

Butler Appeals Conviction, Risking Longer Sentence

Taking a high-stakes legal gamble that could lengthen his 2-year prison term, former plague researcher Thomas Butler is appealing his conviction for mishandling bacteria samples and defrauding his university. Government prosecutors say they will respond with their own request to erase a judge's decision that cut 7 years off a possible 9-year prison term.

"Butler is taking a huge, huge risk," says former prosecutor Larry Cunningham, a law professor at Texas Tech University in Lubbock. "The judge gave him a sweet deal; this gives the government a shot at overturning it."

Butler "is willing to risk a longer sentence to fight for important principles," says Jonathan Turley, one of Butler's attorneys and a law professor at George Washington University in Washington, D.C. "The trial was rife with irregularities; the government is pursuing a longer sentence because it is embarrassed about losing its core case." Prosecutors declined comment.

Butler, 63, captured national headlines last year after he reported 30 vials of plague

bacteria missing from his Texas Tech laboratory, sparking a bioterror scare (*Science*, 19 December 2003, p. 2054). The government ultimately charged him with 69 counts of lying to investigators, moving plague bacteria without proper permits, tax fraud, and stealing from his university by diverting clinical trial payments to his own use. Last December, a Texas jury acquitted him of the central lying charge and most of the plague-related allegations but convicted him on 44 financial charges and three export violations involving a mismarked Federal Express package containing bacteria.

Although government sentencing guidelines called for a 9-year sentence, federal judge Sam Cummings reduced it to 2 years, in part because Butler's research had "led to the salvage of millions of lives." Butler is currently in a Texas prison.

Prosecutors were unhappy with the sentence, say sources familiar with the case, but agreed not to challenge it unless Butler filed an appeal. He recently did just that, arguing in an 80-page brief that his trial was marred

by the government's refusal to try him separately on the plague and financial charges, its use of vague university financial policies as the basis for criminal charges, and a judge's ruling that barred Butler from gaining access to university e-mails. He is asking the appeals court to strike down the convictions or at least order a new trial. Prosecutors are expected to file a response later this month, and a hearing in New Orleans, Louisiana, could come as early as January.

Butler has rolled the legal dice before. He rejected a pretrial government plea bargain offer that included 6 months in jail. Turley expects the government to ask the appeals court to impose the full 10-year sentence allowed by the export violations but says that move would be a "vindictive, gross abuse of prosecutorial discretion."

If the government wins, Butler will lose more than his argument. Because the appeal is expected to take longer than his current sentence, he could find himself back in prison after spending time as a free man.

—DAVID MALAKOFF

INFECTIOUS DISEASES

Bird Flu Infected 1000, Dutch Researchers Say

AMSTERDAM—At least 1000 people—many more than assumed—contracted an avian influenza virus during a massive poultry outbreak in the Netherlands last year, according to a new study. In another unexpected finding, those who developed symptoms after being infected passed the virus on to a whopping 59% of their household contacts, say the researchers at the National Institute for Public Health and the Environment (RIVM), whose results were published in Dutch last week.

Flu experts were cautious in discussing the findings, which they had not yet been able to read. But if correct, they are "another warning signal," says Klaus Stöhr, head of the World Health Organization's global influenza program. Every time an avian virus infects a human being, Stöhr says, the risk that it will mutate into a pandemic strain grows.

Almost 31 million poultry were culled in the Netherlands before the virus, a strain called H7N7, was contained. By the end of the outbreak, the virus had killed one veterinarian, and some 450 people had reported health complaints, mostly an eye infection called conjunctivitis. In a paper pub-

lished in *The Lancet* in February, RIVM virologist Marion Koopmans and her colleagues reported that they detected the H7N7 virus—using the polymerase chain reaction or by culturing the virus—in eye swabs of 89 of them.



Take your pills. Many of those exposed to infected chickens did not take antiviral drugs, the study found.

To gauge the true reach of H7N7, Koopmans and her colleagues also tested those at risk, such as poultry farmers and those hired to cull and remove poultry, for antibodies against the virus. This test provides more definitive and longer-lasting proof of infection. They used a new variation on the classic hemagglutinin inhibition test, which the

team says is better at picking up antibodies to avian flu in humans. (It uses red blood cells from horses, rather than turkeys or chickens, in a key step.)

They found antibodies in about half of 500 people who had handled infected poultry; based on the total number of poultry workers at risk, the team concludes that at least 1000 people must have become infected, most of them without symptoms. Wearing a mask and goggles did not seem to prevent infection; taking an antiviral drug called oseltamivir (Tamiflu) did, but a quarter of the cullers and half of the farmers did not use the drugs.

Among 62 household contacts of conjunctivitis patients, 33 became infected—another surprisingly high figure, Stöhr says. Having a pet bird at home increased household members' risk of becoming infected, perhaps because the birds replicated the virus too.

Detecting antibodies to avian influenza is "tricky," and the results need to be corroborated, cautions flu specialist Maria Zamboni of the U.K. Health Protection Agency, whose lab may retest the Dutch samples.

Human antibody tests for H5N1, the avian flu virus currently ravaging Asian poultry, are ongoing, Stöhr says. So far, the results show that, although far more lethal to humans, the virus has caused few, if any, infections beyond the known 43 patients.

—MARTIN ENSERINK

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