

## BioForMoz Newsletter 9

**October 5 – December 20, 2023**

Dear colleagues and friends,

here is the ninth newsletter of the BioForMoz project, funded by the Italian Agency for Development Cooperation (AICS), entrusted to the Department of Biomedical Sciences of the University of Sassari to collaborate with the Biotechnology Center of the E. Mondlane University of Maputo in Mozambique, together with Dept. Biology and Biotechnology C. Darwin, Sapienza University of Rome and the Department of Earth, Environment and Life Sciences, University of Genoa.

As part of the activities of the Mozambique Biodiversity BioBank, a meeting of the Biotechnology Center, the Natural History Museum and BioForMoz was held on 6 October with the Interim Director of ANAC – National Administration of Conservation Areas, Dr. Jorge Fernandez, to present the BioBank and evaluate possible collaborations with the proposal to draw up a memorandum of understanding between the institutions in order to implement the BioBank itself and research in conservation parks.

The activities at the Field Gala Station adjacent to the Maputo National Park in collaboration with the COMBAT project (<https://www.combat-project.eu/>), continue with two lines: “Assessment of Trypanosome Diversity and Integrated Control Methods for Animal Trypanosomosis in Southern Mozambique” and “Molecular detection of pathogens and identification of food source in ticks of the species *Rhipicephalus maculatus* in Maputo National Park”

Training internships were held at the University of Genoa in the Department of Earth, Environmental and Life Sciences:

from 14 October to 08 November Dr. Amélia Halila Mondlane (Center of Biotechnology) as part of her research "Genomic evolution of *Vibrio cholerae* in the aquatic environment in areas affected by the IDAI cyclone in Moçambique".

From 14 October to 13 November Dr. Charmila Idrisse Ismael (Faculty of Veterinary), as part of her research: “Molecular Characterization, and Mycotoxin Profile of Toxigenic Fungi Isolated from Maize and Peanut in South region of Mozambique”.

We had the satisfaction of receiving 2 scientific collaboration missions from Italy:

from 19th to 28th October Dr. Anna Barra Caracciolo and Paola Grenni, from the IRSA – CNR Water Research Institute, to collaborate with the projects of the Biotechnology Center: “Assessment of emerging contaminants in the Umbeluzi River: Their occurrence and effects on fish” and “Use of biomarkers as hardware biomonitoring of environmental pollution for pesticides: Case study of Rio Umbeluzi”.



From 11 November to 02 December 2023, Dr. Erica Lumini, of the Institute for the Sustainable Protection of Plants (IPSP – CNR, Torino) and Dr. Samuele Voyron, Department of Life Sciences and Systems Biology, University of Turin, at the Biotechnology Center and the Garden Botanist of the UEM, within the project of the Center of Biotechnology and Dept. of Biology of the UEM: “Molecular characterization and taxonomic revision of the endemic and medicinal plants from two biodiversity hotspots (Maputaland and Inhambane Endemism center) preserved at LMU Eduardo Mondlane University Herbarium”

As announced in Newsletter 8, from 28 to 29 November, the Biotechnology Center, together with 5 research units of the UEM and BioForMoz, successfully carried out the "Workshop on water quality monitoring", co-financed by the AICS, at presence of the Italian Ambassador, the Director of AICS of Maputo, Rector of the UEM, representatives of CREA, IRSA-Italy, Ministries of Health, Public Works, IHE (Holland), Municipal Council of Maputo, Águas da Região Metropolitana de Maputo (AdRMM ), Fund de Investimento e Património de Abastecimento de Água (FIPAG), Autoridade Reguladora de Águas (AURA,IP), Agência Nacional para o Controlo da Qualidade Ambiental (AQUA,IP) and 7 reference Laboratories in the Maputo area, at the presence of about 150 of participants.

Numerous field activities were carried out:

from 12 to 26 October the research staff of the Natural History Museum carried out a mission in the buffer zone of the Maputo National Park (Gala), with the aim of collecting pollinating insects for research work.

On 24 October, a joint mission between the IRSA-Italy and Biotechnology Center at the Pequenos Lebombos Dam, for surface water sampling, as part of the research "Availability of emerging contaminants in the Umbeluzi river: its occurrence and effects in fish".

On 04 November in Matutuine for blood and faeces sampling in domestic animals, as part of the research "Characteristics of antimicrobial resistance to eradicate *Escherichia coli* isolated from domestic animals that live close to conservation areas".

As part of the project of Museum of Natural History, “Evaluation of the genetic characteristics of the African buffalo in Mozambique, respecting the biogeographical regions”, from 28 to 30 October, a mission was carried out in the Limpopo National Park and from 04 to 18 December in the parks of Mague (Tete province ), Cotada 9 and Gorongosa, in Manica province.

We are also pleased to announce the presentation of the BioBank at the end of February 2024.

We thank you for your attention and our warmest wishes for a happy new year