



**Università
degli Studi
di Palermo**

CENTRO DI STUDI AVANZATI "A.S.CENT."
CENTRE OF ADVANCED STUDIES "A.S.CENT."
The Director: **Prof. Avv. Antonello MIRANDA**
Full prof. of Comparative and European Law



To kind attention of Prof. **ANTONELLO MIRANDA**
Director of A.S.CENT. – Centre of Advanced Studies
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FINAL REPORT

Thanks to the collaboration between the Embassy of Burkina Faso in Italy and the Centre for Advanced Studies, we were awarded a one-month senior visit at the University of Palermo. Upon our arrival on 20 June 2026, we were assigned to the Department of Biological, Chemical and Pharmaceutical Sciences and Technologies (STEBICEF), specifically to the Laboratory of Microbiology and Molecular Biotechnology, headed by Professor Rosa Valéria Alduina. Professor Alduina leads a research team specializing in research into secondary metabolites produced by bacteria of the genus *Streptomyces*. Her numerous publications in this field demonstrate the undeniable quality of her expertise on *Streptomyces*.

Our research visit, which began on Wednesday 24 June, ended on Friday 10 July 2026, as Professor Alduina was unavailable during the week of 13–17 July 2026. These three weeks of work enabled us to immerse ourselves in an ongoing research project concerning the genomic characterization of the bacterial microbiome in patients with bowel cancer. This work involved DNA extraction from cells derived from both cancerous and non-cancerous tissues. This step was preceded by a crucial and essential tissue pre-treatment step to ensure optimal quality of the DNA extraction. PCR amplification targeting the 16S rRNA region of the bacteria is used to verify the quality of the extraction. Genomic analysis via Illumina sequencing is being carried out in collaboration with another laboratory outside Italy.

Although brief, this research enabled us to:

- Consider adapting the procedure for genomic characterization of the bacteriome for use in an ongoing PhD thesis at University Joseph KI-ZERBO on the characterization of the breast milk microbiome and its influence on the maturation of children's immune systems;

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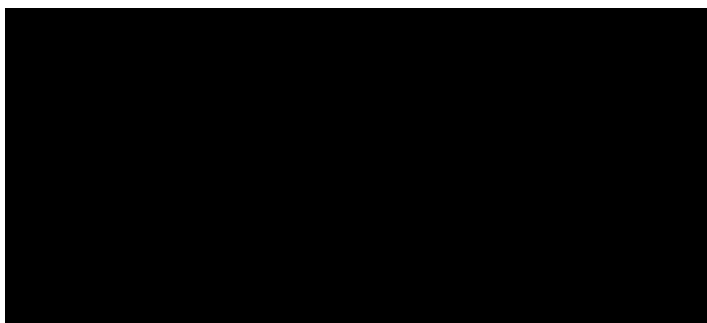


- To launch a research project on the characterization of promising *Streptomyces* strains in Burkina Faso, with the aim of identifying secondary metabolites that exhibit antibacterial activity against resistant or multi-resistant pathogenic bacteria.

We would like to take this opportunity to express our sincere thanks to everyone who made this research visit possible, thereby giving us the opportunity to enhance our scientific knowledge and skills in applied microbiology.

Palermo, 14 July 2026

Signature



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