

## BioForMoz Newsletter 6

**October 30, 2023 – April 1, 2023**

Dear colleagues and friends,

here is the sixth newsletter of the BioForMoz project (Support for Environmental Research - AID 12089), 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.

Since the last newsletter of October 2022, we have been able to develop several actions.

The activities of the 17 fellowships (7 for master, 7 for research, 2 for doctorate and 1 postdoctorate) related to the training and research projects, that we listed in the previous newsletter are in progress and are under evaluation for a new year extension.

A new call for 3 research fellowships is being published:

- (i) genetic characterization of plants present in herbarium or other historical archive of national interest;
- (ii) application of omics approaches (NGS eDNA sequencing and bioinformatics analysis) to study marine biodiversity and its conservation;
- (iii) Molecular characterization of mycotoxins from toxigenic fungi in the food chain in Mozambique.

As part of the field activities relating to ongoing research, we point out the following actions:

Between October 2022 and February 2023, Dra Joelma Leão of the Biotechnology Center carried out 5 field missions in Namaacha to collect water samples as part of the research "Evaluation of emerging contaminants in the Umbeluzi River: their occurrence and effects on fish". With respect to this project, a collaboration with the Water Research Institute of the National Research Center, Montelibretti, Italy has been implemented.

Dr. Carlos Bento of the Natural History Museum and Prof. Mauro Colombo, in the context of the project "Evaluation of the genetic characteristics of the African buffalo in Mozambique, respecting the biogeographical regions", between October and December, carried out two missions for the collection of samples in the Banhine and Zinave parks and in the Rio Save area in the province of Inhambane

In December, Drs Lucinda de Araújo and Vanessa Comé, from the Biotechnology Center, carried out 2 field missions in Matutuine as part of the research "Epidemiology and Molecular Characterization of the RVFV (Rift Valley Fever Virus) and Establishment of Molecular Techniques for detection of RVFV in Mozambique".



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In February 2023, Dra Erica Tovela of the Natural History Museum and Dr. Claudio Ferrari of the University of Parma carried out a field mission for sampling in the areas of Bilene and Salamanga as part of the research "From river to river and from genetic to genomics: the study of homing in freshwater fishes".

Finally, at the beginning of March 2023, Dr. Hermógenes Mucache of the Biotechnology Center carried out a mission to the Matutuine area as part of the research " Longitudinal study to evaluate strategies for the integrated control of animal trypanosomiasis at the wild-domestic interface in the National Park of Maputo".

In November 2022, Dr. José Sumbana, from the Faculty of Sciences of the UEM, participated in an intensive one-month course in Bioinformatics at the Department of Biology and Biotechnology Charles Darwin of Sapienza, University of Rome.

On 13 October 2022, in Maputo, Prof. Piero Cappuccinelli, Scientific responsible of BioForMoz and member of the Accademia Nazionale dei Lincei, held a seminar entitled: " Old and New Microbial Threats: The Fight Against Infection Is Getting Tougher ", in the Sala Magna of the Faculty of Medicine-UEM.

In November 2022, a collaboration was opened between SERNIC (Criminal Investigation Service) and the Biotechnology Center with the support of AICS of Maputo to develop support for the SERNIC criminal laboratory, for the control of poaching.

Regarding the development of the BioBank, Dr. Nídia Cangi participated from 01 to 10 December 2022, in an internship on the organization and management of a BioBank, at the Kruger-Skukuza National Park (South Africa) and subsequently from 27 February On 03 March 2023 he participated in Johannesburg at the Biodiversity Biobank SA Launch & Forum, organized by the South African National Biodiversity Institute.

The preliminary actions for the renovation of the laboratory of the Marine Biology Station of Inhaca (EBMI) have continued and the start of the works is imminent.

On 24 January 2023, the call for enrollment for the 7th cycle of Masters in Biotechnology, 2023-2024 was published. 31 candidates responded to the call, including 23 women. 15 students were admitted, including 14 women and 1 man. This excellent result is a strong indicator of how Mozambican women are also empowering themselves in the field of applied sciences.

Between 13 and 14 February, a certified training course was held in the NP EN ISO/IEC 17025:2018 standard for 12 researchers and laboratory technicians (10 from the CB and 2 from the MHN).



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Between February and March 2023, 3 missions of the Italian technical-scientific staff of BioForMoz were carried out:

Dr. Claudio Ferrari, of the University of Parma, for the supervision of research on fish fauna carried out at the Museum of Natural History and held the seminar "Track who you are: the DNA Barcode from species conservation to natural resources traceability";

Dr. Simone Sabatelli, of the University of Rome La Sapienza, for the supervision of research in Entomology at the Museum of Natural History;

Finally, Dr. Elisa Taviani, of the University of Genoa, coordinator of BioForMoz, for the supervision of research in microbiology carried out at the Biotechnology center and to support the organization of the Master's Course in Biotechnology,

We thank you for your attention and we greet you cordially.