



## REPORT 15

# 15 LIFE ON LAND



# 2025



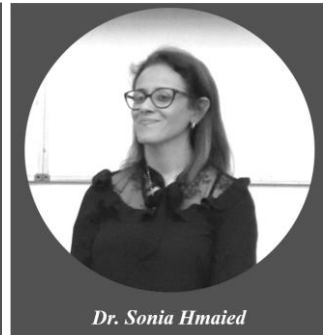
## Ambassador of SDG 15

**Dr. Lamia Krichen**

**Dr. Sonia Hmaied**



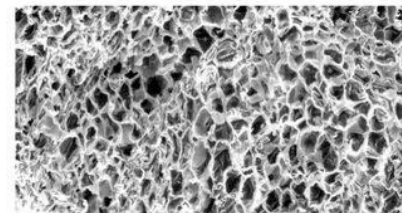
Dr. Lamia Krichen



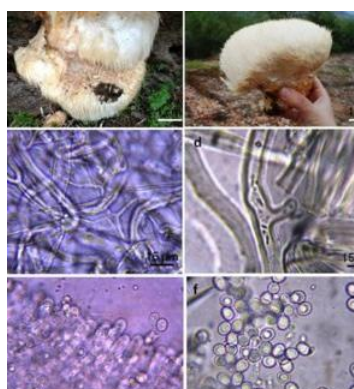
Dr. Sonia Hmaied

## Life on Land through Research, Education, and Collaboration

Through its integrated strategy in research, teaching, and stakeholder engagement, the University of Tunis El Manar (UTM) actively contributes to the achievement of SDG 15: *Life on Land*. The university leads initiatives promoting biodiversity conservation, ecosystem restoration, and sustainable land management. UTM's research covers diverse aspects of biodiversity. Animal-focused studies address species documentation, habitat restoration, and the reduction of human-induced ecosystem degradation resulting from deforestation, urbanization, hunting, pollution, and climatic events such as desertification and flooding. In parallel, plant research investigates resilience to environmental stress, including water scarcity, soil salinity, and the use of saline or treated wastewater for irrigation—proposing viable models for sustainable agriculture. Microbial studies further emphasize the ecological importance of microorganisms in maintaining ecosystem balance and supporting sustainable resource management. Complementing its research mission, UTM offers innovative academic programs that prepare students to address pressing environmental challenges. The university also strengthens partnerships with civil society organizations and environmental actors, translating scientific findings into practical initiatives that safeguard terrestrial ecosystems and biodiversity.



## Fungal Diversity – A National Achievement



The University of Tunis El Manar has distinguished itself through pioneering research on macromycete fungi diversity in Tunisia's forests. In collaboration with the National Gene Bank and international partners, researchers conducted the country's first comprehensive inventory of these fungi, documenting 268 species, including seven globally recognized as rare. This initiative also resulted in the establishment of Tunisia's first national herbarium of macromycetes. Beyond cataloging biodiversity, the research explored the potential applications and sustainable utilization of these fungal resources.



Research has examined the nutritional properties of fungi and the potential of their bioactive molecules. These compounds show promising biotechnological applications, including the remediation of environmental pollutants and the enrichment of animal feed. The findings underscore the multifaceted value of fungal diversity for ecological balance, environmental sustainability, and practical applications in agriculture and industry.



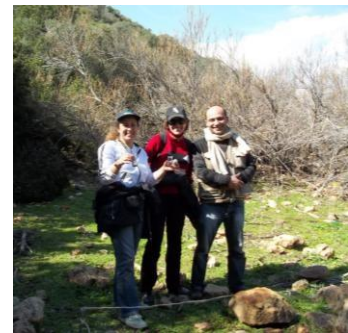
### ***Strengthening Regional Collaboration for Biodiversity and Climate Resilience***



In partnership with the Groupement de Développement Agricole Sid Amor, the University of Tunis El Manar participated in two workshops in Jordan: “*Strengthening Biodiversity Resilience in a Changing Climate*” (September 22–27, 2024) at the Azraq Eco-Lodge, and “*Biodiversity – Nature’s Blueprint for Climate Adaptation*” (September 28–30, 2024) at the Royal Academy for Nature Conservation, Ajloun Forest Reserve. During these events, Professor Atef Jaouani presented initiatives led by the « Groupement de Développement Agricole Sid Amor » alongside UTM’s research contributions in biodiversity conservation and climate adaptation. The sessions highlighted innovative approaches to enhance ecosystem resilience, promote sustainable land management, and tackle biodiversity challenges arising from climate change.

### ***Conservatories and Nature Field Study Visits***

Faculty members, including Dr. Sonia Hmaied, along with students from the Faculty of Science and the Higher Institute of Medical Technologies of Tunis, have taken part in numerous study visits to natural sites and species conservatories. These field experiences form an essential component of biodiversity courses and research activities, offering practical, hands-on learning and deepening participants’ understanding of conservation practices. Such initiatives underscore the University of Tunis El Manar’s strong commitment to sustainability and environmental education.







### Educational Visit to the National Gene Bank

The research team extends its appreciation to the colleagues and researchers at the National Gene Bank (BNG) for their welcoming reception and informative support during a recent educational visit. The visit was organized for third-year undergraduate students in the fields of Plant Biotechnology and Bioresource Management and Valorization from the Higher Institute of Biotechnology of Tunis (ISSBAT).

The presentations delivered by BNG staff were noted for being highly instructive and rich in scientific insight, particularly focusing on the conservation of genetic resources and the valorization of indigenous plant varieties. The session provided valuable exposure to applied research and institutional practices in genetic preservation.



### Closure and Student Pitches at SME 2025 in Tunis

The Tunisia Foundation for Development, in partnership with the University of Tunis El Manar, concluded the SME 2025 program with a dedicated closing event focused on showcasing student-led projects. The day provided an opportunity for participants to present their work through structured pitches, evaluated by a panel of professional experts.



The agenda followed a series of intensive preparatory workshops and a hackathon. The event culminated in an awards ceremony that recognized the most innovative projects, highlighting the potential and ambition of the university's emerging talent.

This initiative was part of the broader incubation program developed through a collaboration between the Tunisia Foundation for Development and the Danish Refugee Council under the Danish-Arab Partnership Programme framework.

### Educational Visit to Mabrouka Promag

The team extends its gratitude to its partners at **Mabrouka Promag** for their hospitality and for hosting an informative visit to their nursery and biotechnology facilities. The visit offered valuable insight into the company's biotechnology operations, plant propagation, and in vitro multiplication processes.

The laboratory and field tours, guided by the technical and R&D teams, provided students with practical knowledge of in vitro techniques, rootstock development, and the production of fruit and vegetable species. The experience was organized as part of the "Improvement and Conservation of Phytogenetic Resources" course curriculum at the Higher Institute of Biotechnology of Tunis (ISSBAT) for third-year students.

This visit provided a highly beneficial and enriching practical component to the academic program, exposing students to the applied work of a leading Tunisian biotechnology institution

