

Press release

Harare, 1 June 2023

Commissioning of the Biotechnology Platform of the University of Zimbabwe

Since 2020, the French Agricultural Research Centre for International Development (CIRAD) has collaborated with the University of Zimbabwe Faculty of Veterinary Science, the French National Research Institute for Sustainable Development (IRD), and the Department of Veterinary Technical Services of the Ministry of Lands, Agriculture, Fisheries, Water, and Rural Development (DVS) on building Zimbabwe's capacity to meet the needs for improved and sustainable diagnosis, monitoring, surveillance, and control of animal diseases, including zoonoses. **As a result of so many years of work, a Biotechnology platform to control animal diseases to support the country's agricultural sector will be officially inaugurated on June 1, 2023, at 2:00 p.m. at the UZ Faculty of Veterinary Science.**

This platform is one of the achievements of the PACMAN project.

This work has been supported by the French Agency for Development (AFD) with core funding from the University of Zimbabwe, Cirad, and IRD. All this work was done under the project codenamed "PACMAN"—Diagnostic Platform for Animal Disease Control.

A project to develop capacity building on animal diseases and zoonoses

The project main objective is to develop the capacity of Zimbabwe to meet the needs for improved and sustainable diagnosis, monitoring, surveillance and control of animal diseases including zoonoses.

To achieve this objective, the project aims to set up a Biotechnology Platform with modern laboratory infrastructure and equipment to facilitate the diagnosis, surveillance and control of animal diseases, thereby providing essential technical and advisory services to the agricultural sector in Zimbabwe.

During the four years of the project (2020-2024), it focusses on:

- Strengthening Zimbabwe's biotechnology capabilities in the latest molecular biology and serology techniques for disease diagnosis, surveillance and control, quality control and research by making sure that such services are accessible across the relevant partners in the life sciences sectors.
- Training public and private partners in molecular and serological biology techniques for disease detection, surveillance and control, quality control and research methods.
- Setting up an action, national and international partnership, financing and sustainability mechanism for the biotechnology platform to ensure its operation and impact over the long term.
- Development of a data management plan (DMP) for all bio- samples stored and analyzed
- Setting up a performance management and monitoring plan.

State-of-the art technologies to work on class 3 pathogens and train students

The Biotechnology Platform provides state-of-the-art technologies to set up serological and molecular biology analysis protocols to:

- Research and research support activities for young Zimbabwean researchers and students (serology, PCR, qPCR, sequencing and bioinformatics analyses).
- Veterinary diagnostic activities on priority animal diseases in Zimbabwe
- Serology: possibility of carrying out 15,000 tests per year including conventional serology systems (ELISA) and Luminex.
- Molecular:
 - o Conventional molecular PCR detection system: 20,000 tests per year
 - o Real-time PCR molecular detection system: 20,000 tests per year
 - o Genetic characterization of pathogens of interest by sequencing: 1500 per year including bioinformatics analysis.

These capacities can be increased according to available staff and/or in the event of a health priority (epidemic).

The platform is also able to work on Class 3 pathogens due to the acquisition of a laminar flow hood dedicated to this type of pathogen (Class 3 negative pressure isolator according to ISO/FDIS 14644-7).

This platform has a training component : it can accommodate up to 25 people for theoretical lessons and for scientific presentations/seminars.

The platform is also a tool for practical training in various cutting-edge technologies for the surveillance of animal and zoonotic diseases and for the reception of students from the University of Zimbabwe and other universities in the country for basic training in serology and molecular biology integrated into university curricula.