Ted Stanley, an anesthesiologist and medical entrepreneur who, with a colleague, created the fentanyl lollipop, a palatable means of delivering a synthetic opioid analgesic, mostly to cancer patients, died on July 13 in Salt Lake City. He was 77.

The cause was complications of prostate cancer, according to the University of Utah, where Dr. Stanley conducted research for 50 years and which, along with him and his drug company, reaped millions of dollars in profits from his discovery.

Though prescribed primarily in cancer treatment, the fentanyl-laced lollipop, a sugary, fruit-flavored confection on a plastic stick, has also been used to relieve migraine and cluster headaches, severe back and bone pain, arthritis and other chronic conditions.

But like other products containing fentanyl, a synthetic drug that is a hundred times more powerful than morphine or oxycodone, the lollipop formulation has also proved vulnerable to abuse by opiate addicts.

They get the product from forged prescriptions, doctors who fraudulently overprescribe, patients who distribute it illicitly and illegal laboratories.
Some steal it from pharmacies.

It is sold under several generic names, including perc-o-pop.

The lollipop version was invented by Dr. Stanley and Brian I. Hague in 1983 and approved by federal regulators in 1998 to treat cancer pain under the name Actiq.

Their patent was assigned to the University of Utah Research Foundation.

The product was considered a breakthrough because it could be sucked or swabbed in the mouths of patients, including children and old people, who had an aversion to vaccinations or had difficulty swallowing pills.

It grew out of research that Dr. Stanley and colleagues had been conducting in Sacramento, Calif., on an even more potent variety of fentanyl called carfentanil, which was used in darts to subdue game animals and was even considered for use as a weapon against terrorists.

“A veterinarian colleague one day wondered whether carfentanil could be injected into the sugar cubes that some of the study team were using that day in their coffee,” Dr. Stanley recalled in 2014 in The Journal of Pain.

The colleague wondered whether a sugar cube loaded with carfentanil could be used effectively to immobilize monkeys who become frazzled when they were placed in a restraining cage before receiving injections.

“He knew that monkeys love to suck on sugar cubes,” Dr. Stanley wrote.

Within an hour, they tested their theory on a monkey.

“With a couple of sucks on the sugar cube, he was down, and safely,” Dr. Stanley later recalled.

Flying back to Salt Lake City, he said, he wondered, “How could we do this with people? And that’s where the idea of the drug in a lollipop and giving it to a child who needed to have surgery” was born.

“I said, ‘What if we had a lollipop that had one of these drugs in it?’ ” he told
NPR in 2010, “‘and you give the lollipop to the child and then boom, they would be relaxed, they’d go to sleep?’ Then you could take them from their parents; it would be so stressless, and so nice.”

In 1985, he and his business partner, William Moeller, founded Anesta Corporation to market the lollipop sedative.

Anesta went public in 1994. In 2000, it was sold for nearly $450 million to Cephalon (which has since been acquired by Teva, an Israeli pharmaceutical company).

The fentanyl citrate is absorbed in the bloodstream within 20 minutes — as quickly as an injection.

That made it useful to treat soldiers injured in the field and in hospital operating and emergency rooms, where quick treatment can be less costly than lengthier drug regimens.

The fentanyl in the lollipop retains its potency because, unlike a medicinal patch or a chewed, crumbled lozenge, it is not first digested and then metabolized by the liver.

Rather, it is absorbed into veins in the mouth, pharynx and esophagus.

Moreover, the lollipop can be self-administered and removed when a patient who is being monitored has received the proper dose.

The normal dosage contains about two grams of sugar (well below the American Heart Association’s recommended daily intake of 36 grams for men and 25 for women), but the lollipop has been known to cause tooth decay.

Theodore Henry Stanley was born on Feb. 4, 1940, in Manhattan.

His father, also named Ted, was a New York City police inspector.

His mother, the former Ellen Kasekevitch, was a corrections officer. He graduated from Bushwick High School in Brooklyn.
Dr. Stanley grew up as a die-hard fan of the hapless Brooklyn Dodgers. But when his dreams of playing center field in the big leagues faded, and after he concluded that he could not make a living as a musician, either (he played nine instruments), he said he decided on a medical career as a last resort.

He went on to earn a bachelor’s degree in zoology, chemistry and music from Columbia College in 1961, followed by a medical degree from the Columbia College of Physicians and Surgeons.

Studying under a fellowship at the University of Utah, he planned on becoming a cardiac surgeon but added anesthesiology as a specialty.

Dr. Stanley served in the Air Force at the medical center of Lackland Air Force Base in San Antonio, Tex.

He joined the Utah faculty in 1972, becoming a professor of surgical research and director of research at the university’s School of Medicine.

At Utah, Dr. Stanley worked with Dr. Willem Kolff, considered the father of artificial organs, and he was a member of the team that in 1982 implanted the first permanent artificial heart in a human patient, Barney Clark, a 61-year-old dentist, who survived for four months.

At Utah, he was also a pioneer in partnering with private industry to subsidize medical research and development as federal financial support was shrinking.

He later became managing director of UpStart Ventures, which invests in innovative life sciences companies.

Dr. Stanley wrote or contributed to scores of books and was frequently published in medical journals.

In 2000 he considered the state of anesthesia in modern medicine.

“Anesthetic delivery has not appreciably changed in the past 150 years,” he wrote. “We still give drugs using needles. We still ask patients to breathe the vapors of very potent volatile liquids — drugs that could take the paint off a car. We still ask
patients to swallow pills and solutions, some of which actually produce the desired effect some of the time.”

But he was optimistic that significant progress was not far-off. He predicted that newer anesthetics, some of which might mimic animal hibernation, “promise improved convenience, improved safety, increased effectiveness, increased bioavailability, continuous delivery with fewer peaks and valleys, decreased side effects, decreased dosage and frequency of administration, and decreased cost.”

A version of this article appears in print on August 5, 2017, on Page D6 of the New York edition with the headline: Dr. Ted Stanley, 77; Developed Fentanyl-Laced Lollipop.