



Camilla Lyons

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Born 17 May 1997

EDUCATION

2021 – present

PhD in Clinical Neurosciences

Department of clinical neurosciences, University of Cambridge, Homerton college

- I have completed the first year PhD in the department of clinical neurosciences of the university of Cambridge, MRC MBU. The PhD project focuses on mitochondrial biology, the organelle of the cell that is responsible for energy production. My main interest is to study cell genomics at single cell resolution. This will shed light on the cellular events that play a role in mitochondrial diseases.

2019 – 2021

Master's degree in Quantitative and Computational Biology

CIBIO, Centre of Integrative Biology, University of Trento

- The Master of Science in Quantitative and Computational Biology is a multidisciplinary degree that integrates biology and quantitative sciences, it is a 2 years, full time degree. The course is designed to capture the increasing need for researchers and experts able to transform the enormous amount of biological information ("big data") into knowledge and to gain quantitative insight into the behaviour of biological systems by means of bio-mathematical and bio-physical models. The course covers a wide range of biological areas: from cancer to microbial genomics, from plant cellular dynamics to quantum physics.
- The Master's degree thesis has been performed in collaboration with the University of Cambridge, at the MRC Mitochondrial Biology Unit. The project consisted in the development of a computational pipeline that detects the transcriptional changes in single-cell RNA-seq data. The analysis's aim is to deepen our knowledge about the complex interplay between heteroplasmy, defined as the presence of multiple mitochondrial genomes within the same cell, and cell transcriptome.
- I have achieved a first class honour degree, with the final grade of 110/110 with Commendation.

2016 – 2019

Bachelors's degree in Bioinformatics

Faculty of Pharmacy and Medicine – Information engineering, computer science and statistics – Medicine and Dentistry – Mathematical, Physical and Natural Sciences, Sapienza University of Rome

- Bioinformatics is part of the biomedical sciences and it focuses on biochemical, genetic and molecular biology research. Being an integrative course, bioinformatics allows a close collaboration between biologists and computer scientists that together advance medical research.
- During the last year of the Bachelor's degree I participated to an Erasmus program, going to Barcelona, Spain. I am very keen on experimenting different approaches to study a given subject and I also am thrilled to discover the latest technologies that allow to analyse them. Therefore I have spent 6 months in Barcelona at University Pompeu Fabra, challenging myself to have a flexible mind set, that is of fundamental importance in a research environment.
- The final year thesis project has been performed at Sequentia Biotech (Barcelona). The aim of the research is to present an innovative approach for forensic identification of metagenomic samples. The approach is kmer-based as the origin of the metagenomic samples is identified by analyzing the kmers that are retrieved from the sequencing reads. The results show that this innovative method does not perform any better than the widely used taxonomy-based method which remains the most reliable approach for sample origin identification.
- I have a first class honour degree in bioinformatics, graduating with top marks: 110/110 with Commendation.

2016 – 2019

Scientific high school

I graduated from Liceo Scientifico Statale "Bruno Touschek", a scientific high school with top marks: 100/100.

SKILLS

Cambridge University societies

During my stay in Cambridge, I have become a life member of the following societies:

- CU Biological Society – this society organises multidisciplinary scientific talks held by world leaders in the field and social events to network with fellow scientists.
- CU social impact and sustainability society – this society is involved in promoting awareness of environmental, social and governance practices.

Languages

English – mother tongue
Italian – mother tongue
Spanish – fluent (C1 level)

Programming languages

During my years as a student I have had the opportunity to learn to code in different programming languages.
I master the programming languages Python, bash, R. I have also practised HTML, Matlab and C++.

LAB EXPERIENCE

2021

PhD and Master's degree thesis project

Prof. Patrick Chinnery lab, MRC MBU

- In Prof. Patrick Chinnery's lab I have learned to work alongside both experimentalists and bioinformaticians. For the first time I truly understood the importance of the dialog between these two groups of experts that need to collaborate to perform excellent research studies.

2019

Batchelor's degree: Thesis project

Sequentia Biotech, Barcelona

- The Bachelor's thesis project has been performed at Sequentia Biotech, Barcelona. This opportunity allowed me to understand the dynamics of a company's work place and left me with a strong feeling of cooperation with the coworkers. I learned to work side by side with people of different expertise, grasping from their mastery and sharing my own knowledge.

2016 – 2019

Private lessons

Rome

- For a few years I have given private lessons of mathematics, English and Italian to high school students.

WORK EXPERIENCE

2022 - present

Homerton College Library

Student helper

- I currently work as a student helper at Homerton College Library. My main activity is to process book returns and place the books back on the shelf. Additionally, I take care of any other task that needs doing, from book stamping to helpdesk service.