



## Sustainable use of plant resources to combat infectious diseases (SUPRIDE)

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Most countries in sub-Saharan Africa struggle with high prevalence of infectious diseases caused by multiresistant bacteria. The situation calls for tailored and context-specific mitigation measures taking into action the limited access to diagnostics or antibiotics. Particularly in the rural areas, people rely on local traditional plant remedies to treat infections and other diseases. Medicinal plant preparations harbour rich cultural heritage and are both accessible and affordable for local populations, but they lack scientific evidence on their efficacy or safety.

Involving close collaboration between researchers from Finland and the Republic of Benin, this project aims to support the evidence-based use of African plant resources

by gathering scientific data on the potential of selected plant extracts as effective and standardized antimicrobial phytomedicines. The primary targets to be treated with these preparations are wound infections, salmonella and other intestinal pathogens as well as chlamydial infections. Plant materials are selected based on surveys targeting Beninese traditional medicine practitioners and subjected to modern pharmaceutical research. The Beninese team members have a key role in designing and conducting the ethnobotanical interview studies with local actors and contributing to the experimental studies both in Benin and Finland. Furthermore, their active engagement with local stakeholders, ranging from governmental bodies to local community leaders, has a key role in disseminating the project's output.

The high disease burden in most sub-Saharan countries represents a major economical burden which hinders their socioeconomical development. Managing the spread of antimicrobial resistance (AMR) has a central role in promoting the progress towards United Nation's sustainable development goals. The main societal impact of this project lies in promoting effective, accessible and

affordable medication respecting local cultural heritage. Furthermore, upskilling of Beninese researchers in the course of the experimental pharmaceutical research expands the project's impact on promoting evidence-based medicinal plant use beyond this project's lifetime.



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#### Publications:

Agbodjento, E. Lègba, B., Dougnon, V.T., Klotoé, J.R., Déguénon, E., Assogba, P., Koudokpon, H., Hanski, L., Baba-Moussa, L., Ladékan, E.E., Unleashing the Potential of Medicinal Plants in Benin: Assessing the Status of Research and the Need for Enhanced Practices. *Plants*. 2023; 12(7):1506.

Dougnon, G., Dougnon, V.T., Klotoé, J.R., Agbodjento, E., Zoumarou, D., Lègba, B., Koudokpon, H., Assogba, P., Hanski, L., Ladékan, E.E., Local knowledge, practices and challenges of ethnopharmacologically used medicinal plants in Benin and implications for brain illnesses. *Scientific Reports*. 2023; 13(1):19743.

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