

Academic Portfolio

Application to Professor Auxiliar — Genética e Genómica (UA)

Luís Kalchhauser Cunha

About

Luís Kalchhauser Cunha is a Molecular Ecologist and Researcher at the University of Coimbra (CFE), specializing in *soil biodiversity, functional genomics, and bioinformatics*. His work examines how disturbance and management practices shape soil communities and ecosystem functions, integrating morphological data with multi-marker genetic approaches and high-throughput sequencing (Nanopore, Illumina; RNA-Seq, genome assembly, metabarcoding, metagenomics).

He combines broad laboratory expertise — from DNA extraction, PCR, library preparation, sequencing, flow cytometry, and genomic marker development to probe-based DNA enrichment and rigorous quality control — with reproducible computational workflows (R, Python, Conda/Bioconda). This integrative approach links molecular tools with ecological knowledge to deliver actionable insights for conservation, agriculture, and climate resilience.

Luís coordinates the **Environmental Genomics Laboratory (EnGeL-UC)** at UC Biotech and has contributed as PI, Co-I, and researcher to projects totalling ~€48M, including Horizon Europe initiatives such as **BENCHMARKS, GOOD, VALERECO, SYBERAC, and PARC**, of which ~€5.5M were allocated to the University of Coimbra. His international collaborations span EMBRAPA (Brazil), Cardiff University (UK), and European research networks. As **PI/PI at UC**, he has secured >€1M directly for UC, while as **Researcher** in international consortia I contributed to >€28M in projects, including ~€4.7M for UC. This record highlights my ability to attract funding and to strengthen UC's position in major frameworks such as **Horizon Europe**.

An experienced educator, he has delivered over **1,560 hours of teaching** in Portugal and the UK across BSc and MSc programmes, covering conservation genetics, wildlife management, marine and freshwater biology, research skills, field ecology, and biostatistics. He also supervises MSc and PhD students and contributes to pedagogical innovation through curriculum design and laboratory manuals.

Beyond academia, Luís engages with agricultural stakeholders to promote soil health monitoring and sustainable land management. His vision is to advance molecular ecology as a bridge between fundamental science and societal needs, strengthening biodiversity conservation and ecosystem resilience in a changing world.

Scopus Profile — [Luis Cunha](#)

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Metric (Scopus)	Value
Citations	527 (from 458 documents)
Documents	38
h-index	15
Preprints	4
Co-authors	253
Topics	10

Core Skills

Linux/Unix R · Python SPSS · JASP Conda/Bioconda Nanopore · Illumina RNA-Seq · Assembly · Metabarcoding Flow Cytometry QC (Nanodrop · Qubit · TapeStation) Technical writing · GLP · SOPs

Teaching (totals)

- University of Coimbra: **253 h**
- University of South Wales: **1 310 h**
- **Total: 1 563 h**

Groups & Links

- [Soil Health Research Group](#)
- [Environmental Genomics Lab](#)
- [Google Scholar](#)
- [ORCID](#)
- [Scopus Profile](#)
- [GitHub](#)

- [ResearchGate](#)
- [LinkedIn](#)
- [CienciaVitae](#)