

Secrets of Germany's 'Alcatraz' virus island revealed

December 27 2019, by Larissa Rausch



A lab assistant prepares mosquito legs for DNA mapping at the Friedrich Loeffler Institute on the German island of Riems

On a Baltic Sea island once used by the Nazis for biological weapon research, German scientists are developing virus vaccines that could save lives.

Access to the island of Riems is highly restricted.

Scientists who work there have to have disinfectant showers when entering or exiting and wear body suits.

And dozens of animals, including sheep and cows, have been deliberately infected with viruses as part of the research to monitor the effects of the diseases.

"We really are the Alcatraz of viruses, a kind of prison for viruses," Franz Conraths, deputy head of the island's Friedrich Loeffler Institute, told AFP.

Located south of picturesque Ruegen Island, Riems has become a global centre for the study of pathogens such as rabies, African swine fever and Ebola.

Visitors have to undergo security controls and the laboratories holding the most dangerous viruses as well as the stables with the infected animals are on security level 4—the highest in Germany.

"We do everything possible to ensure they do not spread," Conraths said of the viruses on his island.

"It's very important for our work."

Preparing for an outbreak

The Friedrich Loeffler Institute is the oldest centre for the study of viruses in the world. It was founded in 1910 by Loeffler, a pioneering German scientist.



Dozens of animals have been deliberately infected with viruses as part of the research to monitor the effects of the diseases

There is no installation like it in Europe, although there are similar facilities in Australia and Canada.

The institute used to be based in a single building on the island but has now expanded and covers almost the entirety of the 1.3-kilometre (0.8 mile) long outcrop.

After World War II, the centre found itself in communist East Germany and began to develop vaccines.

In the 1970s, it was linked to the mainland by a dam.

The government has invested some 300 million euros (\$334 million) in the institute since 2008 to upgrade the infrastructure and there are now 89 laboratories and 163 stables.

"Our biggest task is working out preparations for an outbreak," said Conraths, giving the example of African swine fever which has been detected in Central Europe, raising concerns among German pig farmers.



Founded by Friedrich Loeffler in 1910, the institute is the world's oldest centre for the study of viruses



A jar full of dead mosquitoes at a lab researching mosquito-borne diseases at the Friedrich Loeffler Institute

"We have to expect it any day," he said.

There are between 80 and 100 large animals on the island: alpacas, boars, cows, goats, and sheep.

The researchers said that when the animals get too sick they are put down so as not to let them suffer.

"We do our best to carry out our research without having to do tests on

animals," said Martin Beer, head of the institute's diagnostic department.

But he added that "only by infecting an animal" could researchers work out why animals get sick, how the illness develops and how the animals reacts.

Since the tests are for vaccines that can save millions of [animals](#), protect farmers' livelihoods and alleviate hunger, Beer said they were "justified".

© 2019 AFP

Citation: Secrets of Germany's 'Alcatraz' virus island revealed (2019, December 27) retrieved 25 April 2024 from <https://phys.org/news/2019-12-secrets-germany-alcatraz-virus-island.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.