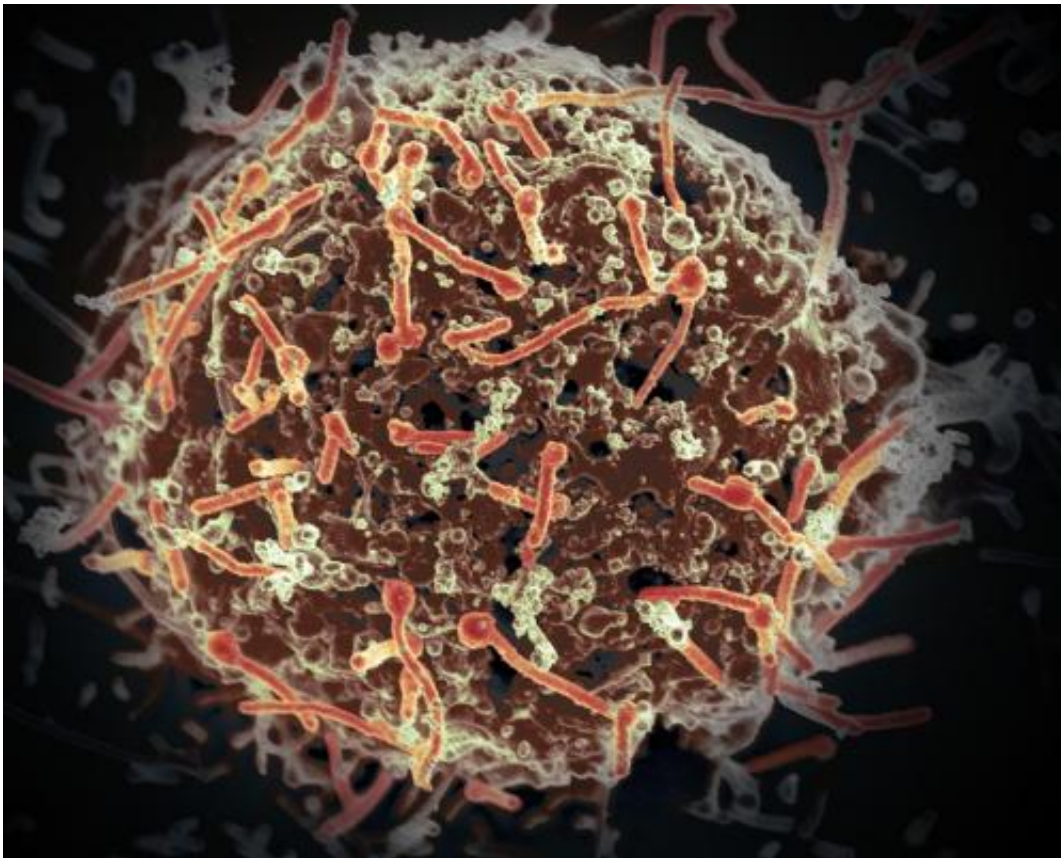


# Japanese Ebola test gives results in 11 minutes: researcher

April 9 2015

---



The Ebola virus, isolated in November 2014 from patient blood samples obtained in Mali. The virus was isolated on Vero cells in a BSL-4 suite at Rocky Mountain Laboratories. Credit: NIAID

A Japanese research team said Thursday it had developed a field test for Ebola that gives results in just over 11 minutes—down from the

90-minute test used now.

The breakthrough by Nagasaki University's Institute of Tropical Medicine will allow medics to move much more quickly in treating people with the [haemorrhagic fever](#), Professor Jiro Yasuda told AFP.

"The result time was unexpectedly short," said Yasuda of the trial conducted in Guinea last month on 100 samples, of which 47 proved positive.

The Guinean government has now asked the institute and its collaboration partner Toshiba to supply equipment to roll out the test, he added.

The test hinges on what the researchers have called a "primer", a substance that amplifies only those genes specific to the Ebola virus found in a blood sample or other bodily fluid.

Using existing techniques, ribonucleic acid (RNA)—biological molecules used in the coding of genes—is extracted from any viruses present in a sample.

This is then used to synthesise the viral DNA, which can be mixed with the primer and then heated to 60-65 degrees Celsius (140-149 Fahrenheit).

If Ebola is present, DNA specific to the virus is amplified by the action of the primers. The by-products from the process cause the liquid to become cloudy, providing visual confirmation, Yasuda said.

Currently, a method called [polymerase chain reaction](#), or PCR, is used to detect the Ebola virus. This requires doctors to heat and cool samples repeatedly and takes at least 90 minutes, sometimes up to two hours.

The Ebola virus, transmitted through contact with infected bodily fluids, has killed more than 10,000 people in western Africa since it re-emerged in December 2013.

© 2015 AFP

Citation: Japanese Ebola test gives results in 11 minutes: researcher (2015, April 9) retrieved 11 May 2024 from <https://medicalxpress.com/news/2015-04-japanese-ebola-results-minutes.html>

This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.