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THE AMES STRAIN

How a sick cow in Iowa may have helped to create a lethal bioweapon.

BY PETER J. BOYER

On the evening of October 12th, a group of scientists and academics at Iowa State University's veterinary college, in Ames, Iowa, gathered in one of the school's laboratories for a procedure involving the university's collection of *Bacillus anthracis*, the bacteria that causes the disease anthrax. The school's anthrax collection was noteworthy both for what was known about it and for what was merely speculated. What was known was that over the years Iowa State's veterinary microbiologists had accumulated more than a hundred vials containing various strains of anthrax, some dating back to 1928. In 1978, a fondly remembered professor named R. Allen Packer had uncorked one of the fifty-year-old vials and, after a couple of tries, was able to coax the bacillus back to life. The experiment, a testament to the remarkable durability of anthrax spores, had lent a certain distinction to the collection.

What was speculated about the Iowa State anthrax was even more compelling. One week earlier, on October 5th, a Florida photo editor named Bob Stevens, at American Media Inc., had died of anthrax, the first bioterror fatality in what has come to be known as "the homeland." Early news reports suggested that the F.B.I. had traced the anthrax to a laboratory in Ames, from which the bacteria had perhaps been stolen or otherwise obtained by terrorists.

The reports of an Ames connection to the anthrax terrors caused much excitement in Iowa, and the College of Veterinary Medicine was suddenly fielding scores of calls from reporters wanting to know about the deadly "Ames strain" of anthrax. The trouble was, nobody at the school knew anything about an "Ames strain"—whether it was the strain of anthrax infecting the mail, whether the Iowa State lab had ever possessed it, or even whether there was such a thing as an "Ames strain." None of the vials were identified as "Ames," but then the labels were cryptic, some bearing only numbers or dates.

The scientists and teachers at Iowa State's veterinary school had not been incautious with their anthrax specimens, but neither had they been obsessed with security. The school's anthrax collection had been stored in cabinets in the teaching laboratory, the doors of which were routinely locked at night. In the context of the academy, this relative casualness was not unusual, especially in the heart of the farm belt, where science was employed as a plowshare rather than as a sword. When an associated laboratory nearby, run by the United States Department of Agriculture, had outgrown its building space a few years earlier, it had moved some of its work on anthrax and mad-cow disease to a rented space in an Ames strip mall. But all of that was before the Florida incident.

On October 10th, Governor Tom Vilsack ordered law-enforcement officers to stand guard over the Iowa State laboratory and at the state's other labs with anthrax (including the Agriculture Department's lab in Ames and labs at the University of Iowa). The Iowa State anthrax collection was beginning to seem like more trouble than it was worth, and the college's dean, Norman F Cheville, after consultation with the lab's director and a school health-and-safety group, decided to do something about it.

Around 5:30 P.M. on October 12th, college staff members wearing biosafety gloves removed the anthrax specimens from the laboratory cabinet and placed them in an autoclave, a steam sterilizer about the size of a filing cabinet. The scientists knew that an hour or so in the autoclave would do the trick, but they let the machine run all night. At eight-

CHRISTOPH NIEMANN

The discovery that the anthrax was natively American widened the range of suspects.