

Ilya Carey

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DOB: 23/11/99

UK Citizen

Zurich

Education & Research

2023-current: PhD Evolutionary Biology, *University of Zurich*, supervisor Prof. Andreas Wagner

- Main project: using CRISPR-Cas9 gene editing to map experimental fitness landscapes in different genetic and environmental backgrounds to assess how trajectories of evolution by natural selection may differ in different environments.
- Side project: new patterns of gene regulation in bacteria by researching recruitment and de novo evolution of transcription factor binding sites (TFBSs)

2021-2022: MPhil in Biology, *University of Cambridge*, supervisor Dr Torsten Krude, Zoology Department

- Investigating roles of the PRMT1 enzyme in human DNA replication. Used tissue culture, DNA replication assays (in vitro and in vivo), and confocal laser scanning microscopy.

2018-2021: Double First in BA Natural Sciences, Jesus College, *University of Cambridge*

- Studied various modules including genetics, evolutionary biology, biochemistry, bioinformatics.
- Final year thesis supervised by Prof. William Amos: "Simulating heterozygote instability and testing if the D-statistic is confounded by differing mutation rates in Hominin evolution"

2019: Summer Internship, Zoology Department, *University of Cambridge*, Supervised by Dr Steve Rogers

- Studied effect of nitric oxide drugs on phonotaxis of *Gryllus bimaculatus* cricket
- In in Dr Berthold Hedwig's group and awarded Department of Zoology Balfour-Browne fund

2013-2018: Simon Langton Grammar School for Boys in Canterbury

- 5 A*s at A-level in Chemistry, Further Mathematics, Mathematics, Biology, Dutch
- A* (45/45) in Extended Project Qualification (EPQ) in 2017:
 - Conducted [research project](#) investigating iridescence in *Chrysochroa wallacei* beetle
 - Published in the Young Scientists Journal and presented at multiple symposia
 - Used scanning and transmission electron microscopes for research
- Gold in British Biology Olympiad and progressed to second round (top 103 in UK)

Teaching & Experience

2024-present: University of Zurich Teaching Assisant

- Undergraduate teaching assistant for Data Analysis for Biologists and Practical Bioinformatics

2021-2022: Supervisor and Demonstrator for Natural Sciences, *University of Cambridge*

- Supervisor and practical demonstrator for Natural Sciences undergraduates in evolutionary, cell, and developmental biology modules

2021-current: Tutoring

- Experienced tutor for Oxbridge interviews and Cambridge Natural Sciences entrance exams

2022-present: Director of tutoring company (IC Oxbridge LTD)

- I manage a small tutoring business which works with several schools and dozens of tutors, specialising in Oxbridge admissions tutoring

2021: Part-time volunteer at biotechnology start-up Animal Alternative Technologies (AAT)

- Produced promo video that helped AAT place [3rd](#) in Cambridge out of hundreds of start-ups

Non-academic

- Content creator, mainly 2020-2024:
 - Mainly educational content on YouTube (>1m views) and entertainment on TikTok (>100m views, >100k followers, account currently deactivated)
- At Cambridge:
 - Various positions of responsibility for societies including:
 - Secretary and competition secretary of CU Mountaineering Club
 - Treasurer, social secretary, and webmaster of CU Belgian Society
 - Secretary of Anning Club (fossil hunting club)
 - Vice-President and webmaster of Cellular Agriculture CU
 - President of Jesus College Climbing Club
 - College Athletics captain
 - Video editor for Cambridge Union Society (Debating Society) publicity team
 - Produced sketch with Cambridge Footlights
 - Represented university for climbing and athletics, represented college for squash
- Competent in Excel, video editing, image manipulation, graphic design, videography, photography, and WordPress web design
- Keen climber and mountaineer, having climbed the 5600m volcano Mt Damavand in 2016, Mt Blanc in 2023

Languages

- English: Native proficiency.
- Dutch/Flemish: Fluent.
- Persian: Fluent speech, limited reading and writing; volunteer interpreter for Coventry Refugee and Migrant Centre.
- French and German: A2-B1
- Latin and Greek: Some experience from school.
- Coding: R, Python, Eidos (SLiM), ImageJ scripting, command-line.