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Liquid Gold

Delano Boudreaux woke to the sound of men cursing and the smell of wet, stale sweat. He didn't want to open his eyes. Just a few more seconds, he said to himself. A few more seconds and I'll get up, before the guards come.^I

He rolled over on his flimsy mattress, straightening out to flatten his body against the cool concrete wall along his bunk. This will have to last me all day, he thought. Soon I'll be out in the goddamn sun, boiling my hide, getting bitten by the Louisiana state bird better known as the mosquito. I'll be bent over, sweat running up my spine, goose-picking grass from around the fences, and weeding around the flowers. As if the damn flowers made the prison look good.

Not that Boudreaux, who arrived there in 1979, had it as bad as most of the other inmates at the Louisiana State Penitentiary at Angola, America's largest maximum-security prison. Located northwest of Baton Rouge, at the end of state Highway 66, Angola is a nineteenth-century plantation transformed after the Civil War into an 18,000-acre prison farm. The dormitories, which a map on the prison website says can hold up to 5,295 inmates,² spread across its rich bottomland and are surrounded on three sides by an alligator-infested stretch of the Mississippi River. The fourth side is swamp, with more gators and the world's biggest, baddest rattlesnakes. At least that's what the inmates—most of them violent offenders and lifers—are told. "The Farm," as it is dubbed, has been used continuously for agriculture for more than two hundred years, and

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most of the inmates, except for those on Death Row, work the fields, growing cotton, soybeans, corn, and other vegetables.

Today, Angola is perhaps best known for its rodeo, an annual extravaganza that every October draws thrill-seeking tourists by the thousands to gawk at inmates clad in black-and-white stripes as they ride bulls and broncos. On the prison's separate rodeo website, longtime warden Nathan Burl Cain, who resigned in 2016, boasted that it was "the most unique show or performance you'll see in this country or maybe in the world." One purpose, Cain said, was to take selfish men and teach them to worry about others.³

But when Boudreaux first got there, the prison had more of a reputation as a corrupt and violent hellhole whose murder rate sometimes challenged that of inmate deaths by natural causes. Angola was a place full of evil men, murderers, rapists, and the worst of the worst. Most would die in that wretched place, one way or another.

Boudreaux, of course, was innocent. He insisted so. Convicted of armed robbery—his brother, he said, was the only one with a gun—he drew a sentence of sixty years. Eventually, in 1999, he would be released after serving twenty-one years.

But that was years away, little more than a ridiculously distant dream on that clammy, muggy morning, as he reluctantly climbed from his bunk for another day's work. It would be hot, of course, but worse for those inmates who toiled in Angola's broad, open fields. Boudreaux would not be among them, for he had a bit of a scam going: he'd conned the prison medical department into believing he had a bad shoulder. That's how he got assigned to weed-pulling duty, and while he hated it, it was a lot better than the harder labor of the farm.

He was almost ready to leave for work when he remembered something that made him smile. He wouldn't be yanking weeds today after all. No scalding sun, no mosquitoes. No, sir.

It was bleeding day.

Twice a week, an inmate could get a "call out" from work for the whole day just by spending an hour with a needle in his arm, donating blood plasma that then was sold and used for who-knows-what. Cosmetics for ladies, somebody said. Plasma was the secret ingredient in those fancy brands they sold at department stores, the inmates had heard.

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The plasma center operated conveniently in a tin and cement-block structure on Angola's grounds. The center contained a holding cell, restrooms, a bleeding area, and storage freezers. Like others of its kind, it was operated not by the local hospital or the Red Cross but by a for-profit company whose owner paid the state handsomely for the right to set up shop at the prison. The profits for the company, Louisiana Biologics, were even greater; by the early 1980s, they were in the millions of dollars, according to documents later produced in lawsuits. Louisiana Biologics ran half a dozen or so facilities at prisons in Louisiana, Tennessee, and Florida. Many similar civilian centers, owned by other companies, operated in cities and towns across America, usually in neighborhoods where down-on-their-luck types needed quick and easy cash.

At Angola, inmates helped run many of the day-to-day operations. It wasn't unusual for a donor to arrive at the center and have fellow inmates assist as someone recorded his name, swabbed his arm, stuck him with a needle, drew the blood, spun it in a centrifuge to separate out the watery plasma, and then reinfused the donor with his red blood cells. Each donor gave two units per visit, one plastic bag at a time, and because he was getting back his red cells, could be bled twice per week without fear of anemia.

The bags would quickly be slant-frozen—suspended at an angle—the better to preserve the precious blood proteins. Then they were boxed and **placed** on pallets, with bills of lading and invoices attached to track their every move.

Corporate documents and witness depositions reveal that, at the height of Angola's productivity, a large shipment of human plasma would be picked up every two weeks from the penitentiary, loaded into tractor trailers, and delivered to a major international pharmaceutical company, Baxter Healthcare Corporation's Hyland Division, at its manufacturing facility in Glendale, California. In the early 1980s, between 20 and 25 percent of Glendale's plasma came from prisons, according to the documents.⁴

Once at Glendale, the frozen plasma bags would be taken to a processing room and slit open, and the precious contents dumped, thousands of units at a time, into huge vats. Rotating paddles would agitate and liquefy the plasma as it thawed. From there, the proteins would be extracted and sent on for further processing.

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for the whole nating blood Cosmetics for 1 those fancy d. In industry parlance, the stuff of life could be cracked into separate and distinct components. These blood proteins, called fractions, were the raw material not for cosmetics, as some inmates believed, but for several lifesaving and often breathtakingly expensive medicines, serums, and vaccines. Manufactured at the time primarily by Baxter and three other large pharmaceutical firms, also known as fractionators, these products brought in billions of dollars globally in annual sales.

In late 1993, as part of a lawsuit filed by a patient who claimed he had contracted the AIDS virus from blood products, the manager of Baxter's plasma operations testified about the safety of the process. The plasma, he insisted in sworn testimony, came from "a completely wholesome, diverse group of donors, including college students, housewives and folks that had jobs who would come in before work or after work, some folks who had part-time jobs and some people that were unemployed."

Like Rumpelstiltskin spinning straw into gold, Angola's facility churned out this yellowish plasma, opening its doors to donors early in the morning and bleeding them into the night. It had metal tables for the inmates to lie on, some so beaten up that a table once collapsed underneath a guy getting bled. Boudreaux, who took a paralegal course in prison and wasn't one to pass up an opportunity, promptly filed a grievance on behalf of his fallen comrade.

Yes, Boudreaux and the other inmates loved what they called "the bleeding," and not just because it was considered a day's work. "Donate" wasn't precisely the right word for what they did. They were paid between five and fifteen dollars per donation, as much as thirty dollars per week if they were bled twice. That compared very favorably to the four cents per hour they received for working in the fields, or twenty cents for working in the laundry.

So there wasn't much a man wouldn't say or do to stay on the donor list.

The blood money went into a commissary account, which an inmate could spend on cigarettes, peanut butter, sugar, coffee, and personal items. Ironically, he also might use those goods, especially the cigarettes, to bribe his way back into the plasma center, should somebody suddenly decide a certain guy's blood was no longer fit to sell. Under federal safety regulations, donors were supposed to be excluded permanently if they had a history of hepati common in prisons sexual sex, intrave tations all were ran

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hich an inmate , and personal the cigarettes, body suddenly r federal safety ntly if they had a history of hepatitis, and the potentially dangerous liver infection was common in prisons—places, after all, where high-risk activities like homosexual sex, intravenous drug use with shared needles, and homemade tattoos all were rampant. That, at least, was the rule.

But at Angola, for example, there was an inmate named Shorty who specialized in tattoos. He had fashioned a tattoo gun from the motor of an old cassette player, the barrel of an ink pen, and a guitar string. He used that contraption over and over on men throughout the prison. Still, if you slipped two cartons of cigarettes to a worker at the plasma center, he might look the other way about tattoos or needle tracks, even if he knew you'd just had sex on the prison bus, or in the honeymoon suite better known as the plasma center's bathroom. Some inmates even had sex in the holding cell as they waited to give their blood. That cell was a social center in a rough world, where prisoners housed in distant barracks could also meet, talk, fight, or shoot drugs.

Indeed, in all the years that Boudreaux was a donor—until the last remnants of the nation's prison plasma machine were dismantled because by then nobody, not even those gullible foreigners who trusted everything American, wanted inmate blood anymore—he estimated that he'd seen a real, honest-to-God doctor at the plasma center maybe once. The exam, he said, went something like this:

DOCTOR: How you doing? You hurting anywhere? BOUDREAUX: No.

End of exam.

So at a time when the screening tests performed on donated blood and plasma were insufficient, when health experts including those from the United Nations were warning that prisons were "often ideal breeding grounds" for HIV,⁵ when thousands or even tens of thousands of plasma units were combined into a single industrial vat for the sake of saving on manufacturing costs, Boudreaux wasn't asked if he was having sex with other inmates, consensual or otherwise. He wasn't asked to remove his shirt so somebody could check for needle marks, tattoos, piercings, or blood-brother ritual cuts. If anybody did ask, he'd deny engaging in such behaviors. For the eighteen dollars he made ,each week, who wouldn't? Not long after he got out of prison in 1999, Boudreaux was diagnosed with hepatitis C, a potentially deadly form of the virus that causes liver cancer in some patients. He claimed not to know when or how he got it.

He certainly wasn't the only one. In the 1980s, there were about a dozen plasma operations in U.S. prisons, mostly in southern and western states, on average paying between \$5 and \$8.50 per donation. Between 30 percent and 60 percent of all inmates were donors.⁶ Besides Angola, other centers were in places like Raiford State Penitentiary in Florida and Tennessee State Penitentiary in Nashville. Many were operated by businesspeople with ties to local politicians.

So in the 1970s and early 1980s, just before HIV was discovered, if 20 to 25 percent of the industry's raw plasma came from prisons, what about the rest? Much of it, according to corporate and government documents, was collected not at Red Cross blood drives or community or hospital facilities, but at commercial plasma centers. Many if not most of these centers were located in lower-income communities as well as skid-row neighborhoods, including areas frequented by IV drug abusers, alcoholics, homeless people, prostitutes, and illegal immigrants, populations at higher risk for infectious diseases. Maybe these donors were motivated by the desire to help one's fellow man, but most simply needed the money.

So the for-profit plasma centers thrived not just in prisons but in areas close to transient hotels, homeless shelters, and social services. Court exhibits and depositions included numerous examples. There were centers in Texas border towns, where impoverished Mexicans came across the Rio Grande River and sold their blood. They were in neighborhoods like the one in Akron, Ohio, where in 1974, city health officials determined that at least fifty people with hepatitis had sold their plasma, and lawyers representing hemophiliacs learned that women hired to draw blood there were poorly trained, with some of them moonlighting as go-go dancers at a nearby bar. And they were in places like Johnson City, Tennessee, where the center's manager told FDA inspectors in 1984 that some donors were so poor he would lend them shoes so they would be in compliance with the state health code.7 He quickly added that he refused to lend anyone his shirt.

Except for the prisons, much of that network still exists today.

Blood centers also operated in several poor regions of the Caribbean, Central and South America, Asia, and even sub-Saharan Africa, believed to he the birthplace of the Al conters rarely if ever v Administration. In 1978, a people angry with its own partner-who were belie local newspaper publishe simated in 1980; his partn musiness with the wife of schice, was found to be s stely mislabeling it as a blood when it reached its hiood-products supplier. uct had been manufact puty involved, Rhone-I tailed themselves the vi Canada. But they did not use it without knowing Even some of those unwittingly took part is Some plasma centers, fo communities of large ci with hepatitis B. Ads in chimed, "We need a f stamp out hepatitis B" times, the ads said, not dired dollars per year bu in the health and welfa because their hepatitis moduction of lifesavir what was left after ext with the full knowledg plasma pools used to a miniate federal standar history of hepatitis. " HDA official told a rep inaccurate. That does

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be the birthplace of the AIDS virus. Corruption was not unusual, and these centers rarely if ever were inspected by the U.S. Food and Drug Administration. In 1978, a center in Nicaragua was burned down by townspeople angry with its owners—dictator Anastasio Somoza and his business partner-who were believed to have helped plot the assassination of a local newspaper publisher.⁸ Somoza later fled the country and was assassinated in 1980; his partner also left Nicaragua, and reentered the plasma business with the wife of a politician in Belize. Another center, in South Africa, was found to be smuggling plasma out of the country by deliberstely mislabeling it as an animal product, then relabeling it as human blood when it reached its destination: the European factory of a major U.S. blood-products supplier. The ruse wasn't discovered until after the prodact had been manufactured and sold. The suburban Philadelphia company involved, Rhone-Poulenc Rorer Inc., and its Armour subsidiary, called themselves the victims, saying they thought the plasma came from Canada. But they did not issue a product recall, and patients continued to use it without knowing of its origins.9

Even some of those who sold their plasma for more altruistic reasons unwittingly took part in what would become a public-health nightmare. Some plasma centers, for example, recruited heavily for donors in the gay communities of large cities, especially among men who had been infected with hepatitis B. Ads in newspapers targeted at the gay community proclaimed, "We need a few good arms!" and "Do your share!" and "Help stamp out hepatitis B!" and "Donors urgently needed!" These plasma donations, the ads said, not only would earn them as much as thirty-one hundred dollars per year but "at the same time, you'll be helping to contribute to the health and welfare of other gay men and women." And this was true, because their hepatitis antibodies and antigens were used in research and production of lifesaving vaccines and serums. But instead of discarding what was left after extracting these valuable materials, the companieswith the full knowledge of the FDA-poured the remainder into the same plasma pools used to make other medicines. The FDA decided this didn't violate federal standards, despite its rule about excluding people with a istory of hepatitis. "You can argue that it wasn't wise," a high-ranking FDA official told a reporter in 1996. "But to argue that it was violative is maccurate. That doesn't mean that people couldn't have done better."10

BLOOD ON THEIR HANDS

So it wasn't as if the manufacturers or the government were unaware of the dangers. Indeed, from the very start of mass production of hemophilia medicines in the late 1960s, some plasma vats were so disease-laden that the newest employees were deliberately assigned to what every other worker knew was the worst job at the plant: slashing open the plasma bags and dumping the contents into the vats. At one company, fourteen workers who had been in the plasma-processing area for eighteen months or less contracted hepatitis between 1968 and 1971, and blood tests showed that most of their fellow employees also had been exposed, according to a government-funded study published in the prestigious *Journal of the American Medical Association*^{II} The authors didn't identify which company was involved, leaving readers to figure it out based on the authors and geographic clues in the article. Not long afterward, the companies took to dressing their employees in protective moon suits, like so many earthbound astronauts.

Two decades later, the former president of one major blood-products manufacturer, a man whose conscience apparently bothered him enough that he became a consultant for hemophilia activists, would admit in an interview: "It was sort of accepted that all of the workers in our plant were positive for hepatitis B, and so were all the hemophiliacs, and it was accepted that all the hemophiliacs would probably die of hepatitis at some time in their lives."¹²

In 1976, British journalist Michael Gillard investigated the use of plasma drawn from drug addicts, homeless people, and alcoholics, and in a televised series he reported what he had seen in America while tracing the source of the plasma used to make clotting medicines for his countrymen. Gillard visited a dozen plasma centers and each time, despite providing false identification, was allowed to sell his blood. His work sparked the obligatory investigations and proclamations of outrage, but nothing changed enough to prevent HIV from entering America's blood supply, and hemophilia products, a few years later.

Men and boys with hemophilia and their families knew little or nothing of any of this, of course. (The most common form of the condition is genetic and occurs primarily in males.) Neither did many of their physicians, although some had their doubts and refused to prescribe the commercial products, sticking instead with more inconvenient, less effective, blood and plasma transfusions because the freeze-dried clottir in the treatment of hemophilia administered, so even people jobs, marry, and have children youth. Nearly everyone—docto embraced them. And so clottin across America and through m



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blood and plasma transfusions. But the pressure on them was intense, because the freeze-dried clotting medicines were a revolutionary advance in the treatment of hemophilia. They came in tiny vials and could be selfadministered, so even people with severe hemophilia could travel, hold jobs, marry, and have children instead of enduring painful deaths in their youth. Nearly everyone—doctors, patients, and advocacy organizations embraced them. And so clotting medicines emerged as standard therapy across America and through much of the industrialized world.

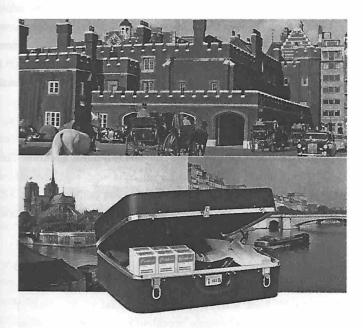




FIGURE 1.1. This early magazine advertisement for Factor VIII products emphasized one of the most desirable attributes of the medicines: portability. They also could be self-administered.

Credit: Marilyn Ness.

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There was some understanding of the potential dangers, especially when patients started getting sick. But hepatitis, they were told, was the price they had to pay, because scientists didn't know how to cleanse the clotting concentrates. Indeed, while much of the manufacturers' plasma was rendered germ-free before reaching consumers who used other products, the more fragile clotting proteins used in hemophilia medicines were not. Impossible and too expensive, the industry said, and the lapdog government regulators went along. Until a foreign competitor began heattreating its hemophilia medicines to kill viruses, none of the major fractionators that purchased plasma from prisoners or other high-risk sellers followed suit.¹³ Even after such methods were added to the process, some companies continued to sell off their older products, especially overseas, with clusters of cases springing up in previously uninfected patients.¹⁴ In internal documents, executives talked about not wanting to lose revenue, contracts, or market share. That would upset the shareholders.¹⁵

So while it certainly horrified those who used these medicines, it shouldn't have surprised the manufacturers or the government when tens of thousands of patients worldwide were stricken. First was hepatitis. Then came HIV. Most people with severe hemophilia who regularly infused commercial clotting drugs between 1980 and 1985 contracted the AIDS virus. Thousands died. So did some of their spouses and children, infected through sex or childbirth before the men were aware they were ill.

- There was David, a handsome, blue-eyed software designer forced to leave his Silicon Valley job when AIDS struck.
- There was Michael, a deputy attorney general for the state of Pennsylvania and onetime president of the National Hemophilia Foundation.
- There was Evan, an American University senior who excelled in tennis and French and was majoring in peace and conflict studies when he died at age twenty-two.
- There was eleven-year-old Roger, a loyal Mets fan from New Jersey, who ended his days blind and strapped into a wheelchair, able to think and moan but not speak.

And there were those left behind when their loved ones died.

There was Judith, a lit only child and desc and her job, chai outrage to then-pr herself placed on trouble.

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There was Judith, a literate, well-educated beauty who lost her only child and descended into near madness, losing her looks and her job, chain-smoking as she wrote daily letters of outrage to then-president Bill Clinton, undoubtedly getting herself placed on some Secret Service watch list for her trouble.

There was Ethel, who lost all three of her sons, a daughter-in-law, and a brother. After spending all of her savings on them, the formerly middle-class mother and grandmother from Baltimore was left destitute, struggling to survive on Social Security, while other family members took on the task of raising two orphaned children left behind.

There was Fern, frail and soft-spoken, whose depression at losing her only child was so deep that she could not function and was evicted from her home on Christmas Eve.

If one were to try to conceive of a way to kill a vulnerable population of innocent human beings, it would be difficult to find a more effective and cruel way to do it. People with hemophilia were devastated by the very medicine that was supposed to ease their pain and lengthen their lives. Children were injected by well-meaning parents who would forever blame themselves.

Few involved in the devastation were willing to accept responsibility, some because they knew they were culpable, others because they were in denial. It must be noted here, however, that many honorable, wellmeaning people who worked for these companies—some of whom had dedicated their lives to helping the hemophilia community, some of whom had hemophiliacs in their own families—were just as unaware, especially of the plasma sources, as were patients and physicians.

Equally as anguished were many government scientists who watched as their bosses appeared to kowtow to Big Pharma. Then and now, the FDA had a revolving door between itself and drug companies, with many officials either coming from or eventually going to high-paying industry jobs.

So it was that generations of children, teenagers, and adults with hemophilia fell victim to one of the worst medically induced epidemics in the history of modern medicine.