

Bruce Ivins,
the Anthrax Attacks,
and
America's Rush
to War

THE
MIRAGE
MAN

DAVID WILLMAN

WINNER OF THE PULITZER PRIZE



THE MIRAGE MAN

BRUCE IVINS, THE ANTHRAX ATTACKS,
AND AMERICA'S RUSH TO WAR

DAVID WILLMAN



BANTAM BOOKS | NEW YORK

All rights reserved.

Published in the United States by Bantam Books,
an imprint of The Random House Publishing Group,
a division of Random House, Inc., New York.

BANTAM BOOKS and the rooster colophon
are registered trademarks of Random House, Inc.

LIBRARY OF CONGRESS CATALOGING-IN-PUBLICATION DATA

Willman, David.

The mirage man : Bruce Ivins, the anthrax attacks,
and America's rush to war / David Willman.

p. cm.

eISBN: 978-0-345-53021-9

1. Bioterrorism—United States—Prevention.
2. Terrorism—United States—Prevention. 3. Anthrax—War use.
4. Anthrax—United States—Prevention. 5. Ivins, Bruce E.

I. Title.

HV6433.35.W55 2011

363.325'3092—dc22 2011006232

www.bantamdell.com

Jacket design: Carlos Beltran

v3.1

CONTENTS

Cover

Title Page

Copyright

Dedication

Prologue

1. *She Would Kill You*
2. *You Will Accept Me*
3. *Secrets Available*
4. *Bruce Being Bruce*
5. *Dark Family Material*
6. *This Was His Baby*
7. *Avenging Angel*
8. *I Am an Anthrax Researcher!*
9. *This Is Next*
10. *On the Wrong Trail*
11. *In Cipro We Trust*
12. *Bentonite?*
13. *Serious People*
14. *Our Old Friend Saddam*
15. *Oh My God, I Know Him!*
16. *I Didn't Keep Records*
17. *Their Secret Weapon*
18. *Less Than a Teaspoon*
19. *Some New Anthrax Vaccine*
20. *We've Got Our Man*
21. *Eye Exercise*
22. *Play It Straight*
23. *Some Changes*
24. *Go to That Sample*
25. *The Rest of Us*
26. *Not a Scintilla of Evidence*
27. *Crazy Bruce*
28. *Not a Killer at Heart*
29. *I'm Not Going Down*

Epilogue

Appendix: The Case Against Bruce Ivins

Acknowledgments

Notes

About the Author

Photo Insert

PROLOGUE

The first of the mysterious infections emerged in South Florida, three weeks after the terrorist attacks of September 11, 2001. Robert Stevens, a sixty-three-year-old photo editor who worked at offices housing the *National Enquirer* and other tabloids, was diagnosed as having inhaled spores of anthrax.

President George W. Bush directed a member of his cabinet, Health and Human Services secretary Tommy Thompson, to hold a news conference on the case. Thompson played down its significance, saying there was no reason to believe Stevens's illness resulted from anything other than a natural exposure to anthrax. "It appears that this is just an isolated case," Thompson said. "There is no evidence of terrorism." When pressed by a reporter to explain how Stevens became infected, Thompson said health officials were unsure, but they knew he had hiked in the woods of North Carolina and drunk from a stream before falling ill.

Stevens died the day after the news conference, bringing Americans face-to-face with an unfamiliar menace. The anthrax bacterium is well known to veterinarians, much less so to physicians. Cattle and deer die every year in the United States from anthrax. But people almost never. (And never by drinking from a stream.) Meanwhile, a colleague of Stevens, seventy-three-year-old Ernesto Blanco, lay gravely ill in another Florida hospital. Blanco, whose job entailed sorting the piles of U.S. mail sent to the *National Enquirer* and other publications of American Media Inc., had been diagnosed with pneumonia. Soon after Stevens's death, further analysis revealed that Blanco, too, was infected with anthrax.

The cases were not confined to Florida. In New York, blackish sores appeared on several people who worked at or had visited the offices of the three major television networks. They had been infected when spores came in contact with their skin. The source of the anthrax in the tabloid offices in Florida remained a mystery. But in New York, two anonymous, anthrax-laced letters eventually were found—one addressed to NBC News anchor Tom Brokaw, the other to "Editor" of the *New York Post*. A similar letter landed in the epicenter of the national government in Washington, addressed to Tom Daschle, the majority leader of the United States Senate. Another letter containing anthrax was addressed to Democrat Patrick Leahy, chairman of the Senate Judiciary Committee. Each letter came within a thirty-four-cent, post-stamped envelope that bore the image of an eagle in the upper right-hand corner. Each 3½-inch-by-6¼-inch envelope was postmarked Trenton, New Jersey.

The notion that there was only a single, isolated case gave way to confusion and fear: The largest Senate office building was closed for decontamination. The House of Representatives was shut down. Delivery of mail was stopped at the White House. At the Supreme Court, the justices vacated the building for the first time since the structure opened in 1935.

Besides Robert Stevens, four others would eventually die of inhalational anthrax because of spores that had leaked out of letters and contaminated an untold volume of mail. Thomas Morris Jr. and Joseph P. Curseen Jr., postal workers in Washington, D.C., were exposed on the job. Kathy Nguyen, a hospital worker in New York City, and Otilie Lundgren, a ninety-four-year-old woman in rural Oxford, Connecticut, were most likely infected by "cross-contaminated" mail. The anthrax attacks left seventeen others with nonfatal infections. Some ten thousand people at risk of infection were treated with antibiotics.

A benign portal of American life, the mailbox, had become an instrument of terror. The nation, it seemed, was in the throes of a biological attack. But by whom? The anonymous letters all contained photocopied messages with the date “09-11-01” and these three lines:

DEATH TO AMERICA

DEATH TO ISRAEL

ALLAH IS GREAT

The letters gave impetus to profound shifts in federal policy set in motion by September 11: Overwhelming majorities of Congress voted to enact the USA Patriot Act, which, among other things, eased prohibitions against electronic eavesdropping. Speculation about who sponsored the anthrax attacks outpaced verified information. President Bush spoke of a “possible link” to Osama bin Laden. Hawks in the administration and elsewhere suggested that Saddam Hussein might be responsible. Their remarks, coupled with the president’s emphatic statements that Saddam possessed biological and chemical weapons and might even be developing nuclear ones, intensified the clamor for war. Wildly inaccurate media accounts stoked the hysteria. In March 2003, the United States invaded Iraq.

The letter attacks gave rise to Bush’s signature domestic policy response, Project BioShield, which provided billions of dollars to develop vaccines or antidotes against anthrax and other “threat agents.” The government also began bankrolling construction of dozens of laboratories equipped to conduct experiments with deadly biological pathogens. Each facility promised to expand the nation’s research capacity—but created new security risks by granting thousands of scientists unprecedented access to the tools of biowarfare.

Within days of the first anthrax death, the FBI launched what would become one of the most far-reaching investigations in the annals of law enforcement. Together with the U.S. Postal Inspection Service, the FBI conducted thousands of interviews and scores of searches. The investigators traveled to six continents to question potential witnesses. The case soon focused on one suspect above all others—Dr. Steven Hatfill, a scientist who had worked for two years at the U.S. Army’s biowarfare research center at Fort Detrick, Maryland.

In numerous leaks to the news media, officials with access to investigative details made clear their belief that Hatfill was the anthrax killer. Investigators delivered the same message privately to congressional leaders and to those at the highest levels of the Bush administration. Yet the FBI never formally accused Hatfill of a crime. His reputation shattered, Hatfill sued the FBI and the Justice Department.

Another scientist at Fort Detrick remained far less visible, although he was well known to investigators. The FBI had in fact called upon this scientist, Bruce Ivins, for early assistance with the investigation. When it came to the poorly understood complexities of *Bacillus anthracis*, the investigators, who had never before tried to solve an anthrax killing, could not have found a better-qualified expert at Fort Detrick. Ivins was an accomplished microbiologist who had established himself as an important anthrax researcher for the Army during the run-up to the 1991 Persian Gulf War, when military leaders feared that Saddam Hussein would unleash the bacterium on the battlefield.

Patent applications filed after the war listed Ivins and several Army colleagues as co-

inventors of a “next-generation” anthrax vaccine. There was interest in a new vaccine because some service personnel blamed the old one for serious side effects, including immune system disorders. Yet the Pentagon’s support for the new product ebbed and flowed with the politics of yearly budget cycles. Ivins could see that the perception of progress in the laboratory—an opportunistic speed—were crucial if the new vaccine was ever to be developed.

On October 22, 1997, Ivins had reason to exult over the arrival of a precious shipment: 1,000 milliliters of purified anthrax bacteria, suspended in liquid at the Army’s Dugway Proving Ground in Utah and delivered to him in seven sealed, shatter-resistant jars. As he examined the anthrax in the light of his lab’s phase-contrast microscope, particles of the material glistened, a sign of purity. When he judged that one of the jars was not sufficiently pristine, he replaced it with anthrax spores that he and a lab technician had grown and purified at Fort Detrick. Ivins then combined the highest-quality material into two flasks and, ultimately, into one. All of it had been derived from what was named the “Ames strain” of anthrax—material shown to be more virulent than other strains used for laboratory research.

Ivins was a master of the delicate art of growing, harvesting, and purifying spores of anthrax. He now had a single, large batch to ensure consistency in his upcoming experiments on rodents, rabbits, and monkeys. Some of the animals would be injected with the new vaccine and then forced to breathe a spray of live anthrax. Success could lead to the crowning achievement of his career: a safer, more effective vaccine. Ivins stored the spores in his lab and accounted for them on an Army form called a Reference Material Receipt Record. He listed this batch as “RMR-1029.”

SHE WOULD KILL YOU

For most of the twentieth century, Lebanon, Ohio, embodied the small-town America of Norman Rockwell. It was a place where doors were left unlocked, where kids roamed without fear. The shops in the well-scrubbed downtown were family-owned. Malts and burgers were served at the soda fountains on Broadway. On the same street, Ohio's oldest inn and restaurant, the Golden Lamb, boasted of having entertained ten U.S. presidents, not to mention Henry Clay and Charles Dickens.

Founded as a stagecoach stop in the state's southwest corner, midway between Cincinnati and Dayton, the town of Lebanon ("LEBB-in-in") grew into a bedroom community of several thousand. Farm kids mixed with classmates whose parents worked for National Cash Register, General Motors, and Frigidaire in Dayton, for General Electric or the German-family breweries in Cincinnati, the Armco Steel plant in Middletown, and the paper mills in Franklin.

Lebanon's nicest neighborhoods were just south of downtown, across the double-arched Turtle Creek Bridge, built in 1897. The first cross street up the hill from the bridge was Orchard Avenue, home to prominent families, including doctors and for a number of years the town's only municipal court judge.

The second-generation proprietor of Ivins-Jameson Drugs, a Lebanon fixture with roots in the nineteenth century, also landed on Orchard Avenue. T. Randall Ivins—the T. stood for Thomas but most everyone called him Randall—had been in no particular hurry to take on the mantle of the family business. Born in 1905 in Lebanon, Randall was raised on the high ground above Turtle Creek, known as South Broadway Hill. His was a childhood that could have been scripted by Mark Twain. He and his pals filled summer days with baseball in an open lot; they rode the trolley to the outskirts of Cincinnati to see Buffalo Bill's Wild West Show. Their favorite swimming hole was a clear-water stream within walking distance of their homes, in the woods of McBurney Hills. There they fished and made use of an aptly shaped tree stump to stash their corn cob pipes and tobacco.

Randall left Ohio after the seventh grade to attend Princeton Preparatory School in New Jersey; he later majored in journalism at Wilmington College of Ohio and psychology at Princeton University. After graduating he worked as a cub reporter at the *Commercial Tribune* in Cincinnati, and as a public school teacher, eventually serving as principal of Lebanon elementary school. It was said that his time as an educator had not been entirely successful—he was simply too nice, incapable of imposing or maintaining discipline.¹

In December 1933, Randall married twenty-six-year-old Mary Johnson Knight, a petite brunette who had earned a four-year degree in home economics from Florida Women's State College. Family lore held that the Knights were original settlers at Jamestown, that the genes were the stronger for having survived its hardships. Mary grew up in Brandon, Florida, near Tampa. She and Randall had met while he was vacationing in the North Florida Panhandle.² Shortly after marrying, the new couple set about planning a family, and they hired an architect to build a home, at 26 Orchard Avenue, just around the corner from where

Randall had grown up. The structure was single story with European flourishes, notably an ornamental turret that rose to the right of the front door.

With his marriage to Mary, Randall decided on a career in pharmacy. He enrolled in class at the University of Cincinnati to get his state license and he began working at Ivins-Jameson Drugs, the family store founded in 1893 and still operated by his father, C. Wilbur Ivins, a charter member of the Lebanon Rotary Club. Randall had arrived none too soon. In January 1938, C. Wilbur died from a stroke while wintering with his wife in Sarasota, Florida. The store was left in the hands of his son and Clarence Jameson, whom the elder Ivins had trained and had taken on as his partner nineteen years earlier.

On April 22, 1946, Mary gave birth to the couple's third and final child, Bruce Edwards Ivins. His older siblings were Thomas, eleven, and Charles, "C.W.," seven. Bruce would learn how to avoid Tom, who C.W. later suspected had grown to prefer the status of only child.³

Their brother, however, was not their biggest concern. Mary Ivins was prim, and comfortable using force to get her way. She was more than willing to impose whatever discipline the kindly Randall might shy away from. Her eruptions were frequent and could not always be predicted, though Bruce could see that C.W. made it a top priority to try to anticipate what was most likely to set her off.⁴

The Ivinses were well off by local standards and lived comfortably, while buying nothing on credit. The parents drove what C.W. called "ocean liners," the heavy, smooth-riding sedans that defined the golden age of Detroit's Big Four. Color photographs captured some of the family's early moments together, including Christmas Eve 1947. Bruce, one year, eight months, is seen pressing keys on the family grand piano while his brothers watched. A snapshot from a year later shows C.W., Tom, and, to the right, Bruce, tightly clutching his brown teddy bear.⁵ By first grade, Bruce had devised an unusual way to play with it and other stuffed animals. He put blindfolds on them.⁶

Mary hovered over her youngest son, closely monitoring his academic progress and his interactions with other children. During his elementary school years, she always served as a room mother to Bruce's class. She and Randall also hosted elaborate, well-attended Halloween parties for Bruce and his classmates.

Apart from the gaiety of those parties, Mary Ivins ran the household like a boot camp. Her maxim for child rearing: "Idle hands are the devil's workshop." C.W. later explained, "Mom was one of these people that you had to justify your actions. So we learned always to have a reason for doing anything. If you acted on impulse you were gambling that you were going to get hit by lightning by impulse, too."⁷

Piano lessons were mandatory, and so was worship. Although Mary had been raised in the Southern Baptist church, she disliked the local Baptist preacher, so she and her sons attended Lebanon Presbyterian, where Pastor J. Taylor McHendry, "Little Mac," presided. After church each Sunday, the boys were required to wear their suits and ties for a midday meal in the family's formal dining room, outfitted with mahogany furnishings, a Czech chandelier, and French wallpaper with velvetlike flocking. "If Mom ever caught you feeling it, she would kill you," C.W. recalled. "Mom could explode. She didn't know about the sliding switch that could adjust the illumination. It was either on or off. She inflicted terror on all of us."⁸

During summers Mary Ivins would load Bruce and C.W. into the family sedan and set off

on weeks-long excursions while Randall stayed behind in Lebanon. She designed the trips to educate her two youngest sons about American history and geography. Mary's snapshots document some of the places they visited: the Grand Canyon, the Painted Desert, Yellowstone National Park, the Colorado Rockies, the Badlands in South Dakota, Valley Forge, Pennsylvania.⁹ There also was a trip, in 1956, in which the family traveled through Princeton, New Jersey.¹⁰

C.W. was a partial buffer between Bruce and their mother. "She just made him feel on edge, like she did everybody else," recalled Martha Leuzinger, who worked at the drugstore and saw a lot of Mary Ivins.¹¹ When C.W. went to college, by which time Tom had been out of the house for several years, Bruce was left behind in a household thoroughly dominated by his mother, his home life grimmer than ever as he prepared to enter the sixth grade.

When her husband's older business partner, Clarence Jameson, died in 1959, Mary, who had been working part-time at the pharmacy, consolidated her influence at the renamed Ivins Drugs. She fired anyone she felt didn't meet her standards. While Randall continued to mix and fill the prescriptions, Mary took control of everything else. Always formally dressed, her hair set in a wave, she built up what was, for small-town Lebanon, a lavish line of high-end cosmetics, including Chanel No. 5. She made sure that the other products, including the cigars, the refrigerated display of Whitman's Samplers, and the horehound candy drops, kept up front in a wooden barrel, remained in ample supply.

"When she came in, everybody was on their toes," said Jacqueline Sams, a student Mary had recruited as a part-time employee and whose brother was Bruce's friend. "You didn't know what was going to set her off."¹²

One day she spotted a ruffled man sitting outside on the concrete steps and, obviously down on his luck. As the store clerks watched, Mrs. Ivins filled a bucket with water, calmly strode out to the steps, pretended to stumble, and thoroughly drenched the man.¹³ On another occasion, suspecting that a couple of boys had done some minor vandalism to the Ivins residence, she waited until nightfall and, dressed in a disguise, splashed paint onto the side of the house where one of them lived.¹⁴

Bruce was a physically and socially awkward child, "Bruce the Goose," as his irreverent classmate Larry Buchanan nicknamed him. A story from his grade school years recounts the time he was playing softball and got thwacked in the head by the ball, batted not by anyone resembling slugger Ted "Big Klu" Kluszewski of the hometown Cincinnati Reds, but by a bookish and bespectacled girl, fellow fourth grader Elaine Kraus.¹⁵

While Randall Ivins had wandered freely as a boy, his youngest son was more comfortable with a chemistry set. Bruce took to wearing a plastic pocket protector, and he talked in rapid-fire bursts. He treasured the expensive microscope his parents bought him and he featured it in his ninth-grade science project. The instrument elevated Bruce from the crowd—enabling him to see things that his classmates could not with their hobby-grade microscopes. When he walked he leaned forward from the waist, as if propelled by an inner purpose. He was a teenager so preoccupied that he didn't seem to notice what some classmates remember to this day—the persistent knots of mucus suspended in his nostrils. With rare exception, he moved about Lebanon alone.¹⁶

Many of his peers at Lebanon High School found Bruce to be uncommonly high-strung,

boy who craved approval, yet struggled to fit in. Bob Edens passed by the Ivins residence every weekday afternoon and on weekends, delivering the *Dayton Daily News* on his sturdy Schwinn. Edens, a good enough student himself, thought Bruce was uniquely strange. “He was very intelligent and made sure that everyone around him knew it,” Edens recalled. “He was in pain in the ass. He had an inability to become a part of the group in a natural way. So he would act out to get attention in weird ways. It was, ‘I’m here. Notice me.’ ... He had no sense of normalcy. He was just a highly wound individual.”¹⁷

Another classmate, Lana Neeley, a neighbor on Orchard Avenue, described what happened one day when her mother asked her to deliver something to the Ivins home. Lana was invited in, and as she waited for Mrs. Ivins, “Bruce asked me if I wanted to come down to the basement and see the gunpowder he’d just made.” Lana, then fourteen, declined. She told her mother she would never set foot in the Ivins house again.¹⁸

One of Bruce’s warmest relationships at Lebanon High was with a teacher, Dean Deerhake, a rail-thin man with a flattop haircut who crackled with enthusiasm. Deerhake taught junior-year chemistry, and Bruce, who had excelled in biology the year before, was one of his top students. Ivins did not join the crowd easily, if at all, Deerhake recalled. “Some of the questions he would ask would cause some of the other students to turn their heads. He was different. A little bit out in left field.”

Deerhake himself was a bit different. He wouldn’t hesitate to stand on a desk if he thought it might strike a chord with his charges. It was Deerhake who persuaded Bruce to try the crosscountry team, which he coached after school. Cross-country provided a team framework for a solitary activity: training regularly over long distances and running two miles on race day through the Ohio countryside. Bruce Ivins wasn’t fast enough to race with the varsity, but in the fall of 1963, his senior season, he once finished with a time of 13:47, placing him thirteenth among forty or more “reserve,” or junior varsity, runners.¹⁹

As Bruce’s teacher and coach, Deerhake got to know his parents. He found Marshall immediately intimidating, Randall just the opposite. The summer before Bruce’s senior year, Randall approached Deerhake with a proposition, no doubt made possible by one of the pharmaceutical salesmen who regularly called upon Ivins Drugs: Would Mr. Deerhake be interested in driving Bruce up to the drug company’s manufacturing plant in Michigan, for an insider’s tour? It would be about a four-hour drive each way, entailing an overnight stay. The payoff would be a scientific opportunity for student and teacher—a chance to observe firsthand the conversion of raw materials to finished medical products.

Deerhake said yes, and he and his wife drove Bruce to the plant in their blue Ford Custom sedan. They saw a movie (*West Side Story*), and Bruce seemed to relax on the road with the cheerful Deerhakes. He fit in as if he was their son.²⁰

Bruce’s isolation as a teenager was magnified by his struggle to communicate with the opposite sex. “He was just a loner. He was so backward with women,” said classmate Patricia McDaniel.²¹ His plight wasn’t made any easier by his self-consciousness about his look. Gaunt, with a forehead that rose tall and flat, his profile was unmistakable. He was not considered a handsome young man. “His nose wouldn’t be taken care of. He was just a duckling,” said Ellen Leuzinger, who was a year younger.²²

In his pained social interactions at Lebanon High, Bruce was operating, as in most aspects

of his life, in the long shadow of his mother. One of the few schoolgirls with whom he was friendly was Elaine Kraus, the same Elaine whose batted ball had hit Bruce in the head in the fourth grade. Whip-smart and toughened by life on her parents' hundred-acre farm, Elaine was on a college-prep track, like Bruce. Both were members of the Current Events Club and the school newspaper staff, and they took part in campus stage productions.

Elaine, like so many others, viewed Bruce as nervous, hyper, "almost socially backward." She noticed that sweat would bead on his forehead and he would become so stressed he could hardly sit still. To his "Bruce the Goose," she was "Elaine the Brain." Proud nerds before the term had currency, they were buddies of a sort, though Elaine felt no romantic attraction toward him. And Bruce never hinted at such to her. None of which deterred Mary Ivins. "*I don't know why you and Bruce aren't going out. You know, the two of you ought to get married.*" Elaine heard this from Mrs. Ivins whenever she saw her.²³

In his four years at Lebanon High, Bruce was known to have had one date. It was with Ellen Leuzinger, one of three sisters Mary Ivins had recruited to work at the family drugstore where Bruce also worked, on Saturdays. Ellen, hardworking and attractive, knew that Mrs. Ivins "was looking over every little piece of his life." Her date with Bruce, centered on the fall's homecoming dance, would be no exception.

Mrs. Ivins drove Bruce to Ellen's house in the family's Chrysler New Yorker. A lot of the kids at the dance were planning to bowl afterward. Chauffeured by Mrs. Ivins, Ellen and Bruce were perhaps the first couple to leave the dance, and they were definitely the first to arrive at the lanes. They bowled quickly and left—before any of their classmates arrived. Then it was time for Mrs. Ivins to drive Ellen home. "Everything was very, very planned," Ellen recalled Bruce as "tender-hearted, sensitive, a gentleman.... I don't remember if we held hands. We surely didn't have a kiss."²⁴

It was clear to most of his acquaintances that Bruce was destined to be a scientist. He earned As in biology (he was selected for the biology honors club) and chemistry, and was strong in physics. In the summer of 1963, he was among a group of high-performing high school students who participated in a science program at Ohio State University. He was also invited to exhibit his special project, "Antibiotics," at the 1963 state fair in Columbus.²⁵

Bruce had other talents. He was gifted at the family's Baldwin piano, and he sang in the school chorus.²⁶ He was the ubiquitous photographer of the school newspaper and the yearbook, the *Trilobite*. If there was a basketball game or other notable extracurricular event, Bruce more than likely was there, weighty camera and flash strapped around his neck.²⁷

And yet it was because of Bruce's reticence that an English teacher, Joe Haven, decided to cast him in a stage role that might draw him out. He selected Ivins for this particular senior class play, Haven said, "thinking that this would be good for him. Give him a little more personality."²⁸ In *The People vs. Maxine Lowe*, a woman was on trial for the murder of her husband. In the climactic scene, the lawyer points directly into the courtroom audience at Vincent Barclay, who has been sitting silently while Maxine's fate swung in the balance.

Played by Bruce Ivins, the suddenly exposed villain tries to bolt but is forced to the witness stand. There, in a swift denouement worthy of Perry Mason, Ivins's character breaks down. "Yes, I shot him!" Bruce shouted, nearly sobbing as he turned to the judge. "Yes—I killed him—and I wanted to see her burn for it." His performance impressed cast and audience alike. "He had some real believable emotion," recalled Nick Nelson, who played the prosecutor.²⁹

Throughout his struggle to fit in with peers, Bruce endured unrelenting dysfunction within his family. There were two ways to cope with Mary Ivins: Behave at all times in a way that might please her, or learn to hide from her those forbidden activities that were just too pleasurable to forfeit. Bruce, C.W., their father, and the employees at Ivins Drugs developed sensitive radar for the approaching storm. Usually by mid-morning, Mary Ivins would arrive in heels, a cyclonic force. Her tight smile, wielded with condescension, was not to be trusted. It cloaked her penchant for withering insults or worse. “The woman was a little touched,” recalled Jacqueline Sams.³⁰

By the spring of 1964, when Bruce reached his final semester of high school, Randall Ivins was fifty-nine years old, gray at the temples and almost bald, a weathered five-foot-eleven with tobacco-stained teeth and a paunch. From nine in the morning until at least nine o’clock at night he could be found at Ivins Drugs, dressed always with a professional formality, which included a suit, coat, white shirt, tie.

Using a mortar and pestle, he still mixed and “compounded” some of what he dispensed. He made one of his medicines by percolating grain alcohol over dried herbs, yielding a tincture whose effectiveness he swore by. He also touted the benefits of his father’s concoctions, including a product called “Snivi” (Ivins spelled backward), sold as a live stimulant.

Randall was a generous man who tended to see the best in people. In 1956, when Don Hawke, one of his employees, asked Randall whether he would object if he, his longtime apprentice, bought a competing pharmacy directly across the street, the older man encouraged him to do it. Over the ensuing years, the two helped each other almost daily, exchanging materials, products, whatever either pharmacy might need. “Really nice man,” Hawke recalled emphatically. “Helped me in some tough times.”³¹

Little that Randall did appeared to please Mary. “I had seen her give him some tongue lashings,” said Jackie Sams. “So I was very careful. My thinking was, ‘If she talks to her husband this way, no telling what she might do with me.’ She was a little woman, but she had a very sharp tongue.” Said Ellen Leuzinger, “She was very cruel to him, all the time.... Mary Ivins was scared of her.”³²

Evening at Ivins Drugs was when Randall could be most at ease, with Mary at home. Jackie Sams would walk across the street to the Best Café to fetch dinner for Randall, which was always the same: chopped steak, smothered in A-1 sauce; cottage cheese, with more A-1 sauce; and a glass of tomato juice. At any time of the day Randall might also send her over for a slice of pie, usually apple. This was an indulgence absolutely forbidden by Mary Ivins. Hence a workaround: The pie was to be left inside a drawer of the store’s back office. If Mary Ivins showed up, the slice became Jackie’s. If he *knew* Mary wasn’t coming, he’d fill his pipe and light up. At home he was forbidden to smoke indoors, except within his own bedroom and then only with a window fully opened—no matter the temperature in winter. Did Randall ever violate the rule? “No,” C. W. Ivins recalled softly, “because he was living that way the next day.”

For most of their marriage Randall and Mary maintained separate bedrooms. Her room adjoined her all-pink bathroom, off-limits to the other members of the household. Randall shared a bathroom with his sons. Despite their separate quarters, Randall found it difficult to elude the wrath of Mary. When the amiable proprietor of Ivins Drugs arrived at work with

gashes on his arms, neck, or head, employees came to understand why. It was an ugly and poorly kept secret in Lebanon: At home, the volcanic Mary Ivins, standing only five feet tall, did not express her displeasure with words alone.

“Different little lady,” said Don Hawke. “One day he came in and he had a black eye. Of course, she hit him with a broom. He said, ‘She missed me the first time.’ He was scared of the death of her.” Several years later Rick Sams saw Randall in the pharmacy with bandaging on his head. “Skillet,” Randall said. Another time it was a fork to his hand. Things could and did get more extreme, as happened the night the phone rang at 2 A.M. at the home of Dr. Ralph Young, a neighbor on Orchard Avenue.

“Ralph, come down here. I’ve killed Randall.”

Dr. Young raced out, expecting the worst. It was 320 yards from his home to the Ivinses’ front door. To his surprise it was answered by Randall—alive but pressing a garment to his blood-splattered head. Dr. Young bandaged Randall up and, neighbors or not, sent along his bill. This house call, he told his wife, had exceeded the bounds of professional courtesy.³³

The sustained abuse inflicted a lasting trauma on an unwilling witness—the couple’s youngest son. Years later he would recall seeing his father bloodied by Mary Ivins.³⁴ More than a few of Bruce’s acquaintances from Lebanon, among them Ellen Leuzinger, were certain that his mother’s behavior damaged him. As Leuzinger saw it, “Bruce was programmed by her.”³⁵ Don Hawke agreed. “I don’t think Randall had a whole lot of influence on Bruce,” he said. “All the influence on Bruce was from Mary.”³⁶

After graduating from Lebanon High, Bruce left Orchard Avenue for the University of Cincinnati, but he remained within his mother’s reach. After living in a dormitory his freshman year, he rented an apartment with several other students, until Mary Ivins showed up. She declared the quarters unfit for her son and demanded that he move out, prompting a flight of the roommates, including Bruce, to relocate to a different apartment.

Bruce led a regimented existence as an undergrad, studying diligently, exercising on a schedule, always taking vitamins. He was generally liked by his roommates, but he chafed at sharing his food with others and was said to have once made a veiled threat if more of it went missing: “I can drop something in your water.”³⁷

Some who saw him in Lebanon during school breaks thought that Bruce was progressing emotionally. “He was so much better,” said Ellen Leuzinger. “Not so geekish. Smiled a lot more. Talked a lot more.” He even took Ellen’s younger sister, Martha, on a date to see the Monkees at Cincinnati Gardens.³⁸

But despite these intimations of normality, something happened to Bruce at the University of Cincinnati—something that would consume him for the rest of his life. He noticed a young woman, a fellow undergraduate, whom he found appealing. She declined his request for a date, and with the passage of time, she forgot about his overture. Ivins, however, never stopped dwelling on her rejection. He attributed it to her membership in a Greek letter sorority, Kappa Kappa Gamma. From her lack of interest in him, an obsession would fester.³⁹

YOU WILL ACCEPT ME

While Bruce entered graduate school at the university, his mother was rebuffing suggestions that she consult a doctor about her persistent abdominal pain. When she finally did, the diagnosis offered no hope. On June 23, 1970, Mary Ivins died of metastatic liver cancer in a Cincinnati hospital. She was sixty-three years old.¹ Although she had lived in Lebanon for nearly four decades, the local weekly, *The Western Star*, published no obituary. There was no memorial service.

Fierce in life, Mary was no less ornery about her death. “My mom, she never stopped fighting the Civil War,” recalled C. W. Ivins. “She made it very clear in her will and her last wishes that she was not going to be buried in ‘Yankee territory.’ ”² Consistent with her wishes, Mary Ivins’s cremated remains were returned to Florida.

For the sixty-five-year-old Randall Ivins it was the end of a nightmare. Randall chose not to attend the interment of his wife’s ashes. Freed at last from her abuse, he sold the pharmacy building at the corner of Mulberry and Broadway within a few months. After a run that had begun in the 1890s, Ivins Drugs was no more. Randall began traveling again, flying out to visit C.W., who had moved to California and delighted in introducing his father to the Sierran Nevada mountains.

Bruce, meanwhile, had proven to be a strong college student, twice making the dean’s list while majoring in chemistry and bacteriology. His strong performance as a bacteriology major won him induction to Phi Beta Kappa, the national honor society.³ In addition to his core science curriculum, he had completed eighteen units of psychology.⁴ After earning his undergraduate degree he remained to study for a master’s in microbiology, which he received in late 1971. The university then accepted him as a candidate for a Ph.D. His doctoral advisor, Professor Peter Bonventre, remembered him as introspective, someone who would “happily sit in a dark room for an hour or two on his own. He was a little different.”⁵

That didn’t mean he was always silent. In countless conversations over breakfast or lunch with a fellow doctoral student, Robert Baughn, Ivins held forth on “a whole gamut of subjects” and was equipped to support his positions on matters both philosophical and scientific. “Bruce was one of the smartest people, book-wise, that I’ve ever known,” Baughn remembered. “Common-sense-wise? He was the kind of guy that didn’t have the sense to come in out of the rain.”

Baughn recalled that Ivins was never without a black leather notebook in which he plotted out his daily movements in fine detail. Once when Ivins left it out on his desk, Baughn and another student leafed through the book. “It was, ‘7:15—brush teeth. 7:20—comb hair. 7:30—finish dress.’ ” Baughn considered Ivins quirky, not crazy, and he had seen a warm side to him. Baughn was touched by how, when he occasionally brought his young daughter to the university, Ivins would excitedly rush out into a corridor to play with her.⁶

Bruce, who with his brothers had been led by Mary Ivins each Sunday to the Presbyterian church in Lebanon, reassessed his faith after her passing, and in the spring of 1972 he converted to Catholicism. If she were alive and knew, he wrote in a personal letter, “m

mother would have had a *STROKE*.”⁷

Bruce became a regular at Newman Hall, a place for campus Catholics to socialize and worship. He attended mass and prayer group meetings and played piano and other instruments there. His entrée to Catholicism was the result of his friendship with a fellow microbiology student, Bill Hirt, who, along with his wife, Ann, was impressed by Ivins' intellect and gentle nature. The Hirts also were struck by their friend's gift for music. Ivins would hear a song on the radio and say, “That sounds like B-flat.” And then he would play it on the piano.

Ivins talked to the Hirts at length about his upbringing. His mother, he said, was severe and harassing. He regarded his father as contemptibly indifferent. Ivins said he felt so disconnected from his family that “I think I must have been adopted because I'm so different from my two brothers and my parents.”⁸ Even his conception, he told the Hirts, was devoid of tenderness. He later claimed in a note to them that he was born “a ‘Positive Pap Smear Baby,’ ” adding: “Back in the mid 1940s, if a woman came up with a positive pap smear, she was told to get pregnant, and that the hormonal changes would correct the medical condition. Soooo ... my parents couldn't stand each other at that time ... and I became a medical necessity!”⁹

The bizarre tale about his conception was not as sad as the truth. Randall and Mary Ivins had planned the arrivals of their first two children, but by late 1945, when Thomas was eleven and C.W. was six and a half, the couple had no desire to add to the family. Hence Mary Ivins's fury when she learned that she was pregnant. In conversations with a sister-in-law, Ellen “Nell” Knight, Mary described how she tried to abort the pregnancy: Over and over, she descended a series of steps by bouncing with a thud on her buttocks. When he was an adult, his Aunt Nell shared this information with Bruce Ivins and other family members.¹⁰

Bill and Ann Hirt grew so fond of him that they chose Bruce Ivins to be godfather of the firstborn, a daughter. And they arranged a date for him with one of Ann's sisters, Mary Westendorf, a teacher at a Catholic school in Dayton, Ohio.¹¹

Although they went out only once—Bruce took her to dinner at the venerable Golden Lamb in Lebanon—Mary remembered enjoying their conversation. Bruce alluded to his unhappy childhood, telling Mary she was lucky to have loving siblings and a family that got along. Bruce struck her as a gentle soul, but also a loner in search of acceptance.¹²

Not long afterward Bruce went on a church-sponsored retreat, where he met Mary Diane Betsch, a nursing student from Cincinnati who was eight years his junior. Raised a strict Catholic in a German American family, Diane, as she was known, was almost as tall as Bruce at five-foot-ten. Unlike him, the strong and sturdily framed Diane was an impressive athlete, excelling at basketball, swimming, and softball. The couple did share musical talents: Bruce was a facile keyboardist, guitarist, and composer, Diane a strong violinist and vocalist. On August 22, 1975, they married in Cincinnati. Bill Hirt served as best man.

Bruce submitted his Ph.D. thesis (“Binding, Uptake, and Expression of Diphtheria Toxin in Cultured Mammalian Cells”) in December 1975, and he and Diane headed to the University of North Carolina at Chapel Hill, where he took a position as a postdoctoral researcher and Diane worked as a registered nurse. A few months after the move, Bruce was awarded his doctorate in microbiology from the University of Cincinnati. It was mid-1976 and he was no

thirty years old.

Bruce's boss, Priscilla "Pris" Wyrick, was a microbiologist brimming with passion for the work at hand. Though Wyrick occasionally played pickup basketball with Diane and found her "very charming and pleasant," Ivins was nonetheless apologetic about his wife, who he said felt intimidated in the company of academics. This, he explained, was why the couple didn't have people over for dinner and why Diane was not seen at social events with her colleagues.

Nearly every afternoon Ivins would excuse himself for an hour to clear his head with yoga or meditation in a campus library. He also could be spotted riding his bike around campus carrying a sack with his juggling gear. He juggled four or five items at a time, anywhere someone might notice him. "He was very aware of other people's opinions of him. Very sensitive to other people's opinions of him," Wyrick recalled. Ivins was also curious and concerned about others' day-to-day woes. "He was enthusiastic and vivacious, just wanted to know about you and make you feel good." But Wyrick sensed a subtext: "If I'm this way about you, you will accept me."¹³

Solicitude aside, Ivins saw himself as a person of superior intellect and wanted badly to win admission to Mensa, the society of the brainiest.¹⁴ On the other hand, he perpetually lamented his lack of "athletic looks" and skills—deficits he blamed for his inability to gain easy social acceptance. He wanted to be liked, but was always struggling to fit in, a man transparently convinced of both his gifts and his shortcomings.

The once reluctant teenager was nonetheless eager to strike up conversations, even when they distracted his colleagues from their work. And while his inquiries were never viewed as obviously sexual, he began prying into the backgrounds and the personal lives of female colleagues in ways that made them uncomfortable.

One of the women was Elizabeth Brownridge, a lab technician whose desk adjoined his. She saw Ivins as pleasant but an "odd bird." He was immune to nonverbal cues and either couldn't or wouldn't respect social boundaries. "He was very interested in people's personal lives. And sort of wanted to know more about you, personally, than sometimes you were willing to tell," Brownridge recalled. "Sometimes he would go too far and you'd just say 'Knock it off.' He wanted to be accepted and wanted to be part of the gang, but he was just a little off the beam."¹⁵

Both Wyrick and Brownridge viewed him as a religious straight arrow. "Sort of a Mr. Goody Two-shoes," as Wyrick put it. "A good churchgoing man, good Christian, good religious sort of life." In fact, Ivins struck acquaintances as a man who would look down on them for any moral transgression.¹⁶ Based on the side of him that they saw, Ivins was not someone people would have suspected of any form of wrongdoing, let alone criminality.

They would have been shocked, then, to know what Ivins was up to one night in Chapel Hill. He had been keeping watch on the campus chapter of Kappa Kappa Gamma, the sorority he still blamed for his rejection by a coed years earlier. And now he was ready to do something about it.

As he approached the sorority house on this particular night he noticed that several lights were on, but based on his past observations he was confident that no one was inside. Ivins entered through a bathroom window. With the help of a penlight, he climbed a staircase and prowled the next level. When he found a locked hallway closet, he forced it open with

piece of metal.

Inside the closet, he found a few loose papers related to Kappa Kappa Gamma rituals. And something else, something of far more value to him: It was the “cipher,” a glass-enclosed sheaf of documents used to decode the sorority’s most closely held secrets. After roaming the chapter house for about an hour, he left with the prized cipher and other papers that interested him.¹⁷

Ivins was determined to learn as much as he could about the customs of KKG and other sororities. After he discovered that a doctoral student working across the hall from him had been active in Kappa Kappa Gamma, Ivins startled her one night with a spot-on recitation of the group’s secret initiation rituals. Then he pressed for details. “*Why did you do that?*” Ivins asked her. “*What was the meaning of that?*” The doctoral student, Lori Babcock, tried not to let Ivins see how shocked she was at what he knew. “Bruce, I don’t know what you’re talking about.” Babcock thereafter tried to steer clear of Ivins, but she would never forget the encounter. “The hair on the back of my neck went right up when he started toying with me,” she recalled. “I just thought it was real creepy and bizarre.”¹⁸

When Ivins questioned Priscilla Wyrick about her own student-days sorority, Chi Omega, she cut him off. Referring to his daily yoga and meditation regimen, she asked, “ ‘Okay, what’s your mantra?’ And he said, ‘Oh, I can’t tell you that.’ And I said, ‘Well get off the secret handshakes and secret passwords. That has nothing to do with your science. It’s none of your business.’ ”

Yet Wyrick was pleased that Ivins had come to Chapel Hill. She found him to be conscientious, bright, a very good scientist. He was meticulous about his experiments. “He was very careful at the bench. I never had to question the authenticity of his data. Even Wyrick also noticed that Ivins was “extremely careful” while handling cultures of bacteria.¹⁹

When it came to shutting off Ivins’s unwanted personal inquiries, Wyrick had a distinct advantage: She was the boss. The lab tech Elizabeth Brownridge was not; nor was Lori Babcock; nor was another doctoral student who worked in a separate lab but in the same building, twenty-four-year-old Nancy Haigwood.

The daughter of a Marine Corps officer, Haigwood had moved frequently as a child and was accustomed to meeting new people. She sensed that the newly arrived Bruce Ivins “was clearly looking for people he could befriend and hang out with.” She welcomed him to UNC and also met his wife, Diane. When Bruce learned that Haigwood and her husband were relocating to a new house, he and Diane joined ten or so other people who helped them move.

Haigwood, preoccupied with her scientific work, soon found Bruce Ivins to be “cloying” and “annoyingly intrusive.” He had noticed a T-shirt she wore, identifying her former sorority, Kappa Kappa Gamma, and began pressing for details. What were KKG’s practices, its customs, its rituals? As a graduate student, to what extent did she remain involved with KKG? Haigwood let Ivins know that she no longer had interest in these things—and even less in discussing them. “Most people, if you tell them to back off or change the subject, they would never come back to that. Bruce came back to it at least once a month—maybe more frequently. He was always doing it in a very kind of *friendly* way.”

Ivins wrote a note to Haigwood, lamenting that she was not reciprocating his overtures of friendship. The episodes struck her as strange, yet harmless. Haigwood concluded that Ivins

was in need of constant approval and attention, but she had no inkling what he was really up to.²⁰ Ivins tried to learn everything he could about her. He would drive past her home at an hour, just to gaze in.²¹

As Ivins would later confide to a psychiatrist, he envied Haigwood's self-confidence. He imagined her as both the ideal mother he never had and as his wife. He experienced Haigwood's distancing of herself from him as a replay of his mother laughing at him. Though in fall 1978 Bruce and Diane Ivins moved some three hundred miles from Chapel Hill to the suburbs of Maryland, where Bruce took a research position at the U.S. Defense Department health sciences university in Bethesda, he continued to obsess about Haigwood. When he felt bothersome gastrointestinal symptoms, along with sadness and insomnia, he attributed all of it to her absence from his life. He confided to the psychiatrist that he had thought through various plans to kill Haigwood, including with poison.²²

By the spring of 1979, everything that Nancy Haigwood had worked so hard for, all of her aspirations, hinged on converting the data in her lab notebook into her doctoral dissertation. The notebook was filled with hand-recorded hypotheses, results of experiments, notes, pictures, all the records that captured her scientific work over the previous several years. There was no duplicate. She kept the notebook in a locked room on the seventh floor of a laboratory building at UNC.

One day, it was gone.

She alerted her professors, UNC scientists Clyde A. Hutchison III and Marshall Edgell. Professor Wyrick got word, too. Eventually, after fruitless searching, the police were brought in. After a couple of days of sheer agony, Haigwood received an anonymous note. The writer said that the notebook could be found at a certain street mailbox in Chapel Hill, near the campus. The authorities found Haigwood's irreplaceable notebook there—inside the blue United States Postal Service mailbox. The case was closed without an arrest. Haigwood was left with her suspicions, which she would not voice to Ivins until a year or more later. "I put a little man in my head thinking, 'The only person who's sneaky enough to do something like that is Bruce.'" ²³

It was preposterous to think that he would go to such trouble to steal the notebook. Right. Wrong. Ivins had executed a carefully planned scheme to punish Haigwood, the self-assured "Kappa," for her indifference toward him.²⁴

With his furtive retaliations against Kappa Kappa Gamma and now Nancy Haigwood, Ivins was settling into a recognizable pattern: One-on-one, he was the smiling, devout colleague who exuded empathy. Behind people's backs, he was prone to bizarre, secretive acts of vengeance, for the most obscure of slights.²⁵

SECRETS AVAILABLE

The value of biological warfare will be a debatable question until it has been clearly proven or disproven by experience. The wide assumption is that any method which appears to offer advantages to a nation at war will be vigorously employed by that nation.

—U.S. Secretary of War Henry L. Stimson, reporting to President Franklin D. Roosevelt, April 29, 1942

It was at a bleak moment during World War II—amid fear that the Germans were preparing to drop bombs filled with botulinum toxin on Britain—that the U.S. biological warfare program was born. Intelligence reports suggested that Japan also could launch a biological attack. Secretary of War Henry Stimson's emotionless note to FDR belied the terror evoked by such weaponry.

Needing a place for testing that was isolated but not too far from the Pentagon, officials converted a landing strip known as Detrick Field, outside Frederick, Maryland, into the center of the nation's infant biological program. The weapons of biological warfare could be bacteria, viruses, or toxins that cause disease—and the targets could be humans, animals, or plants. Though no such weapons were deployed against the British or the Americans, the victorious Western Allies continued to work toward developing the munitions.¹

After World War II, anthrax became a staple of the fledgling U.S. arsenal. It is a hardy organism that can lie dormant for many decades, if not centuries.² The disease it causes is not contagious, but anthrax had for centuries been a scourge to sheep-herders and, later, cattlemen in temperate climates. Indeed, the pioneers of microbiology, Louis Pasteur and Robert Koch, had worked on anthrax because in their time, the late 1800s, it was a major killer of domestic grazing animals in Europe.³ If ingested by an animal grazing on plants that shoots in contaminated soil, anthrax spores can penetrate the lining of the gastrointestinal tract and swarm through the blood, attacking the spleen, the brain, and virtually every organ. As recently as 1945, an outbreak of anthrax in Iran was reported to have killed a million sheep. The advent of veterinary vaccines eventually reduced the toll, though anthrax deaths among livestock and deer have persisted in the United States and elsewhere.

As has been understood since the work of Pasteur and Koch in the nineteenth century, anthrax exists in two distinct states, as actively growing bacteria and as dormant spores. In the active state, it grows readily to high concentration within animal (or human) tissue, releasing toxins that can kill its host within a few days. And if the blood of a carcass is exposed to air, an abundance of newly formed anthrax cells can be deposited into the dirt, waiting in the dormant state, as spores, for the right conditions to infect and kill again.⁴ The spores are inert, within a shell-like coating. But when moved to a favorable environment—within a living animal—the spores revert to the active state, undergo rapid cell division, and unleash their deadly toxins. In the laboratory, anthrax is grown readily, either within a liquid

broth or on the surface of an agar-based, gelatinous material in a Petri dish.

The bacterium's scientific name, *Bacillus anthracis*, derives from the Greek word for coal, *anthraki*. This alludes to the black scabs that appear on the skin of a person who develops cutaneous anthrax after exposure to an infected animal or its hide or fur.⁵ Among human cutaneous anthrax is the most common form of the disease, accounting for 95 percent of reported U.S. cases. It is rarely deadly if treated promptly. Another form, gastrointestinal anthrax, is seldom seen, but is highly lethal. Infection by this second form results from eating the undercooked meat of a stricken animal.

The third form of the disease, inhalational anthrax, is also highly lethal and extremely rare. If treated promptly with an antibiotic, it can be cured. But because the initial symptoms of exposure—cough, painful tightness of the chest—can be confused with a bad cold or a range of other maladies, treatment may come too late to prevent death.

As the world's two superpowers vied for supremacy, anthrax appealed to both U.S. and Soviet military planners as a possible weapon because of its lethality and because it would remain stable during prolonged storage. And since it was theorized that, under ideal weather conditions, anthrax could be disseminated over a wide area, it was also thought capable of inflicting mass casualties. In 1950 and 1951, when military researchers sprayed two nonlethal simulants of anthrax from ships in the Pacific, two miles from San Francisco, the simulants dispersed with the wind and were detected at monitoring stations up to thirty miles away. The results convinced the biowarfare scientists at Fort Detrick that, had anthrax spores been sprayed instead of the simulants, many thousands of people could have been infected and killed.⁶

Yet the totality of U.S. laboratory work and field testing, from the 1940s to 1960s, suggested that even the most carefully designed biological weapon remained undependable for use in combat: A change of wind direction, for example, might sweep anthrax back onto the attacking force. Compared to nuclear armaments that could be delivered from land-based cruise missiles, high-altitude bombers, or submarines, no biological agent seemed as reliable for killing on such a large scale.

And so on November 25, 1969, President Richard M. Nixon announced that the United States would unilaterally end its biological weapons program immediately and “confine its biological research to defensive measures.” Nixon's move proved catalytic: In April 1972, the Soviet Union agreed to the newly negotiated Biological Weapons Convention, providing the president a peacemaking boost at a time of upheaval over the Vietnam War. By 1975, more than one hundred countries had signed the treaty, which described use of the weapons as “repugnant to the conscience of mankind.” There was, however, a glaring loophole: The treaty provided no means for verifying compliance.

Nixon was aware of the pitfalls inherent to deploying biological weapons—and he was no ingenué when it came to dealing with the Soviets. He had made a realpolitik calculation. With its nuclear arsenal, the United States possessed an overwhelming deterrent against any country that might consider waging biological warfare.

The shrewdness of Nixon's calculation could be questioned after an event several years later in the USSR. By signing the 1972 treaty, the Soviets had promised to abandon the development of biological weapons. Having come aboard in response to Nixon's first move, they assessed their options under the agreement. And then they cheated.⁷

Dramatic evidence of their betrayal emerged in early April 1979, when an explosion rocked a military research complex, 1,200 miles southeast of Moscow, in the low-slung Urals Mountains. The complex, officially known as the Military and Virology Institute, housed anthrax—and the blast loosed a plume of it on the city of Sverdlovsk, home to some 300,000 people.

As much as 10 kilograms of anthrax might have been released, some of it floating on the wind. The blast may have been caused by a missing air filter, which, because of a lapse in communication between workers, was not replaced before the beginning of a new shift.⁸

The first sickened patients were military and civilian employees of the research institute. Soon many others sought treatment, including employees from a ceramics factory nearby. The initial symptoms suggested pneumonia. However, the patients soon developed high fever, followed quickly by serious breathing difficulties, choking attacks, and even death. The bacterium killed at least sixty-four people and caused more than one thousand others to be hospitalized. It was the worst biowarfare accident ever recorded. Autopsies revealed advanced accumulation of fluid in the lungs and other symptoms that clearly pointed to inhalational anthrax as the cause of death.⁹

The first media report of the incident was published six months later, in October 1979, by a Russian-language newspaper in Frankfurt. U.S. intelligence agencies sought more details—but the Soviets denied that the institute was used for bioweaponry or that there had been an accident. The deaths and hospitalizations, the Soviets said, were caused by an outbreak of anthrax among animals whose meat was then eaten by certain unfortunate residents of Sverdlovsk. American officials remained unconvinced. In March 1980, during the first review conference for signatories to the bioweapons treaty, the U.S. ambassador pointedly raised questions about Sverdlovsk with his Soviet counterpart.¹⁰

The Americans made no move to withdraw from the treaty. But the reports about the incident at Sverdlovsk resonated at Fort Detrick, where years before Army scientists had worked in secrecy to develop germ weapons. Nixon's decree in 1969 had sent many of the original bioweaponers packing, and also led to the increased staffing of a newly formed scientific unit at the sprawling base: the United States Army Medical Research Institute of Infectious Diseases. The microbiologists, physicians, and other specialists at USAMRIID would also handle anthrax and other deadly biological agents. Their stated mission, however, was purely defensive: developing medical countermeasures, like vaccines, to protect U.S. forces in the event of a biological attack.

Sverdlovsk galvanized thinking in certain quarters of the U.S. defense and intelligence establishments. If the Soviets were still producing anthrax munitions, what else might they be doing to gain an advantage? Was the biological weapons treaty sowing a dangerous complacency? The best available answers were not comforting. But other than renouncing the treaty and seeking a resumption of the offensive program, what could U.S. defense planners do?

Compared to multibillion-dollar aircraft or missile defense programs with powerful political sponsors, USAMRIID was an orphan. Its budgets were unfailingly tight, its mission confined to developing the medicines to protect American forces. While the intelligence agencies continued to investigate the Soviets, USAMRIID formed a three-member committee with

- [read online The Whiteness of the Whale: A Novel pdf, azw \(kindle\), epub](#)
- [Sylvester, or the Wicked Uncle pdf, azw \(kindle\), epub, doc, mobi](#)
- [download Broken Borders \(Criminal Investigation Detachment, Book 2\)](#)
- [click Western Illuminated Manuscripts: A Catalogue of the Collection in Cambridge University Library here](#)
- [Start a Revolution: Stop Acting Like a Library pdf, azw \(kindle\), epub](#)
- [Bite Me: A Love Story online](#)

- <http://www.gateaerospaceforum.com/?library/The-Whiteness-of-the-Whale--A-Novel.pdf>
- <http://hasanetmekci.com/ebooks/Sylvester--or-the-Wicked-Uncle.pdf>
- <http://www.khoi.dk/?books/Broken-Borders--Criminal-Investigation-Detachment--Book-2-.pdf>
- <http://www.khoi.dk/?books/George-B--McClellan--The-Young-Napoleon.pdf>
- <http://kamallubana.com/?library/Living-Downstream--An-Ecologist-s-Personal-Investigation-of-Cancer-and-the-Environment.pdf>
- <http://www.rap-wallpapers.com/?library/The-Seventh-Book-of-Lost-Swords--Wayfinder-s-Story--Books-of-Lost-Swords-.pdf>