

## Covid-19: improving knowledge on coronaviruses carried by bats to protect human populations

The French Agricultural Research Centre for International Development (CIRAD), the University of Zimbabwe and the French National Research Institute for Sustainable Development (IRD), long-standing research partners in animal and zoonotic diseases, launched a new project on the genetic diversity of coronaviruses found in Zimbabwean bats.

Coronaviruses are a family of viruses whose types "alpha" and "beta" affect mammals. SARS-Cov-2, causing the Covid-19 pandemic, is a beta coronavirus. A few months ago, Zimbabwean and French researchers identified different types of coronaviruses in two colonies of insectivorous and cavernous micro-bats in the Kwekwe and Hurungwe districts.

*“The local population frequently visits these bats’ habitat, in order to collect guano to use as fertilizer for their crops. It is therefore essential to know the pathogens carried by the bats, because they could be transmitted to humans. The current pandemic is, among other things, linked to the reduction of wildlife habitat”,* said Dr. Elizabeth Gori, a specialist in veterinary biochemistry and molecular biology at the University of Zimbabwe.

### Being better prepared for the next epidemic

The researchers collected samples of droppings from bats belonging to these colonies. Back in the laboratory, these samples are now being analyzed and the coronaviruses are extracted. Scientists sequence the genetic signature of the virus, its RNA, in order to reveal its genetic characteristics.

***“If we know the genetic characteristics of these viruses better, we will be able to react better, thanks to rapid and customized diagnoses according to already-known strains. We are in a way preparing a toolbox to be used in the event of transmission of a new coronavirus to humans”,*** indicated Dr. Florian Liégeois, IRD virologist and leader of the project.

In addition to these analyses, the researchers plan to collect new samples of droppings, saliva and blood from the same bats, in order to increase knowledge of the genetic diversity of coronaviruses as well as their prevalence among these populations.

This new project, funded by [Montpellier University of Excellence](#) and carried out in Harare, complements an existing international project on the genetics of coronaviruses carried by bats in Zimbabwe, Guinea, Cameroon and the Democratic Republic of Congo.

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### About IRD

Internationally recognised multidisciplinary organisation working primarily in partnership with Mediterranean and inter-tropical countries, IRD via its network and presence in fifty or so countries, takes an original approach to research, expertise, training and knowledge-sharing, to the benefit of countries and regions that make science and innovation key drivers in their development.

More information: <https://southern-africa-cnrs-cirad.ird.fr/>

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