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[Important Bacteria Cultures Destroyed](#)

Scientists wonder why the VA killed the collection of Legionnaire's disease samples.



By [Arthur Allen](#) 03/17/2008 / [1 Comment](#)

Let's say your 48-year-old husband has just been diagnosed with Legionnaire's disease in a hospital intensive care unit. You learn that the bacteria causing this disease spread in water supplies, and you have a hot tub at home where your teen-age kids are currently splashing about. How do you find out whether the hot tub was the source of your husband's infection?

Until recently, you sent water samples to the Special Pathogens Lab at the Veterans Administration hospital outside Pittsburgh. That's what Lynn Winn, of Orange, Calif., did in July 2006. But she never got the results, because the VA closed down the lab without processing her samples.

Six months later, in what infectious disease specialists around the world are calling a tragic, inexplicable act of vandalism, the VA incinerated the lab's library of 4,000 microbe cultures, including the world's most important collection of legionella bacteria, collected over a period of nearly 30 years.



No one seems to understand the point of this deliberate destruction. “My theory is that this was essentially a vindictive act,” said Dr. Victor L. Yu, who headed the lab. The VA has said the samples weren't properly labeled. But Yu and his colleagues flatly deny that, and it seems hard to believe. VA spokesmen in Washington and Pittsburgh did not return several phone calls and emails seeking explanations.

A murky turf war seems to lie behind the closing of the pathogens lab, which was unusual because its influence extended well beyond the Veterans Administration health-care system. (For exhaustive details and background, go [here](#)). Yu has been at odds with the Centers for Disease Control in the proper way to detect and prevent legionella infections, but he doesn't believe that scientific dispute had anything to do with the sacking of his collections.

Colleagues of Yu and his partner, Dr. Janet E. Stout, described the destruction of the collection as a calamity on a scale with the burning of a library of rare books or a museum full of prized artworks. They said it would damage research into Legionnaire's and other illnesses; the collection also included strains of Pseudomonas, Enterococcus, Klebsiella and many other pathogenic bacteria. Isolates of these bacteria could have been used to compare changes in virulence and antibiotic resistance, and to help fingerprint new outbreaks of disease.

“This was a tragic event, and it seems to me both stupid and egregious,” says Dr. William Bonnez, a physician and researcher at the University of Rochester Medical Center. “This was a collection that had taken years to collect and provided insight into all sorts of things—the evolution of bacteria and bacterial resistance, the genes that allow these germs to survive in the environment and in people.”

This story of destruction emerged in the April 1 edition of the journal *Clinical Infectious Diseases*, released on line last week, which included a [petition](#) signed by 250 infectious disease specialists. They demanded that the Veterans Administration convene an investigation of the Pittsburgh VA Healthcare System's decision to close the lab and wreck its collection of microorganisms. “These isolates were accrued purely for the advancement of science,” the petitioners write, “And the beneficiaries of these studies were the patients.”

Kate Kelly, spokeswoman for Sen. Arlen J. Specter (R-Pa), said he has conducted an inquiry into the episode but, for the moment, had no further details.

Following the closure of the lab, Yu got into an ugly battle with the administration, which locked him out. The VA destroyed the microbe library in December 2006, without even notifying Yu or Stout. Both scholars had joint appointments at the University of Pittsburgh, and have moved their operations there.

Infectious disease doctors view Yu and Stout as the go-to experts on Legionnaire's disease and the bacteria that causes it. Legionnaire's bacteria sicken an estimated 20,000 Americans each year, mostly the old and immunocompromised, often in hospitals, according to the Centers for Disease Control. About a quarter of the patients die. Sending samples to Drs. Yu and Stout, hospitals around the world were able to determine whether the bacteria afflicting their patients existed in the microbiological record, providing hints as to the disease's spread and the virulence of the particular strains they sent in. "Many researchers depended upon them," said David A. Relman of the Stanford VA Hospital and Stanford University. "Given the amount of time they put in, and the value of these collections it seems incredibly shortsighted to terminate it. Its value was immense, almost unmeasurable, and it's very hard to replicate."

David Cowgill, spokesman for the Pittsburgh VA, said in 2006 that the lab was closed because it had performed commercial testing, which he said wasn't permitted in government buildings. In fact, the lab had for decades conducted tests for hospitals and for individuals, whom it did not charge. Its extensive links with doctors and hospitals around the world were part of what made the lab invaluable, supporters say. Cowgill did not respond to an email and two phone requests for comment on Friday.

Legionnaire's bacteria are named for a 1976 outbreak that killed 34 people and sickened 221 others attending an American Legion convention in Philadelphia. Though first discovered during that outbreak, the germ seems to be common and growing health threat.

The Pittsburgh lab's expertise was especially sought-after because legionella is a notoriously difficult bacteria to culture, and Legionnaire's disease often difficult to diagnose. Yu and Stout proved that the disease frequently spreads through undetected contamination of tap water.

In 2005, after a mysterious outbreak of pneumonia at a Toronto nursing home killed 17 people, samples were sent to Yu's laboratory, which confirmed legionella as the cause. Toronto doctors were unfamiliar with the intricacies of culturing the bacteria, and had failed to diagnose it.

Research by Yu, Stout and their colleagues has embroiled them in a scientific dispute with the Centers for Disease Control over the proper way to control legionella. Yu believes all hospitals should conduct routine examination of faucets and water coolers for legionella colonies. Most clusters of the disease, Yu and Stout believe, have broken out in hospitals that later turned out to have contaminated water.

The CDC's guidelines, however, do not encourage proactive water testing. Many hospitals that are colonized with high counts of legionella do not have cases of the disease, while others have cases of the disease despite minimal contamination of water supplies, said Dr. Lauri A. Hicks, a CDC medical epidemiologist. Hicks maintains that decontamination of water supplies does not provide lasting protection against legionella contamination; Yu claims that such treatments do exist.

Most of Western European and some Asian countries now require hospitals to proactively check for legionella in their water, and Stout and Yu have attacked CDC for failing to follow suit. "We think this long-overdue approach should be adopted," Stout told a Pittsburgh newspaper last year. "How much longer do we have to wait and how many more lives will be lost?"

In the [study](#) that reinforces this conviction most strongly, Stout and Yu's team found high levels of legionella bacteria in six of 20 VA hospitals over a three-year period. Five of the six hospitals had cases of Legionnaire's disease during the study; none of the 14 "clean" ones did.

A few years later, one of the "clean" VA hospitals, in Phoenix, found cases of Legionnaire's disease. Yu's lab processed water from that hospital and found that 65 percent of the samples contained legionella. That was the last piece of work his team did at the VA. Administrators sent in security guards to keep his employees from finishing samples sent in by other hospitals or individuals—including Winn's hot tub waters. "We were given 48 hours to shut down a lab that had been open for 25 years," says Yu. "How could they shut this lab down? It was the legionella reference lab for the entire world."

In response to the results Yu sent it, the Phoenix hospital installed a water treatment program, and since has been legionella-free.

"So," said Yu, "we proved our point."

Yu and Stout now operate a lab across town. Their library, and its precious volumes of killer bugs, is gone forever.

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This is just horrific. Sounds like Yu and Stout stepped on too many toes, eh?

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