

PETROS KRANIOTAKIS

MSc Student | BSRC Alexander Fleming

kraniotakis@fleming.gr

PROFESSIONAL SUMMARY

- **Academic Profile:** Integrated Master's student conducting thesis research at BSRC "Alexander Fleming" (GPA 8.18/10.0) with a strong foundation in molecular biology, disease modeling, and international mobility experience in Portugal.
- **Technical Expertise:** Highly proficient in molecular cloning, high-fidelity PCR, bacterial transformation, single-molecule fluorescence microscopy, FRET analysis, and in silico vector design.
- **Analytical & Computational Skills:** Experienced in executing complex experimental workflows and quantitative fluorescence data analysis using ImageJ/Fiji, R, and Python.
- **Professional Independence:** Demonstrated ability to transition from supervised training to autonomous experimental design, protocol optimization, selective media preparation, and troubleshooting during research placements.
- **Languages & Adaptability:** Strong communication, biosafety compliance, and cross-cultural adaptability. Fluent in English (C2) and German (C1).

RESEARCH EXPERIENCE

Master's Student Researcher — Vassilis Aidinis Lab

Biomedical Sciences Research Center "Alexander Fleming" | Vari, Greece | 2026 – Present

- **Thesis Research:** Conducting Master's thesis research in the Physiology of Animal Models for Disease lab under Dr. Vassilis Aidinis.
- **Experimental Workflows:** Applying molecular biology and disease modeling methodologies to investigate pathophysiology in experimental animal models.

Erasmus+ Research Trainee — ITQB NOVA

Oeiras, Portugal | Summer 2025

- **Scientific Research:** Investigated *M. tuberculosis* divisome proteins (PerM/FtsB) using single-molecule fluorescence microscopy and FRET analysis under Dr. Zach Hensel.
- **Molecular Cloning & Genetic Engineering:** Executed multi-fragment Gibson Assembly (with and without inserts), in silico construct/vector design, high-fidelity PCR (Q5), colony PCR screening (Taq), and bacterial transformation via heat shock and electroporation.
- **Microbiology & Downstream Processing:** Maintained liquid/solid *E. coli* cultures, prepared selective media with antibiotics, performed IPTG gene expression induction, and isolated plasmid DNA via miniprep, gel extraction, and PCR cleanup.
- **Microscopy & Quantitative Image Analysis:** Prepared biological slides and coverslips for microscopy, operated optical and fluorescence microscopes, and conducted quantitative intensity analysis using ImageJ/Fiji algorithms.
- **Laboratory Autonomy & Safety:** Maintained strict aseptic technique under Bunsen burner, performed agarose gel electrophoresis (TAE/LIB buffers) with UV/Blue light gel documentation, and ensured full biosafety compliance.

EDUCATION

Integrated Master's in Applied Biology and Biotechnology — Agricultural University of Athens (AUA)

GPA: 8.18/10.0

- **Relevant Coursework:** Recombinant DNA Technology, Molecular Biology, Genetics, Lab Procedures (DNA amplification, Cloning vectors, Sequencing).

TECHNICAL & LANGUAGE SKILLS

Molecular Cloning & Genetics: Gibson Assembly, High-Fidelity PCR (Q5), Colony PCR (Taq), Primer Design, Heat Shock Transformation, Electroporation, IPTG Induction, In Silico Construct Design.

Nucleic Acid Isolation & Analysis: Plasmid Miniprep (Alkaline Lysis), Gel Extraction & PCR Purification, Agarose Gel Electrophoresis (TAE & LIB buffers), UV/Blue Light Gel Documentation.

Microbiology & Aseptic Technique: Liquid & Solid *E. coli* Culturing, Selective Media Prep (Autoclaving, Antibiotics), Streak Plating, Glass Beads Plating, Aseptic Bunsen Burner Techniques.

Microscopy & Data Analysis: Optical & Fluorescence Microscopy, FRET Analysis, Sample Preparation (Slides/Coverslips), ImageJ/Fiji Quantitative Processing.

Computational Tools: R, Python (Statistical Analysis & Data Processing), MS Office.

Languages: Greek (Native), English (C2 Proficiency / Certified), German (C1 Advanced / Goethe-Zertifikat).

CONFERENCES & EXTRACURRICULARS

- **Scientific Engagement:** Attended the 73rd, 74th and 75th Panhellenic Conference of the EEMB and the 7th and 8th Hellenic Pasteur Institute Young Scientists Conferences as well as other biomedical conferences.
- **Music:** Classical pianist; performed twice at the Athens Concert Hall (Megaron).
- **Sports:** Avid skier and outdoor enthusiast.