

UW-Madison: First relatives of Rubella virus discovered in bats in Uganda and mice in Germany

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MADISON – At night in a Ugandan forest, a team of American and African scientists take oral swabs from insect-eating cyclops leaf-nosed bats.

In a necropsy room near the Baltic Sea, researchers try to determine what killed a donkey, a Bennett's tree-kangaroo and a capybara at a German zoo – all of them suffering from severe brain swelling.

Neither team was aware of the other, yet they were both about to converge on a discovery that would forever link them – and help solve a long-enduring mystery. They were each about to find two new relatives of the rubella virus, which had been, since it was first identified in 1962, the only known member of its virus family, Matonaviridae.

In Africa, this relative is ruhugu virus, named for the place where it was found, Ruteete Subcounty, and the word in the local Tooro language that describes the flapping of bat wings in the hollow of a tree: obuhuguhugu. The virus found in Germany, slightly different from rubella and ruhugu, is rustrela, named for the nearby Strela Sound.

The two teams have now collaborated to publish their findings today [Oct. 7] in Nature. They describe the new viruses, their similarities to rubella virus, and their differences. Neither of the new viruses is known to infect people.

“Why has it been so challenging to track down the origins or relatives of rubella virus?” asks Tony Goldberg, a University of Wisconsin-Madison professor of

epidemiology at the School of Veterinary Medicine, who led the American efforts. “Why did it take 206 years from the time George Maton first described rubella, and why did two teams working independently figure it out within three months of each other, get lucky enough to learn of one another’s results, and then lucky enough to work together to publish?”

It isn’t because people haven’t tried, Goldberg says. It may be that advancing technology has made it easier – rubella virus genomes are notoriously difficult to work with, and the new viruses share these characteristics.

It may just be serendipity.

STORY CONTINUES AT <https://news.wisc.edu/first-relatives-of-rubella-virus-discovered-in-bats-in-uganda-and-mice-in-germany/>