

Coronavirus Infects Famed Research Lab Working on At-Home Test

The Pasteur Institute in Senegal may be close to producing the kind of cheap, quick, in-home test for the coronavirus that, if it works, could be a game-changer in Africa, and elsewhere.

By **Ruth Maclean**

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DAKAR, Senegal — For months, researchers at the Pasteur Institute in Dakar, a prestigious biomedical research center in Senegal, have been working to produce a low-cost, rapid, at-home test for the coronavirus — the kind that countries across Africa and elsewhere have been most eager to have.

Now the coronavirus has infected a cluster of staff members at the institute, one of whom has died, according to its director, Dr. Amadou Sall. He did not say how many workers had tested positive, but local media reports said it was five.

Their contacts have been isolated and the work is continuing, according to Cheikh Tidiane Diagne, a researcher at the lab.

The center's work has been crucial in efforts to contain the spread of the virus in West Africa: In the early stages of the outbreak, it trained laboratory staff from more than a dozen countries in how to test for the virus.

The institute says it is now working on a test kit that would cost as little as \$1, and could be used at home. In other countries like the United States, home test kits for the coronavirus have yet to be widely approved or distributed, with many public health experts concerned about whether results would be accurate. So far, the World Health Organization has not recommended them for clinical use, but only in a research setting.

Oyewale Tomori, a virologist who leads a Nigerian government committee on Covid-19, said that if it worked, a \$1 antigen test kit would be a "game-changer," because test kits now sell for more than \$50 apiece.

But he had concerns about whether it would be sensitive enough to detect the virus, and said it should be tested in other countries as well as Senegal, to show that it could work in other environments.

Senegal now has 3,739 confirmed cases of coronavirus, and 42 deaths. A full lockdown was never imposed, but there is a curfew, restrictions on movement between the country's regions, and mandatory mask-wearing in public spaces.

"Whatever their level, the staff of the Dakar Pasteur Institute as well as their families are facing the same restrictions, risks and life realities as all Senegalese people, with whom they share the same living conditions," Dr. Sall said in a statement. "The virus spares no one."



Scientists researching the coronavirus at the Pasteur Institute in February Seyllou/Agence France-Presse — Getty Images

The British diagnostic company Mologic said it had been working with the institute to make both an antigen test, which detects whether someone has the coronavirus, and an antibody test, which shows whether a person's immune system has been exposed to it. The diagnostic kit will have two components: a saliva test and a blood test. The 10-minute antibody test should be available first, Mologic said — in June, if production goes according to plan.

Mologic's co-founder developed the first home pregnancy test, and the Covid-19 home tests use the same basic technology.

Full production is planned to begin in July, according to staff at the institute, which is part of an international network of research centers named after the French biologist Louis Pasteur. The center in Senegal was founded in 1896 by one of the disciples of Pasteur, and has worked on diseases like yellow fever, rabies and malaria.

The Coronavirus Outbreak ■

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Updated June 5, 2020

● How does blood type influence coronavirus?

A study by European scientists is the first to document a strong statistical link between genetic variations and Covid-19, the illness caused by the coronavirus. Having Type A blood was linked to a 50 percent increase in the likelihood that a patient would need to get oxygen or to go on a ventilator, according to the new study.

● How many people have lost their jobs due to coronavirus in the U.S.?

The unemployment rate fell to 13.3 percent in May, the Labor Department said on June 5, an unexpected improvement in the nation's job market as hiring rebounded faster than economists expected. Economists had forecast the

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Researchers hope that home test kits could help increase the testing capacity in countries across Africa, where laboratories have struggled to obtain diagnostic equipment.

Diagnostic equipment is sold on the open market, with no system to help lower-income countries get access, as is the case with vaccines, or to agree on pricing. African countries often have to pay higher prices for them because they buy them in small numbers relative to Western countries, many of which have bulk purchasing arrangements with companies.