## Bird flu possibly latest in number of diseases able to jump to humans

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ST. LOUIS — Humans risk being overrun by diseases from the animal world, according to researchers who have documented 38 illnesses that have made that jump over the past 25 years.

That's not good news for the spread of bird flu, which experts fear could mutate and be transmitted easily among people.

There are 1,407 pathogens \_ viruses, bacteria, parasites, protozoa and fungi \_ that can infect humans, said Mark Woolhouse of the University of Edinburgh in Scotland. Of those, 58 percent come from animals. Scientists consider 177 of the pathogens to be "emerging" or "re-emerging." Most

Experts fear bird flu could prove an exception. Recent advances in the worldwide march of the H5N1 strain have rekindled fears of a pandemic. The virus has spread across Asia into Europe and Africa.

will never cause pandemics.

Controlling bird flu will require renewed focus on the animal world, including the chickens, ducks and other poultry that have been sacrificed by the tens of millions to stem the progress of the virus, experts said at a news conference late Sunday at the annual meeting of the American Association for the Advancement of Science.

"The strategy has to be looking at how to contain it in the animal world, because once you get into the human side, you're dealing with vaccines and antiretrovirals, which is a whole new realm," said Nina Marano, a veterinarian and public health expert with the National Center for Infectious Diseases.

Bird flu has killed at least 91 people \_ most of them in Asia \_ since 2003, according to the World Health

Organization. It appears to kill about half the people it infects. However, should it mutate so it can pass from human to human, it likely will grow far less deadly, said Dr. Stanley Lemon, of the University of Texas Medical Branch at Galveston.

"It is very unlikely that it would maintain that kind of case mortality rate if it made the jump," Lemon said

Each year, one or two new pathogens and multiple variations of existing threats infect humans for the first time. That pace appears to be unsustainable in the long run because it would imply that people run the risk of being overrun, Woolhouse told reporters.

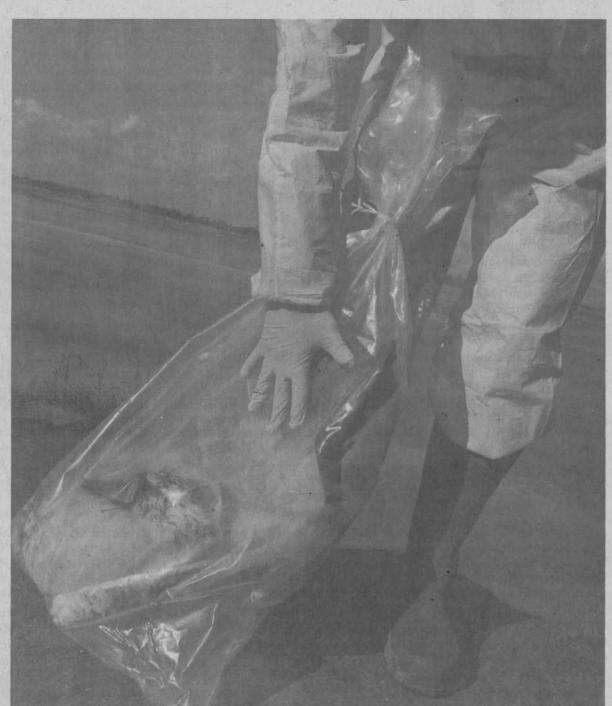
"Humans have always been attacked by novel pathogens. This process has been going on for millennia. But it does seem to be happening very fast in these modern times," Woolhouse said.

Woolhouse argues that either many of those diseases and other afflictions will not persist in humans or that there is something peculiar today allowing so many of them to take root in humans.

One explanation may be the recent and wide-scale changes in how people interact with the environment in a more densely populated world that is growing warmer and in which travel is faster and move extensive, Marano said. Those changes can ensure that pathogens no longer stay restricted to animals, she added. Examples from recent human history include HIV, Marburg, SARS and other viruses.

That prospect leaves open the question of what future threats await humans.

"It always surprises us. We think that avian flu will be the next emerging disease. My guess is something else might come out before that," said Alan Barrett, of the University of Texas Medical Branch at Galveston. "It's very hard to anticipate what comes next."



Rela Saandelerby / The Associated Press

A Hungarian ranger, wearing a protection suit shows a dead swan found in a fishing lake near the village of Nagybaracska (210 km south of Budapest), Hungary, on Sunday. The number of dead birds is increasing as Hungarian authorities test for the presence of the deadly H5N1 bird flu virus.

