causal** inference and evidence **triangulation**.

Academic Appointments

Postdoctoral Researcher
Barcelona Institute for Global Health (Barcelona, ES) Oct 2025

PhD Student
Barcelona Institute for Global Health (Barcelona, ES) Jun 2021 - Sep 2025

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

Education

Máster de Formación Permanente en Salud Pública
UNED (Madrid, ES) Dec 2025

Diploma de Experto Universitario en Métodos Avanzados de Estadística Aplicada
UNED (Madrid, ES) Dec 2025

PG Certificate in Public Health
London School of Hygiene & Tropical Medicine (London, GB) Oct 2025

Basic Epidemiology (PHM101).

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

Mathematical statistics (M347): 91/100 With Distinction.

PhD Programme in Biomedicine
Universitat Pompeu Fabra (Barcelona, ES) Sep 2021 - Sep 2025

- Thesis: Early Life Exposure to Environmental Chemicals and Neurodevelopment through Childhood and Adolescence.
- Supervisor: Prof. Martine Vrijheid.

M.Sc. in Quantitative and Computational Biology
Università degli Studi di Trento (Trento, IT) Oct 2017 - Oct 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) Sep 2016 - Jul 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) Oct 2012 - Feb 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.

Research Visits

Master's thesis
Fondazione Bruno Kessler (Trento, IT) — Jun 2019 - Oct 2019

Master's internship
HITS (Heidelberg, DE) — Mar 2019 - May 2019

Bachelor's thesis
RWTH Aachen University (Aachen, DE) — Apr 2015 - Aug 2015

Grants and Fellowships

Meritatamente 2023
Società Unione Mutuo Soccorso (San Marino, SM) — Mar 2024 - Sep 2024

Causal Inference for Environmental Mixtures [declined]
ATHLETE (Barcelona, ES) — Mar 2024 - Jun 2024

Causal Inference for Environmental Mixtures [declined]
Centro de Investigación Biomédica en Red (Madrid, ES) — Jun 2024 - Sep 2024

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

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

Faculty of Informatics Scholarship
Università della Svizzera italiana (Lugano, CH) — 2016 - 2017

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

Honors and Awards

Student Tuition Waiver [declined]
CAUSALab Summer Courses on Causal Inference — 2024

Outstanding Abstract by a Student
International Society for Environmental Epidemiology — Sep 2022

Publications

Journal articles

[1] **Lorenzo Fabbri**, Oliver Robinson, Xavier Basagaña, Leda Chatzi, Regina Gražulevičienė, Mònica Guxens, Manik Kadawathagedara, Amrit Kaur Sakhi, Léa Maitre, Rosemary McEachan, Claire Philippat, Óscar J. Pozo, Cathrine Thomsen, John Wright, Tiffany Yang and Martine Vrijheid. 'Childhood Exposure to Non-Persistent Endocrine Disruptors, Glucocorticosteroids, and Attentional Function: A Cross-Sectional Study Based on the Parametric g-Formula'. In: *Environmental Research* 264 (1st Jan. 2025), p. 120413. ISSN: 0013-9351. DOI: 10.1016/j.envres.2024.120413. pmid: 39577729. URL: https://www.sciencedirect.com/science/article/pii/S001393512402320X (visited on 25/11/2024).

[2] Nikos Stratakis, Augusto Anguita-Ruiz, **Lorenzo Fabbri**, Léa Maitre, Juan R. González, Sandra Andrusaityte, Xavier Basagaña, Eva Borràs, Hector C. Keun, Lida Chatzi, David V. Conti, Jesse Goodrich, Regina Grazuleviciene, Line Småstuen Haug, Barbara Heude, Wen Lun Yuan, Rosemary McEachan, Mark Nieuwenhuijsen, Eduard Sabidó, Rémy Slama, Cathrine Thomsen, Jose Urquiza, Theano Roumeliotaki, Marina Vafeiadi, John Wright, Mariona Bustamante and Martine Vrijheid. 'Multi-Omics Architecture of Childhood Obesity and Metabolic Dysfunction Uncovers Biological Pathways and Prenatal Determinants'. In: *Nature Communications* 16.1 (14th Jan. 2025), p. 654. ISSN: 2041-1723. DOI: 10.1038/s41467-025-56013-7. URL: https://www.nature.com/articles/s41467-025-56013-7 (visited on 15/01/2025).

[3] Nuria Güil-Oumrait, Nikos Stratakis, Léa Maitre, Augusto Anguita-Ruiz, Jose Urquiza, **Lorenzo Fabbri**, Xavier Basagaña, Barbara Heude, Line Småstuen Haug, Amrit Kaur Sakhi, Nina Iszatt, Hector C. Keun, John Wright, Leda Chatzi, Marina Vafeiadi, Mariona Bustamante, Regina Grazuleviciene, Sandra Andrušaitytė, Rémy Slama, Rosemary McEachan, Maribel Casas and Martine Vrijheid. 'Prenatal Exposure to Chemical Mixtures and Metabolic Syndrome Risk in Children'. In: *JAMA Network Open* 7.5 (23rd May 2024), e2412040. ISSN: 2574-3805. DOI: 10.1001/jamanetworkopen.2024.12040. URL: https://doi.org/10.1001/jamanetworkopen.2024.12040 (visited on 16/07/2024).

[4] Sarah Warkentin, Nikos Stratakis, **Lorenzo Fabbri**, John Wright, Tiffany C. Yang, Maria Bryant, Barbara Heude, Remy Slama, Parisa Montazeri, Marina Vafeiadi, Regina Grazuleviciene, Anne Lise Brantsæter and Martine Vrijheid. 'Dietary Patterns among European Children and Their Association with Adiposity-Related Outcomes: A Multi-Country Study'.

In: *International Journal of Obesity* (27th Oct. 2024), pp. 1–11. ISSN: 1476-5497. DOI: 10.1038/s41366-024-01657-6. pmid: 39465309. URL: https://www.nature.com/articles/s41366-024-01657-6 (visited on 12/12/2024).

[5] **Lorenzo Fabbri**, Ronan Garlantézec, Karine Audouze, Mariona Bustamante, Ángel Carracedo, Leda Chatzi, Juan Ramón González, Regina Gražulevičienė, Hector Keun, Chung-Ho E Lau, Eduard Sabidó, Alexandros P Siskos, Rémy Slama, Cathrine Thomsen, John Wright, Wen Lun Yuan, Maribel Casas, Martine Vrijheid and Léa Maitre. 'Childhood Exposure to Non-Persistent Endocrine Disrupting Chemicals and Multi-Omic Profiles: A Panel Study'. In: *Environment International* (26th Feb. 2023), p. 107856. ISSN: 0160-4120. DOI: 10.1016/j.envint.2023.107856. URL: https://www.sciencedirect.com/science/article/pii/S0160412023001290 (visited on 27/02/2023).

[6] Christoph Thiel, Henrik Cordes, **Lorenzo Fabbri**, Hélène Eloise Aschmann, Vanessa Baier, Ines Smit, Francis Atkinson, Lars Mathias Blank and Lars Kuepfer. 'A Comparative Analysis of Drug-Induced Hepatotoxicity in Clinically Relevant Situations'. In: *PLOS Computational Biology* 13.2 (2nd Feb. 2017), e1005280. ISSN: 1553-7358. DOI: 10.1371/journal.pcbi.1005280. URL: https://journals.plos.org/ploscompbiol/article?id=10.1371/journal.pcbi.1005280 (visited on 20/09/2023).

Articles under review and revising

1. Prenatal and Childhood Exposure to Mixtures of Environmental Chemicals and Adolescence Attentional Problems: A Triangulation Study. Accepted at *Environment International*.
2. Distinct tumor microenvironment signatures predict outcomes and correlate with PD-L1 in HPV-independent vulvar cancer.

Software packages

causaleffects: Estimating causal effects
https://github.com/lorenzoFabbri/causaleffects 2024

myphd: A easy to use package for common tasks in epidemiology and causal inference research projects
https://github.com/isglobal-cep/myphd 2024

replicating-papers: Replicating papers from the epidemiology and causal inference literature
https://github.com/lorenzoFabbri/replicating-papers 2024

Conferences, Workshops, and Talks

Research presentations and conference participation

A precision environmental health approach to childhood obesity and metabolic dysfunction: identifying biological pathways and prenatal determinants
ISEE Annual Conference, Santiago (CL) 2024

Prenatal Exposure to Chemical Mixtures and Metabolic Syndrome Risk in European Children
ISEE Annual Conference, Santiago (CL) 2024

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

Talks and workshops

See https://github.com/lorenzoFabbri/talks for slides and materials.

Transparent causal inference for observational epidemiology
Colicino Group, NYC (via Zoom) Jan 2025

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

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

Referee

Scientific Reports (1).

Working groups

Students and New Researchers Network
International Society for Environmental Epidemiology (Herndon, US) — 2022 - 2023

Early Career Scientist Working Group
COnsortium of METabolomics Studies (Bethesda, US) — 2022 - 2022

Professional memberships

Society for Longitudinal and Lifecourse Studies
Society for Longitudinal and Lifecourse Studies (Newton Abbot, GB) — Nov 2024 - Nov 2025

Centro de Investigación Biomédica en Red (CIBERESP)
Centro de Investigación Biomédica en Red (CIBERESP) (Madrid, ES) — Feb 2024 - Sep 2025

Society for Epidemiologic Research
Society for Epidemiologic Research (Eagle, US) — Dec 2021 - Dec 2024

Skills

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