



Gabriel Bouys/AFP/Getty Images

Catlin, Don H.

June 4, 1938— Drug-testing expert; physician; educator

Address: Anti-Doping Research Inc., 3873 Grand View Blvd., Los Angeles, CA 90066

In recent years the use of steroids and other banned strength-and-endurance aids among athletes has become common, so much so that outstanding feats in sports often trigger suspicion. Don H. Catlin, a physician, is one of the founding fathers of drug testing in sports. Over the last quarter-century, he has developed numerous drug-identification techniques and helped lead the fight against athletes' use of performance-enhancing substances. Catlin is the founder (in 1982) and former director of the UCLA Olympic Analytical Laboratory, the only drug-testing lab in the United States accredited by the International Olympic Committee (IOC). Under his 25-year stewardship, the lab grew to become the largest testing facility for performance-enhancing drugs in the world, processing approximately 40,000 urine samples a year and providing drug education and tests for many national and international sports organizations, including the U.S. Olympic Committee, the

National Collegiate Athletic Association (NCAA), the National Football League (NFL), and Minor League Baseball. During that time Catlin developed the groundbreaking carbon-isotope ratio (CIR) test, which determines whether testosterone in athletes' bodies is natural or has come from a prohibited performance-enhancing drug. He also led efforts to get the IOC to ban androstenedione and other male-hormone supplements. Catlin's greatest achievement came in 2003, when he cracked the code for the previously undetectable "designer" steroid tetrahydrogestrinone (THG), popularly known as "the Clear." That breakthrough led to the decoding of other steroids and played a key role in the Bay Area Laboratory Co-operative (BALCO) investigation, which linked such high-profile athletes as Barry Bonds, Jason Giambi, Marion Jones, and a slew of other professional athletes to use of a wide array of performance-enhancing drugs; Catlin was honored by the *Chicago Tribune* as sportsman of the year for his contribution to that investigation.

In 2005 Catlin became the founder and chief executive officer of Anti-Doping Research Inc., a nonprofit organization based in Los Angeles, California. There, he has continued to develop new testing methods, including one aimed at detecting the human-growth hormone (hGH). Commenting on the proliferation of drug use in sports, Catlin explained to Dan Shaughnessy for the *Boston Globe* (July 16, 2006), "People think of this as cops and robbers. That's not really it. I look at any positive test as a failure of the system. A failure to explain things. A lot of [those who test positive] are innocent. They get stuff that's contaminated and they get whacked even though they have no intention to cheat. Those guys don't bother me. We want to catch the cheaters.

If you believe that sport is good for life and society and is worth preserving, you have to do something about it.” He also said, “I think a clever crook can beat us. Once we get [the test for] growth hormone, they’ll just shift a few degrees and start doing something else. There is so much money involved, there is so much desire to win, whether it be a pennant, a World Cup, the Tour de France. It doesn’t matter. People want to win and they’re going to do what they have to do and they might consider cheating. It’s part of a way of life for an athlete. And that’s tough.” Catlin said to Jill Lieber Steeg for *USA Today* (February 28, 2007), “I can’t think of anything more exciting than the Olympic model, where 220 countries in the world participate and every four years they send their best to compete against the best from other countries and the best man or woman wins. That’s gorgeous. What could be nicer?” He told Steeg, “You should care about preserving something natural and beautiful.”

Don H. Catlin was born on June 4, 1938 in New Haven, Connecticut, and was raised near the Berkshire Mountains of western Massachusetts. His father, Kenneth, was an insurance executive; his mother, Hilda, was a homemaker. An avid sports fan from youth, Catlin grew up “rooting for Ted Williams and the Boston Red Sox,” as Steeg noted. One of his family’s close friends was the pioneering surgeon and Yale University professor Gustaf Lindskog. “Private chats with him convinced me to go to medical school,” Catlin told *Current Biography*. “That made sense to me because I feared boredom and medicine seemed to guarantee a lifetime of challenges.” After graduating from high school, he attended Yale, in New Haven, where he received a bachelor’s degree in statistics and psychology in 1960. Catlin then attended medical school at the University of Rochester, in New York. He received his M.D. degree in 1965.

Upon completing his medical studies, Catlin joined the U.S. Army and became a specialist in internal medicine at the Walter Reed Army Medical Center, in Washington, D.C. During that time he read an account of a Washington, D.C., man who took drug addicts from the streets to his treatment center and helped them overcome their habits. “He had the right approach,” Catlin recalled to Steeg. “He would dry them out, physically keep them away from drugs. He would literally hold them, then sing, play music, and talk to them.” After the government threatened to close the center because it had no doctor on staff, Catlin offered to fill that position. On the strength of his reputation for working with addicts, he was put in charge of an army treatment program. He clashed with generals at the Pentagon over plans to jail soldiers who had turned to heroin to deal with the stress of the war in Vietnam. He recalled to Steeg, “I said, ‘Wait, let’s try the medical model.’ But they locked ’em up anyway.”

In 1972 Catlin joined the faculty of the University of California at Los Angeles (UCLA), beginning as an assistant professor in the Department of Pharmacology. He had been teaching at UCLA for nine years when the IOC recruited him to set up and run its drug-testing lab for the 1984 Summer Olympics, which were being held in Los Angeles. At the time only three labs in the world (in London, England;

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Paris, France; and Cologne, Germany) were conducting sports-doping research. While the IOC had started using limited doping tests at the 1968 Summer Olympics, in Mexico City, not much other drug testing had been done. Catlin confessed to T. J. Quinn for the *New York Daily News* (June 11, 2006) that at first “the idea made no sense to me. Why would a young, healthy athlete want to take a drug? It seemed so stupid.” He nonetheless took the assignment, in part because UCLA would keep the lab equipment after the Games. In 1982 he founded the UCLA Olympic Analytical Laboratory, the first anti-doping lab in the United States. At the behest of the IOC, he began educating athletes a year prior to the 1984 Olympics to give them a chance to experience the drug-testing process. Shortly afterward he tested a series of urine samples that, he discovered, contained a banned drug in decreasing amounts and realized that someone was using the program to figure out how long it took for the drug to disappear from athletes’ systems. Catlin recalled to Steeg, “[The U.S. Olympic Committee] wanted to do testing, and for us to tell them the answers, meaning whether their guys and girls test positive or not. But they didn’t want any consequences. It would just be an educational experience. And already we could see that, well, what kind of education is this? We shouldn’t be doing this. . . . That program stopped real fast.”

After the 1984 Olympics Catlin approached Manfred Donike, a pioneer in drug testing for sports, about the lack of a test for Stanozolol, a synthetic anabolic steroid that Catlin had suspected athletes of using in the Los Angeles Games. Catlin said to Steeg, “[Donike] hands me a pill—Stanozolol—and says, ‘Here, take this.’ So, I took it, and I gave him my urine, and he couldn’t find it.” A year later Donike discovered a way to detect the drug. Throughout the 1980s Catlin made repeated pleas to the IOC to establish a code of ethics for Olympic drug-testing labs; the code was eventually adopted as a requirement for accreditation by the IOC. In 1988 Catlin persuaded the IOC to remove norethisterone, a substance common in birth-control pills, from its list of banned drugs; it had been barred because of its potential to generate a by-product also created by the banned anabolic steroid nandralone, which made it impossible for drug testers to know whether a female athlete had taken nandralone, a birth-control pill, or both. Catlin and his team of scientists found a method of determining which substance a female athlete had consumed. Also that year, in a development that rocked the sporting world, the Canadian sprinter Ben Johnson tested positive for Stanozolol, just days after winning the gold medal and breaking the world record in the 100 meters at the 1988 Summer Olympics, in Seoul, South Korea. Catlin, who was in Seoul when the scandal erupted, told Dan Shaughnessy, “That changed things a lot. It woke up a lot of sports people. When I came home from Seoul, my friends said, ‘We’re going to send our kids out for baseball. They don’t have drugs in baseball.’ That was 1988. People like sports and they don’t like to believe how dirty it can be. So they put blinders on. It’s hard for me to do that. When you get into my field, everything looks very different.”

In the 1990s Catlin developed the CIR test, which differentiates between testosterone produced naturally and that introduced through drugs. During that period, in efforts to set stricter drug-testing policies, Catlin suggested to the IOC that approval by the International Organization for Standardization be a prerequisite to IOC lab accreditation, an idea that the IOC adopted years later. Meanwhile, in 1998 Catlin got the IOC to ban other performance-enhancing drugs, including androstenedione and other male-hormone supplements. (Androstenedione, commonly known as “andro,” was widely used throughout the 1990s by Major League Baseball players. Prior to its banning it could be purchased over the counter.)

The year 2000 saw the establishment of both the World Anti-Doping Agency (WADA) and the U.S. Anti-Doping Agency (USADA). The former was created in the wake of the 1998 doping scandal involving Tour de France riders from the French Festina cycling team, which exposed many of the failings of the old drug-testing system. (The team was found to have doped their riders with everything from anabolic steroids to the red-blood-cell-boosting endurance drug erythropoietin, or EPO.) Up until then each of the various sports organizations had run its own anti-doping operation, which made it easier for athletes to cheat the system. The IOC created the WADA as an independent body that would establish a universal list of prohibited substances. The WADA does no testing of its own but comprises a global chain of accredited laboratories that do so. The UCLA Olympic Analytical Laboratory is currently one of 35 laboratories that conduct tests for the WADA. The USADA, by contrast, sends its own officers to collect urine samples and request tests from labs. Athletes who test positive for performance-enhancing drugs are then charged and punished by the agency. Catlin, for his part, has maintained that what he calls the cop-and-robber approach to drug testing is ultimately futile. “People are following this old model—run ’em down, chase ’em, find ’em, assume they are guilty, drag them into testing,” he explained to Brian Alexander for *Outside* magazine (July 2005, on-line). “And athletes still get away with stuff, and I maintain you can get away with stuff with everybody looking *right* at you.” He added, “The system has failed to deal with the problem. And it will fail now.”

Despite his skepticism, Catlin continued to lead the charge against drug misuse in sports and developed a number of new tests. In 2000 the scientists in his lab learned to distinguish between natural testosterone and that produced by a drug made from yams. Then, prior to the 2002 Winter Olympics, in Salt Lake City, Utah, Catlin used the French EPO test (developed by the scientist Françoise Lasne) to detect darbepoetin, a variety of EPO that increases endurance. That test helped expose three cross-country skiers who used darbepoetin while competing in the Games, including the gold medalists Johann Muehlegg of Spain and Larissa Lazutina of Russia. Later that year, after analyzing data from an athlete’s urine sample, Catlin cracked the code for norbolethone, the first reported “designer” steroid, or synthetic steroid created to enable its users to evade existing drug laws. (The drug, aimed at increasing weight, was first synthesized by the pharmaceutical compa-

ny Wyeth in 1966 but was never marketed, out of fear of harmful side effects.) Catlin explained to Steeg that his lab's discovery "proved beyond a shadow of a doubt that our suspicions were true, that there were designer steroids out there that we couldn't find and that people were getting a hold of them." In the same year the U.S. track cyclist Tammy Thomas was found to have used norbolethone and was banned for life from competing in the sport.

In 2003 Catlin cracked the code for another designer steroid. The circumstances of the discovery brought to mind "a B-movie mystery plot," as Brian Alexander noted. In June of that year, a syringe was mailed anonymously to the USADA. (The source was later revealed to be Trevor Graham, a former track-and-field coach who received a lifetime ban from his sport in 2008 for supplying many athletes with performance-enhancing drugs.) The USADA sent some of the syringe's contents to Catlin, who with his team of about 40 researchers concluded that the substance was a previously undetectable, custom-made steroid, which they called tetrahydrogestrinone, or THG. Catlin then developed a special test for the drug. He noted to Steeg, "It was a wonderful time for us because it was a kind of project that took all the skills that are represented in this lab, in terms of PhDs, chemists . . . it took everybody."

Through his research Catlin was able to advise Jeff Novitzky, an agent of the Internal Revenue Service (IRS), who opened the BALCO case, leading to perhaps the biggest doping investigation in the history of sports. Headquartered in Burlingame, California, BALCO provided blood and urine analysis and food supplements for professional athletes. An investigation revealed that BALCO's owner and founder, Victor Conte, was working with a network of rogue chemists and steroid dealers to supply professional athletes with performance-enhancing drugs. Catlin, who had long suspected that bodybuilders and other athletes were being supplied with undetectable steroids from clandestine labs around the country, helped expose BALCO by testing more than 550 existing urine samples from athletes, 20 of which contained traces of THG. He was the first witness to testify before the grand jury in the BALCO case. Among the athletes named in connection with the BALCO case were the baseball players Barry Bonds, Jason Giambi, Gary Sheffield, Benito Santiago, and Jeremy Giambi; the football players Bill Romanowski, Tyrone Wheatley, Barrett Robbins, Chris Cooper, and Dana Stubblefield; the boxer Shane Mosley; and the sprinters Dwain Chambers, Marion Jones, Tim Montgomery, Raymond J. Smith, and Kelli White and many other track-and-field stars, including the shot putters Kevin Toth and C.J. Hunter. The scandal foreshadowed the findings of the Mitchell Report, the result of former U.S. senator George J. Mitchell's 21-month investigation into the use of anabolic steroids and human-growth hormone in Major League Baseball (MLB). The report, released on December 13, 2007, named 85 MLB players who were alleged to have used steroids or other banned drugs, including such superstars as Roger Clemens, Andy Pettitte, Miguel Tejada, and Eric Gagne. A number of other athletes have since come forth about their steroid use, most notably the baseball players Alex Rodriguez and Mark McGwire.

In 2004 Catlin cracked the code for madol (commonly known as DMT), the third reported designer anabolic steroid; in January 2010 the drug became a controlled substance, meaning that U.S. federal law governs its manufacture, distribution, and use. In 2005 Catlin became the founder, president, and CEO of Anti-Doping Research Inc., a non-profit research organization focused on performance-enhancing drugs. The organization has led efforts to uncover new drugs being used illegally by athletes and worked toward developing new tests to detect them. In 2007 Catlin stepped down from his directorship at the UCLA Olympic Analytical Laboratory to work exclusively with Anti-Doping Research. Over the last several years, the organization has attempted to produce an effective urine test for hGH, a hormone that has been used in the past primarily to treat abnormally short children. Many believe that the use of human-growth hormone is still common among professional athletes, making a successful hGH test highly sought-after by sports leagues worldwide. In the meantime Catlin and his researchers have been successful in developing tests for other drugs. Most recently, in late 2009, he and his team developed an equine test for the potent blood-boosting drug CERA (sold under the brand name Mircera), a long-acting form of EPO.

Catlin's organization has also worked to set up programs that will dissuade athletes at all levels from using performance-enhancing drugs. Catlin has long advocated the establishment of a volunteer program, through which athletes would submit to tests to create a set of "biomarkers" for each participant, showing what is normal and abnormal (regarding levels of testosterone or insulin, for example). The participants would have ongoing checkups to ensure that no drugs are in their systems and would be recognized as honest athletes. While the idea has been called far-fetched because it would rely on voluntary actions, Catlin believes that social pressure would ultimately lead most athletes to volunteer. He told T. J. Quinn, "We're fundamentally optimists; we have to be in this field. We're not proposing that there's a solution, we're proposing that it needs to be tried."

Brian Alexander described Catlin as tall and balding with "a handsomely craggy face." Catlin is professor emeritus of molecular and medical pharmacology at the UCLA David Geffen School of Medicine. He serves as chairman of the Equine Drug Research Institute's Scientific Advisory Committee and is a member of the Federation Equestre Internationale Commission on Equine Anti-Doping & Medication. In addition, he is a member of the International Olympic Committee Medical Commission. Catlin's wife, Bernadette, a nurse whom he met at UCLA, died of melanoma in 1989. He has two sons from that marriage: Bryce, a software engineer in San Francisco, California, and Oliver, who is vice president of Anti-Doping Research. According to Steeg, Catlin has gotten hate mail from athletes caught using drugs, and on one occasion his car was firebombed. Catlin has remained undeterred, however. Oliver Catlin told Steeg that since he started working with his father, he has become "fully aware of how dedicated he is to his field. He doesn't stop thinking about this stuff. He eats, drinks, and sleeps this stuff. It's his life. It's his cause. It makes him tick."

—C.C.

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