

# ALESSANDRA LEARMOUNT

al2122@cam.ac.uk | alessandra@learmount.com | <https://www.linkedin.com/in/alessandralearmount/>

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## Education

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### PhD in Plant & Microbial Sciences (BBSRC DTP)

Department of Pathology, University of Cambridge | Oct 2025 - Present

- Investigating the role of arbuscular mycorrhizal fungi in rice (*Oryza sativa*), with a focus on transcriptomic and metabolomic approaches to identify molecular signatures associated with differential responsiveness to AM colonisation. This work is conducted in collaboration between the Enright Lab (Department of Pathology, University of Cambridge) and the Paszkowski Lab (Crop Science Centre, University of Cambridge).
- Previously completed a rotation project at Niab examining root system architecture and rhizosphere microbial community composition in the orphan crop *Eragrostis tef*, employing Oxford Nanopore shotgun metagenomics to characterise soil microbial diversity.
- Funded by BBSRC and Shuttleworth Scholarship Fund.

### BA Natural Sciences (Department of Plant Sciences)

Gonville & Caius College, University of Cambridge | Oct 2022 – Jul 2025

- First-class honours; ranked 1<sup>st</sup> in Tripos
- Papers: Biochemistry & Molecular Biology; Microbes: Evolution, Genomes & Lifestyles; Responses to Global Change; Applied Ecology; Conservation Science

### A-Levels

Hills Road Sixth Form College, Cambridge | Sep 2020 – Aug 2022

- Biology (A\*) | Chemistry A\* | Mathematics (A\*) | Economics (A\*)

## Professional Experience

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### Director of Partnerships

University of Cambridge Sustainability Society | Jan 2026 – Present

- Cultivated strategic partnerships with academic institutions including MIT and UCL, coordinating cross-institutional collaborations to advance sustainability initiatives across the university sector
- Led and organised a range of events, including a formal dinner at Gonville & Caius College and a series of panel and speaker events, connecting students with sustainability-focused researchers, practitioners, and entrepreneurs from across industry and academia.
- Engaged with entrepreneurship societies to explore commercial and innovative approaches to sustainability, broadening the Society's network and fostering interdisciplinary dialogue

### Social Secretary

Gonville & Caius MCR | Oct 2025 – Present

- Organised and delivered diverse social programming for a postgraduate community of 200+ students, including weekly Port Nights, ice skating events, and animal encounters, fostering cross-disciplinary connection and college belonging
- Managed event logistics, budgets, and vendor relationships across multiple simultaneous events, demonstrating strong organisational and project coordination skills
- Led community building initiatives within an international academic environment, enhancing inclusivity and engagement through creative event design

## Startup Assistant

Kiseki Bio | Jul – Oct 2025

- Supported a pre-seed synthetic biology startup with a focus on protein engineering
- Conducted market research, competitor analysis, and preparation of a pitch deck
- Imported a trial product from Ghana, evaluating market viability and customer feedback

## Environmental Auditing

SOS UK | May 2024

- Completed IEMA-approved training in "Auditing and Evaluating Environmental Behaviour Change"
- Conducted a sustainability audit at Newnham College, evaluating current initiatives and identifying environmental improvement opportunities

## Founder & Business Owner – eCommerce Startup

Daijikkun (Japanese Product Importer) | 2020 – 2022

- Designed and scaled an e-commerce business importing Japanese products to the UK market
- Applied data analytics to optimise product selection, pricing strategy, and inventory management
- Managed end-to-end operations: supplier negotiations, international logistics, regulatory compliance, budgeting, and website design
- Developed strong written communication through customer-facing blog content and marketing

## Research Experience

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### Final Year Project – Photoprotection in Chlorophytes

Kromdijk Group, Department of Plant Sciences, Cambridge | Oct 2024 – May 2025

- Designed and executed quantitative experiments evaluating Non-Photochemical Quenching (NPQ) efficiency across engineered *Arabidopsis* lines
- Integrated diverse wet-lab techniques (fluorescence imaging, western blotting, ROS staining) with computational structure prediction (AlphaFold, ChimeraX) and statistical analysis (RStudio)
- Analysed multi-parameter photosynthetic datasets and synthesised findings into a 7,500-word report

### Field Researcher – Tropical Forest Ecology

Danum Valley Field Centre, Malaysia | Sep 2024

- Collected ecological, climatic, and photosynthetic data comparing logged vs. primary forest systems and the impact of aerial leaf catching fungi on host plants
- Conducted statistical analysis (ANOVA, PCA) and graphical interpretation using R
- Presented findings to an international research team, translating quantitative results into clear ecological insights

### Research Assistant – Cooperative Breeding in Mammals

Kalahari Meerkat Project, South Africa | Jul – Sep 2023

- Designed and executed an independent research project on cooperative breeding in mole-rats
- Conducted advanced statistical analysis (GLMMs, multivariate analyses) in R
- Produced a 5,000-word research paper and presented findings
- Worked effectively within an international field team, adapting research protocols to remote and resource-constrained conditions.

## Awards & Grants

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- 2026: Shuttleworth Scholarship Fund
- 2025: BBSRC DTP Funding
- 2025: Winifred Georgina Holgate-Pollard Memorial Prize (ranked 1<sup>st</sup> in Tripos; £1,950)
- 2025: T.B. Wood Prize (ranked 1<sup>st</sup> in Plant Sciences; £1,200)
- 2025: Honorary Scholarship (First-class degree achievement £300)
- 2024 & 2025: Frank Smart Prize in Botany (£220)
- 2024: Senior Scholarship (£300)
- 2023: Panton Trust Grant (Kalahari Meerkat Project research; £1,250)