Saul Pierotti

Computational geneticist — PhD fellow at EMBL-EBI
Born in 1995 — Italian citizen

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RESEARCH EXPERIENCE

European Bioinformatics Institute (EMBL-EBI) — Cambridge, UK
University of Cambridge — Jan 2021 — Jun 2021
Predoctoral fellow; Supervisor: Prof. Ewan Birney
QTL mapping and exploration of GxE, GxG, and indirect (social) genetic
effects in medaka fish.

Science for Life Laboratory (SciLifeLab) — Stockholm, Sweden
Master thesis; Supervisor: Prof. Arne Eloffson — Jan 2021 — Jun 2021
Prediction of protein contact maps from deep mutational scanning data
using machine learning

Max Planck Institute for Evolutionary Biology — Plön, Germany
Intern; Supervisors: Prof. Arne Traulsen, Dr. Jenna Gallie — Jun 2019 — Sep 2019
Experimental evolution of *Escherichia coli* and *Pseudomonas fluorescens* in
long-term batch cultures

University of Perugia — Perugia, Italy
Bachelor thesis; Supervisor: Dr. Manlio di Cristina — Oct 2018 — Oct 2019
Characterization of vacuolar proteins in *Toxoplasma gondii*

EDUCATION

European Bioinformatics Institute (EMBL-EBI) — Cambridge, UK
University of Cambridge — Expected Oct 2025
PhD candidate at the University of Cambridge as part of the the EMBL
International PhD Program (EIPP) — Applicant acceptance rate 2.7%

University of Bologna — Bologna, Italy
International Master Degree in Bioinformatics (MSc) — Jul 2021
Final mark: 110/110 cum laude

University of Perugia — Perugia, Italy
Bachelor's degree in Biotechnology (BSc) — Oct 2019
Final mark: 110/110 cum laude and honorable mention

PUBLISHED WORKS

S. Pierotti, B. Welz, M. Osuna-López, T. Fitzgerald, J. Wittbrodt, E. Birney, Genotype imputation in F2
crosses of inbred lines, *Bioinformatics Advances*, 2024, 10.1093/bioadv/vbae107

PLANNED PUBLICATIONS

- Main PhD work on the detection of 16 QTLs for heart rate in medaka, their CRISPR validation, and
  the characterization of GxE and GxG effects — collaboration with Bettina Welz (Wittbrodt group,
  Heidelberg University, Germany).

- Pilot study on the effect of direct and indirect (social) genetic effects on medaka behaviour — collaboration with Ian Brettel (Birney group, EMBL-EBI) and the group of Felix Loosli (KIT, Karlsruhe,
  Germany).

- Application note on a mixed linear model genetic association pipeline.

- Application note on a genetic variant prioritization pipeline.

- GWAS for behavioural phenotypes in medaka — collaboration with the group of Felix Loosli (KIT, Karlsruhe, Germany).

CONFERENCE PRESENTATIONS

The Biology of Genomes, Cold Spring Harbor Laboratory (Cold Spring Harbor, USA), May 7th to 11th, 2024 — poster

NRBP Medaka International Workshop, National Institute for Basic Biology (Okazaki, Japan), April 26th to 27th, 2024 — talk

TRAINING DELIVERED

EMBL-EBI course "Exploring Gene and Environmental Exposure Interactions to Understand Human Health and Disease", February 19th to 23rd, 2024

Nextflow practical for the EBI predoc course (online), November 21st to 25th, 2022

LANGUAGES

English: proficient, CEFR level C2. IELTS score 8.0. CAE with grade A awarded by Cambridge ESOL.

Italian: native speaker.   **Others:** Currently learning Turkish, German and Dutch (elementary).

REFERENCES

Ewan Birney, current PhD supervisor at EMBL-EBI (Cambridge, UK): birney@ebi.ac.uk

Arne Elofsson, master thesis supervisor at SciLifeLab (Stockholm, Sweden): arne@bioinfo.se