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Link to original story: <https://news.wisc.edu/uw-madison-virologists-are-at-the-forefront-of-efforts-to-keep-tabs-on-avian-influenza-in-dairy-milk/>  
 **UW–Madison virologists are at the forefront of efforts to keep tabs on avian influenza in dairy milk**

Written by Adam Malecek

When H5N1 avian influenza made an unprecedented jump into dairy cattle in early 2024, the development prompted concern on multiple fronts. How would herds with infections fare? Would dairy workers be at risk? Could the virus potentially infect consumers through milk and other dairy products?

Led by a team of virologists at the Influenza Research Institute, University of Wisconsin–Madison researchers and their collaborators immediately got to work to answer some of these questions with important public health and food-safety implications. The work, which was funded in part by the National Institutes of Health and the U.S. Department of Agriculture, helped to ease potential fears about most dairy products and has given policymakers crucial information as they confront the evolving threat the virus poses to the agricultural industry and public health.

First, in a set of experiments the team [described in the New England Journal of Medicine](https://news.wisc.edu/raw-milk-containing-h5n1-can-infect-mice-while-lab-based-heat-treatments-greatly-reduce-the-virus/) in May 2024, the researchers demonstrated that raw milk containing H5N1 poses an infection risk to mammals. However, the group, led by Yoshihiro Kawaoka, professor of pathobiological sciences, also found that heat treatment methods roughly similar to pasteurization, are highly effective at inactivating the virus. The experiments were crucial in demonstrating that pasteurized dairy products are safe, while raw milk and products made from it pose an H5N1 infection risk in people.

Building on these experiments, Kawaoka and his team next showed that while raw milk is risky, ferrets that became infected by the virus for the most part did not spread H5N1 to other animals through the air. Ferrets are an established animal model for studying how influenza viruses might act in humans, so the findings represented relatively good public health news. Namely, while people exposed to raw milk either through their work on dairy farms or by consuming raw milk products are at risk of catching H5N1, the virus — or at least a primary circulating on dairy farms at the time — was unlikely to easily spread beyond those initial infections. Those findings were [reported in the journal Nature](https://news.wisc.edu/raw-milk-is-risky-but-airborne-transmission-of-h5n1-from-cows-milk-is-inefficient-in-mammals/) in July 2024.

Most recently, the team was able to study a strain of H5N1 isolated from an infected dairy worker in Texas. Although they [found that this strain was 100% lethal in ferrets](https://news.wisc.edu/h5n1-virus-isolated-from-infected-dairy-worker-is-100-lethal-in-ferrets-but-does-not-appear-to-be-circulating-in-nature-anymore/) with only 10 infectious virus particles — a concerning finding — the UW–Madison researchers noted that it is no longer circulating in nature and are working to better understand why a strain that caused a relatively mild infection in a dairy worker would be so deadly in other mammals.

The federally supported research is continuing as H5N1 remains a risk to farms and public health. The ongoing research has provided public health officials, farmers and consumers with actionable insights so they can make informed decisions about how to run their operations and what to eat.