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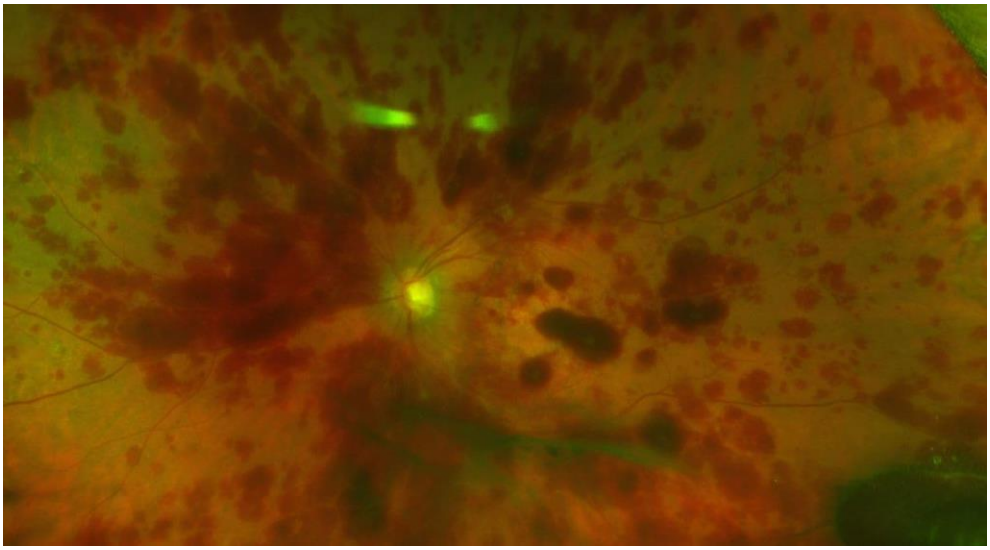
This clinic's experimental stem cell treatment blinded patients. Years later, the government is still trying to stop it.



A picture of a patient's eye one week after receiving stem cell injections from U.S. Stem Cell in 2015 shows widespread retinal hemorrhages. The patient's doctor said the patient was in pain and later suffered significant loss of vision. (Thomas Albini)

By **Laurie McGinley** and
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MIAMI — In the summer of 2015, ophthalmologist Thomas Albini examined a patient who had suddenly lost vision in both eyes. The woman, 78, had macular degeneration and had visited a Miami clinic offering a new treatment: injections of stem cells made from fat in her belly.

Instead of getting better, the woman's vision deteriorated significantly. Peering into her eyes, Albini said, he saw clumps of blood floating inside.

The next day, a second patient appeared in Albini's emergency room at the University of Miami complaining of blindness and searing pain after receiving eye injections from the same company, U.S. Stem Cell. Albini reported the cases to the U.S. Food and Drug Administration, urging an investigation.

Now, the FDA is suing to stop the company's treatments in federal court in Fort Lauderdale, Fla., in one of the government's most aggressive actions against the burgeoning stem cell business. With the judge expected to rule any day on the government's charge that U.S. Stem Cell is "openly violating the law and endangering patients," legal experts say the case could constrain a lucrative industry accused by doctors, lawyers and federal officials of harming dozens of people.

But the FDA's slow response has permitted U.S. Stem Cell to continue operating four years after those first reports of blindness. Although the company stopped injecting its fat-derived treatments into eyes after the patients sued, it continues to sell the therapy to people with spinal injuries, Parkinson's disease, multiple sclerosis and other serious chronic conditions.

Last spring, just three weeks after the government filed suit, another patient had a catastrophic reaction after visiting a South Miami clinic affiliated with U.S. Stem Cell. The 59-year-old woman felt faint and started vomiting two hours after receiving injections for arthritis pain.

Her case — which has not previously been reported — was described in an "adverse event" report filed with the FDA and obtained by The Washington Post through the Freedom of Information Act, as well as in a second report filed with the Florida Health Department. The woman was taken to a hospital, the reports said, and spent more than a month in a coma.

"It's frustrating that these clinics are still operating, and surprising that authorities aren't moving faster — even now," said Albini, an ophthalmology professor who has emerged as a vocal critic of the stem cell industry.

FDA officials declined to discuss the lawsuit, or respond to critics who say the agency should have sought a temporary restraining order to shut down U.S. Stem Cell years ago. Former FDA officials said that such orders are extraordinarily difficult to obtain, and that the agency is wary that a loss in court could undermine its ability to regulate the industry.

"People have the right to legal recourse," said Robert Califf, who served as FDA commissioner during the Obama administration. "You don't want a situation where a judge could make a ruling that would be a bad precedent. The FDA has to be very careful."

With $6.7 million in revenue last year, U.S. Stem Cell operates three clinics and has trained doctors at 150 others, making it one of the most influential stem cell companies in the nation. Over the past year, it has hired a top law firm to defend against the lawsuit, and cultivated formidable allies with close ties to President Trump, including GOP operative Roger Stone and Newsmax chief executive Christopher Ruddy.

Kristin Comella, the company's chief scientific officer, said she met late last year with a White House official, whom she declined to identify, to press the administration to get the FDA to back off. The White House did not respond to a request for comment.

In a long interview at her company's main clinic in Weston, Fla., an hour north of Miami, Comella accused the FDA of overstepping its authority — which, she said, does not extend to any of her treatments. She said that adverse events are rare, and that doctors trained by U.S. Stem Cell have provided relief to more than 10,000 people, many of them suffering from intractable conditions.

Comella said she has been "crucified" by the FDA, the news media and other critics who call her treatments a form of human experimentation.

"All medicine is human experimentation. All drugs are human experimentation. Everything we do every single day is a human experimentation," she said. "The only thing we all know for certain is that we're all going to die."

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In many ways, Comella, 42, has become the face of the stem cell industry. A ubiquitous presence online and at conferences, she is central to the industry's lobbying efforts in Washington and beyond.

In 2014, Comella formed the Academy of Regenerative Practices, an advocacy group that has set up a legal-defense fund for clinics under government scrutiny. The group has accused the FDA of squelching innovation and denying patients with incurable diseases access to potentially lifesaving treatments.

Since U.S. Stem Cell began offering its stem cell therapy about 10 years ago, Comella said, the company has weaned addicts off opioids and helped people with spinal cord injuries walk again. Last year, the company injected the treatment into a man's penis and announced plans to start treating erectile dysfunction.

"I personally have had stem cells injected into my vaginal wall," Comella said, adding that the treatment not only helped her recover from childbirth but also improved her sex life.

"She is an amazing woman," said Stone, the GOP operative, who said he met Comella through mutual friends after his wife benefited from stem cell therapy for arthritis.

Via text message, Stone confirmed that Comella had met with a White House official.

"Incredibly, the Trump administration is seeking to outlaw stem cell therapy and has specifically threatened criminal action against Dr. Comella," said Stone, mischaracterizing both the nature of FDA enforcement — the agency is seeking to regulate stem cell therapies, not ban them — as well as the government's lawsuit, which is a civil, not criminal, proceeding.

Last year in Tallahassee, Comella successfully lobbied state legislators to kill a measure that would have required stem cell clinics to register with the Florida Health Department, submit to annual inspections and have a physician on staff.

Although her long-standing title is chief scientific officer, Comella does not have a medical degree. She recently obtained her doctorate from a nonaccredited "virtual university" based in Panama. On its website, the Panama College of Cell Science offers a three-year PhD for $2,950 a year, or a discounted rate of $2,700 if students wire a lump sum in advance.

Founder Walter P. Drake said the Panamanian institution is legitimate and rigorous. Comella noted that she also holds a master's degree in chemical engineering from Ohio State University and that she completed some coursework at Florida International University.

According to a financial report filed last month with the Securities and Exchange Commission, U.S. Stem Cell's business is booming. Last year, company revenue rose 21 percent over 2017, to $6.7 million; Comella received a salary of $452,000, plus $812,000 in promissory notes for bonus and stock options.

In addition to treating patients, U.S. Stem Cell has long played a major role in the industry's growth. The company has trained more than 700 doctors — for a fee of $7,500 in person or $2,500 online — and sells clinical equipment, Comella said, helping many American clinics get their start.

U.S. Stem Cell offers two procedures, one using fat and another using bone marrow. The FDA lawsuit targets only the fat-based therapy.

That procedure involves extracting a patient's belly fat, mixing it with an enzyme to break down the tissue and spinning the mixture in a centrifuge to isolate mesenchymal stem cells, which can morph into a variety of cell types. Those cells are then injected into patients' spinal fluid, bloodstream or joints.

Comella said the treatment repairs damaged tissue and reduces inflammation, but conceded that she does not know precisely how it works.

“Of course, we don’t understand the mechanisms of action,” she said. “I suppose you would have to talk directly to God to get that.”

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Kristin Comella, chief scientific officer of U.S. Stem Cell, is pictured in her office in Weston, Fla. She has accused the FDA of overstepping its authority, which she says does not apply to any of her treatments. (Scott McIntyre/For The Washington Post)

The FDA’s rules on the processing and marketing of human cells, including stem cells, date to 2005. The rules allow such cells to be extracted and reinjected into patients without agency approval, but only if they are not more than “minimally manipulated” through processing or the addition of chemicals, such as enzymes. Otherwise, the treatment is considered a drug and requires FDA approval.

For years, stem cell clinics were a cottage industry that attracted little attention from the FDA. As the clinics multiplied, the agency occasionally conducted inspections and issued warnings against dispensing unapproved drugs. Often, former FDA officials said, those warnings were ignored.

The Justice Department, which handles lawsuits on behalf of federal agencies, was not eager to sue the clinics, former FDA officials said. Some administration officials worried that going after the clinics would draw accusations that the agency was seeking to regulate the practice of medicine, which it is not authorized to do.

Left largely unchecked, the for-profit stem cell industry exploded. Soon, hundreds of clinics had opened across the nation, selling a wide variety of treatments.

International scientific groups, leading stem cell researchers and medical groups such as the American Lung Association and the American Academy of Ophthalmology began issuing warnings: Although stem cells may eventually be used to treat many diseases, the research is in its early stages, they said, and the therapies at cash-based clinics are unproven and premature.

In 2014 and 2015, the FDA issued draft guidances seeking to clarify when stem cell treatments need FDA approval. Although the guidances are not legally binding, clinic operators, including U.S. Stem Cell, pushed back. In public hearings, they decried the guidances as a violation of patients' rights to use their own cells to treat their conditions.

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As Washington began debating the issue, Albini, the ophthalmology professor, notified the FDA and Florida authorities about the first two patients who lost vision after being treated by U.S. Stem Cell.

Two months later, in September 2015, he said, the FDA finally sent an investigator.

After that, Albini said, he heard little from the agency, even as two more women said they were similarly blinded.

"It was crickets," he said. "We tried to call them. We tried to find out what happened to the investigation. We even filed a Freedom of Information Act request trying to get the report they told us they were working on."

Albini and other eye doctors soon decided to act on their own. In March 2017, they published an article in the New England Journal of Medicine that drew national attention to the women's cases.

Trump had just been inaugurated. Scott Gottlieb was about to become FDA commissioner. When Gottlieb met with agency officials to discuss their priorities, Peter Marks, director of the Center for Biologics Evaluation and Research, put regulating stem cell clinics "at the top of the list," Gottlieb recalled in a recent interview.

"We started on it right away," he said.

In August 2017, the FDA directed U.S. marshals to seize an unapproved concoction of stem cells and smallpox vaccine that two clinics in California had injected into cancer patients.

The agency also sent its first warning letter to U.S. Stem Cell, accusing the company of selling an illegal, unapproved product and of not following safe manufacturing practices, as documented by agency inspectors in 2015 and 2017. Within months, the FDA would also finalize guidances making clear the kind of fat-derived treatment offered by U.S. Stem Cell is a drug requiring FDA approval.

In a statement issued with the warning letter, Gottlieb called U.S. Stem Cell one of the "bad actors" that "mislead patients and put them at risk."

It had been more than two years since Albini's complaint. Mark Schwartz, who was deputy director of compliance for biologics during the Obama administration, said he did not remember the case and could not explain the delay.

"If we had investigators out there looking into this in 2015 and didn't issue a warning letter until 2017, that's way too long," said Schwartz, who left the agency in December 2015 and is now a lawyer at Hyman, Phelps & McNamara, which specializes in FDA regulation.

Gottlieb acknowledged that for many years the agency didn't aggressively enforce its rules, and that "during that time, a large industry grew up. You can't just flip a switch."

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U.S. Stem Cell responded to the warning letter with defiance. In a public reply, Comella called the agency's accusations "blatantly false" and "a violation of the rights of American citizens to prevent them from seeking alternative care."

Instead of retreating, U.S. Stem Cell was expanding. It struck a deal with General American Capital Partners, a Florida private equity firm, which agreed to invest $2.5 million to open 10 new clinics — including the South Miami operation that treated the 59-year-old woman who wound up in a coma. The expansion clinics have since closed.

The following spring, in April 2018, Sen. Charles E. Grassley (R-Iowa), then chairman of the Senate Judiciary Committee, prodded the FDA to take further action. Citing a Washington Post article about the report in the New England Journal of Medicine, Grassley demanded to know why the agency had permitted U.S. Stem Cell to continue treating patients.

Three weeks later, the government sued, asking a federal judge to permanently enjoin U.S. Stem Cell from offering its fat-based procedure. The Securities and Exchange Commission opened a separate investigation of the company's finances.

Last month, lawyers on both sides asked U.S. District Judge Ursula Ungaro to issue a summary judgment rather than letting the case go to trial. The FDA argues that U.S. Stem Cell's fat-based treatment is a drug subject to agency approval. The company argues that its therapy is not a drug, but a surgical procedure outside the federal government's purview.

If the FDA wins, legal experts say, it would force U.S. Stem Cell to stop selling the therapy, and send a chilling message across the industry. It also could strengthen the agency's hand in future lawsuits.

If the FDA loses, however, it "would mean the agency lacked lawful authority to rein in these clinics," said Sam Halabi, a law professor at the University of Missouri and an expert on health regulation.

In that case, he said, the FDA "might not be able to proceed further against them without an act of Congress."

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With the lawsuit pending, Gottlieb has promised action against other companies that pose a risk to consumers. The FDA has sent out five additional warning letters in the past two years, the latest on Wednesday.

Meanwhile, the FDA has given the industry at large until 2020 to comply with the new rules. So far, few companies have made any move to do so, FDA officials said.

Reports of injuries continue to surface at clinics unaffiliated with U.S. Stem Cell. Albini said he and other researchers have documented the cases of at least half a dozen additional patients who suffered severe vision loss. And at least 17 people in five states have been hospitalized with life-threatening bacterial infections in recent months after being injected with tainted stem cell treatments made from umbilical cord blood, prompting a nationwide recall and FDA warnings.

Meanwhile, Comella is continuing her campaign against the FDA. In addition to meeting with Stone, Ruddy and the White House official, she said she managed to get a message directly to the president.

Roy Hinman, a doctor who was trained by Comella and runs 45 clinics throughout Florida, said he had a 15-second exchange with Trump in July, during a photo op at a rally in Tampa.

Hinman said he praised Trump's effort to decrease government regulation and warned him that agencies such as the FDA were undermining his agenda by using guidances and policy letters to crack down on businesses.

The president, Hinman said, "looked at me and said, 'I know what they're trying to do and they're not going to get away with it.'"

The White House did not respond to requests for comment about Hinman's account. In an interview, Gottlieb, who recently resigned and is set to leave office Friday, said he has seen no sign of White House interference.

"We've had broad support up the line," he said, "for the actions we've taken."

Alice Crites and Josh Dawsey in Washington contributed to this report.