

From *Stolen Virus*

Chapter 1

University of Minnesota, St. Paul Campus

Evening, March 11, 2004

In the fading light, Jason drove between the leafless maple trees lining Gortner Avenue. He passed the entrance to the brick Veterinary Diagnostic Lab on his right and turned left into a parking lot. He and Joe, his fellow graduate classmate, left the car and headed to the edge of the lot where a chain-link fence surrounded the university's veterinary isolation facility. They stopped at the entrance gate, their breath turning to mist. It was seven o'clock and the temperature had dropped to eighteen degrees.

Jason took off his gloves and fumbled to get the key into the ice-cold padlock. Finally, he unlocked the gate and held it open for Joe, then closed and locked it behind him. Joe, recently arrived from China, hadn't worn a hat, and his bare hands were shoved deep into the pockets of a thin windbreaker. Jason shook his head and reminded himself to talk to Joe about wearing warmer clothes when they were finished tonight. Raised and educated in Michigan, he was continually surprised when students from tropical and sub-tropical regions tried to get by without buying winter clothing.

They took the sidewalk the fifty feet from Building A to Building B. The only lights in the isolation compound were the single bulbs over the entrance to each cinderblock building.

Jason passed his ID badge under the card reader, listened for the lock to click, opened the door, and entered the men's locker room. He searched for a pen and signed the entry logbook as Joe stripped. Tall and lanky, Jason swept his shirt and sweatshirt over his unruly auburn hair and down his arms in a single motion. He hung them in a locker and turned to Joe. Shorter and stockier, Joe, in only his briefs and socks, was shivering and rubbing his arms with his hands.

It's at least seventy degrees in here, Jason thought. "Do you feel okay, Joe?" he asked.

Joe didn't feel well. "I'm okay. Still tired, still jet-lagged," he said, and hoped he was right. He hadn't felt well when he boarded his flight to the States four days ago, but he'd passed it off as nerves and claimed to be well when asked the standard questions at the airport. Approval

to study in the States had taken a year of dodging bureaucratic pitfalls and he wasn't about to jeopardize the opportunity at the last minute.

Joe showered and stepped through to the sterile passageway on the other side, where clean towels and clothing were waiting. Jason followed.

“What was the temperature when you left Hong Kong?” Jason asked as they pulled sterile white coveralls over their scrubs.

“About eighteen degrees Centigrade. Hong Kong rarely gets below fifteen degrees in March, even at night.”

Jason pointed toward a rack of tall rubber boots. “Find your size. It's printed on the bottom. Sterile boot covers are in the cabinet to your right.” He thought a moment, converting Centigrade to Fahrenheit. “So Hong Kong is roughly sixty to sixty-five degrees Fahrenheit at this time of year?”

“Yes. Safety glasses?”

“They're in a box on the next shelf up, next to the latex gloves and face masks. Might as well grab those, too. Did anyone tell you about Minnesota weather?”

Joe paused; he didn't want to sound like a fool. “The graduate school sent brochures, but paperwork, packing—I haven't read them yet.”

Their plastic boot covers scuffed on the floor as they walked down the brightly lit central hallway. The corridor was spotless; its glistening cream-colored concrete floor and walls smelled faintly of disinfectant. Dubbed the “clean hallway,” nothing that might be contaminated was allowed to enter it.

They stopped in front of the first small window and watched the five black-and-white, two-day-old calves in the room. All had been inoculated with bovine coronavirus, or BCV. Three of the calves were indignantly bawling to be fed. The other two were lethargic, their tails coated with feces by diarrhea caused by the virus.

“There's an extra sweatshirt and coat in my car,” Jason said. “You can wear them after we finish work. I'll take you shopping for warmer clothing tomorrow.”

Joe thanked him and volunteered to feed and examine the calves. Jason noticed sweat on Joe's forehead but shrugged it off. The disposable coveralls were hot; the fabric didn't breathe.

Jason entered the next room and put nipple bottles full of warm milk out for the calves. These calves hadn't been inoculated with BCV, and all of them greedily set to work on the

nipples, their fuzzy little tails twitching back and forth with pleasure. He completed his work and recorded his observations in a three-ring binder labeled “BCV Study No. 3.” That done, he removed his coveralls, gloves, and boot covers, put them in a medical waste barrel, and exited the calf room to the “dirty” hallway.

The dirty hallway was identical to the clean hallway except for flat pans filled with bright yellow disinfectant sitting on the floor next to each door. Jason stepped into the nearest pan, scrubbed his boots with a long-handled brush, and waited for Joe to exit the first room.

Several minutes passed with no sign of Joe. Jason peered through the small window in the door but couldn't see Joe. Concerned, Jason showered, dressed as before, and took the clean hallway to the first calf room. The shower, change of clothing, and return to the clean hallway were required to control contamination between rooms. For the same reason, entry into rooms from the dirty hallway was never permitted.

Joe was standing in the center of the calf pen, hosing diarrhea into the large drain in the floor. He fiddled with the zipper of his coveralls with one gloved hand.

“You don't have to do that tonight,” Jason said. “We only clean pen floors during the day.”

Joe kept his head down and continued working. “No problem. Almost done.” He finished hosing the brown liquid feces down the drain.

As the spray from the hose hit the floor, minute droplets carrying microscopic particles were blasted into the air throughout the room. The droplets were too large to be inhaled deep into the lungs, but they settled on the calves where they would be licked off during grooming.

The men exited through the dirty hallway, showered, dressed, and left the building. To the west, the campus was dark except for a few streetlights and a light over the entrance to the Diagnostic Lab. In the other direction lay the inky darkness of the empty State Fairgrounds and its vast parking lots. Jason found the extra clothes in his car for Joe and gave him a ride back to his apartment. It was only a ten-minute drive to the apartment complex on Lexington, but Joe asked midway to stop to use a bathroom.

Jason sat in the car at the gas station and looked around at the mud, dead grass, and leafless trees as he waited for Joe. *God, March is a dismal month in Minnesota, and the lakes and ponds just beyond the trees will be a damned heaven for mosquitos in summer*, he thought. He wondered if the graduate school had warned Joe about that.

It was eight o'clock when Jason got back to his apartment and crawled into bed. He'd begun his day at six that morning, trying to catch up on lab work from the previous calf study. Teaching, preparation of lab reagents, a literature search, and working with the calves had kept him busy the rest of the day and into the evening. Although Jason was exhausted, sleep remained elusive.

In the dream world between waking and sleeping, his mind repeatedly played the scene of Joe hosing down the floor in the animal room. Something had been wrong, very wrong, but he couldn't identify it