

SCA 001965 FEBRUARY 1995 BICYCLING

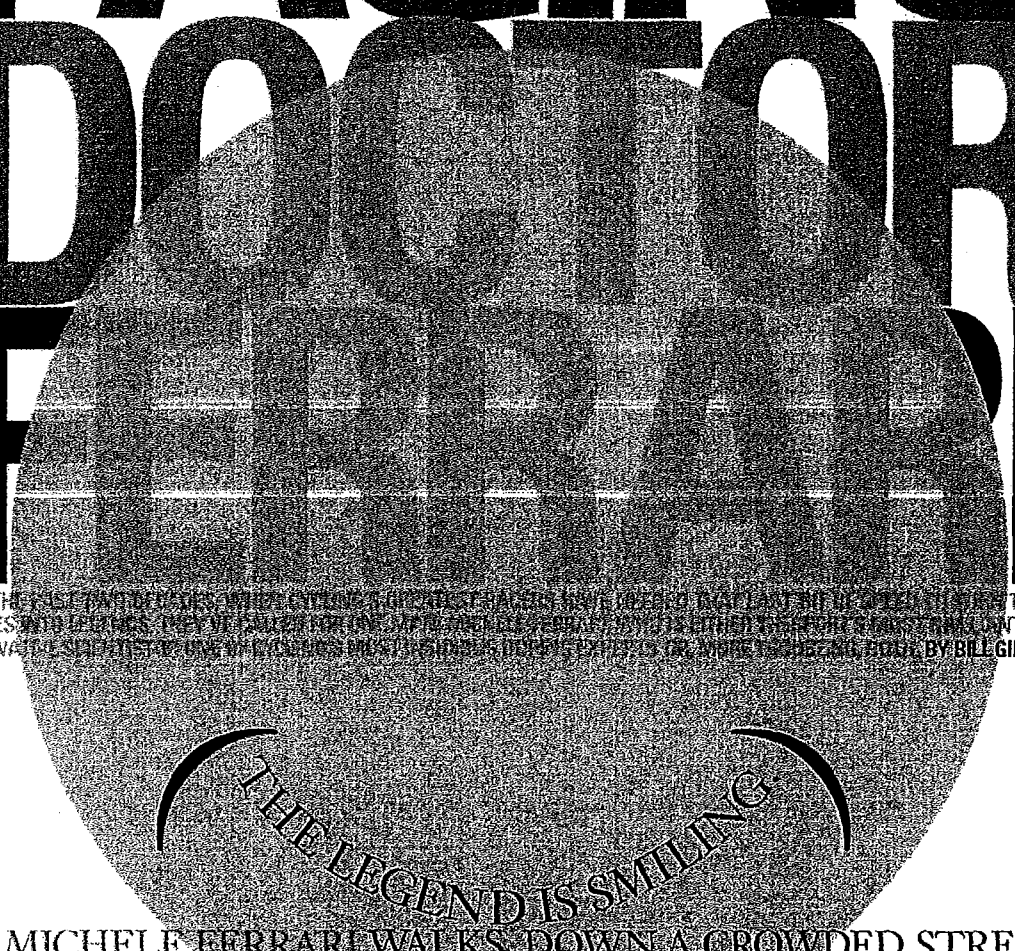
RESPONDENTS 40

SCA 001965

PAGING

DOCTOR

FOR THE LAST TWO DECADES, WHILE CREATING THE MOST ADVANCED TESTS HAVE BEEN MADE IN THE WORLD TO PROTECT THEMSELVES AND LEADERS. THEY'VE SEARCHED FOR ONE WHO COULD BE A GREAT SUCCESS EITHER AS A SPORTS SCIENTIST OR AN INNOVATIVE STRATEGIST. THE ANSWER WAS MICHELE FERRARI, THE DOCTOR WHO KEPT THE BEST OF BOTH WORLDS. BY BILL GIFFORD



AS MICHELE FERRARI WALKS DOWN A CROWDED STREET IN FERRARA, ITALY, IN BRIGHT WINTER SUNSHINE, HIS SMILE IS THE SAME

one you can see in the few published photos of him, in which he is sun-tanned and well-dressed, as if he'd just stepped out of *La Dolce Vita*. But as he draws closer, you see the smile is really just a display of teeth. Perhaps even a grimace. He was once recognized as one of the brightest sports scientists in the history of cycling, maybe the most innovative ever, the pioneer who helped develop landmark tests that let riders pinpoint their physiological parameters so they could train harder and smarter. But now the mere mention of his name can trigger a scandal, for 52-year-old Michele Ferrari has become a pariah in the sport he helped revolutionize. He has worked with Francesco Moser, Tony Rominger, Mario Cipollini, Lance Armstrong and other storied cyclists to set records and win Grand Tours, Classics, and other important races. For two decades he has engineered champions. For nearly as long, he has been suspected of doping his champions, as well. The years of allegations came to a head in October 2004, when Ferrari was convicted in Italy on two doping-related charges, for which he was fined \$1,200, barred from practicing medicine, and given a suspended sentence of a year in jail, all of which he is appealing. The worst penalty, however, wasn't imposed by the court. Within hours, his last major client and his staunchest defender, Armstrong, severed all formal ties with Ferrari, after having won six Tours de France with the doctor's help. His shunning was complete.

ILLUSTRATION BY DALE STEPHANOS

FERRARI

NO, THE LEGEND IS NOT SMILING.

The trouble started with orange juice. Within cycling circles, Ferrari had been well-known and respected as a trainer since the mid '80s. He became notorious in the spring of 1994, after three team Gewiss riders he was working with swept the Belgian Classic Fleche Wallonne. After the race, journalists peppered him with the usual questions asked of any outstanding cycling performance nowadays. "How can you explain it?" he imitates them now, mockingly: "Blah, blah, blah!"

He knew the reporters were alluding to performance-enhancing drugs, specifically EPO, the synthetic blood booster erythropoietin, which at the time was already banned but undetectable in tests. And, being Michele Ferrari, he gave his honest opinion.

You can say someone's doping, he said, only if they test positive for something that's banned. "If it doesn't show up in the drug controls, then it's not doping," Ferrari said, adding that if he were a rider, he just might take whatever he could get away with. And by the way, he informed the French sports daily *L'Equipe* (and a handful of Italian newspapers), "EPO is not dangerous, it's the abuse that is. It's also dangerous to drink 10 liters of orange juice."

Kaboom. It was as if he'd tried to toss a hand grenade from a car at his critics, but forgot that the windows were rolled up. Within days, he'd been fired as team doctor for Gewiss. His problems, and his glory, were just beginning.

For the next decade, he was a hunted man—pursued by investigative reporters and law enforcement on the one hand and, on the other, by riders seeking his services. Erwann Mentheour, a French ex-pro who was one of the first athletes to be suspended for EPO use, in 1997, writes in his book, *Secret Defense*, of going to visit "il dottore." In the waiting room, Mentheour says, he saw "some of the greatest athletes in the world sitting there, like a virgin on her first visit to the gynecologist. It almost made me laugh out loud."

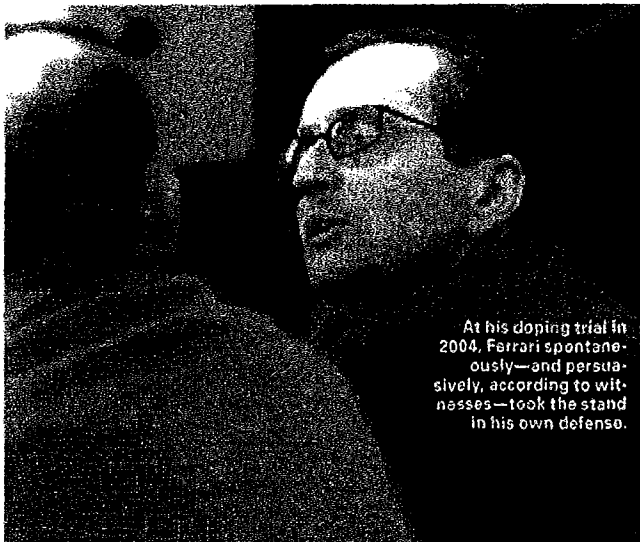
In the fall of 1994, Ferrari helped Swiss rider Tony Rominger break cycling's sacred hour record. Twice. The following spring, his riders swept the top five places in the Giro d'Italia, led by Rominger and the Russian Evgeni Berzin, a burly pursuit rider who'd somehow become a climber. Ferrari gave no interviews, and worked largely in secret. He became known in the peloton as *Il Mito*, or The Legend, an appellation that is chillingly appropriate. In all of his mystery, and success, and uncertainty, Ferrari

is the essence of the doping debate itself—a frustrating twilight zone where guilt and innocence alike are difficult to prove. Accusations often exceed evidence, while proof itself is always on trial. The result is a sport where every victory is tainted by suspicion. Case in point: Lance Armstrong, Ferrari's most famous (and in recent years, only acknowledged) major client. Although Armstrong passed dozens, if not hundreds, of drug tests during his seven-year Tour de France winning streak, his career remains the subject of never-ending allegations, even after his retirement. He probably wouldn't have won without Ferrari's training genius, but now he can't rest because of him.

Just as there is clean and dirty, guilty and innocent, there seem to be two opposing Michele Ferraris. There is the young team doctor, barely in his thirties, who quit in a huff after finding pills hidden in a stack of jerseys on the team bus—not even an illegal drug, but one he hadn't known about. There is an older Ferrari, working for another team, telling reporters that it "doesn't scandalize me" if his riders went to Switzerland to buy EPO over the counter.

THIS MUCH IS INDISPUTABLE: IF MICHELE FERRARI AGREED TO WORK WITH YOU, AND YOU COULD AFFORD TO PAY HIM 10-20 PERCENT OF YOUR SALARY, IT WOULD MAKE YOUR CAREER.

There is a brilliant coach and trainer, who welcomes athletes in the autumn of their careers, or riders who have lost direction, and helps them find new motivation and discipline. And there is a Michele Ferrari who makes cryptic notes in his riders' training logs to tell them—according to prosecutors—when to take EPO, steroids and growth hormone to maximize their results while avoiding detection. This is the Ferrari described by the European media as "sulfurous," as though he'd studied medicine in the very depths of hell itself. "For many years, [Ferrari] was like the devil in the sport," says Pier Bergonzi, longtime cycling correspondent for *La*



At his doping trial in 2004, Ferrari spontaneously—and persuasively, according to witnesses—took the stand in his own defense.

GIORGIO BENVENUTI/AFPI/GETTY IMAGES

Gazzetta dello Sport, Italy's premier sports daily. To avoid the press, this Ferrari would sometimes meet his clients on lonely roads in his camper van. And there is a Ferrari who lives in a quiet villa hidden in a copse of trees just outside the university town of Ferrara, a caring and dedicated coach who became so involved with his riders that he spent Christmases with them and their families. Riders speak of the new motivation and confidence this Ferrari instilled in

The Magic Number

Through study of Armstrong and other top racers, Ferrari says, he has calculated the power-to-weight ratio a cyclist must be able to produce at lactate threshold (the hardest effort a body can sustain for long periods) to have a chance of winning the Tour de France. The magic number is 6.7 watts per kilogram, or 3.045 watts per pound.

To reach the magic number, strict adherents of Ferrari see saw their body weight and power development in search of the combination that produces the desired ratio. Gains or losses are tracked by a single watt, a painstaking level of accuracy. For instance, Armstrong knew he could produce somewhere between 430-500 watts at threshold. He often started the Tour at 163 pounds and 495-497 watts, or between 3.036 and 3.049 watts per pound. —*Bill Strickland*

them, when they thought their careers were lost.

This much is indisputable: If Ferrari agreed to work with you, and you could afford him—he typically charged between 10 and 20 percent of a rider's salary—it would make your career.

One of his first resurrections was performed on an Italian rider, Moreno Argentin, who came to Ferrari in 1989. Argentin had won the world road championship in 1986 but had since hit the skids, with two years of bad results. At only 29, he was thinking about retiring. Then he made the pilgrimage to Ferrara, a walled medieval town on the flat coastal plain near the Po River.

"Thanks to Ferrari, I found new motivation and conviction," says Argentin, over an espresso in his hometown on the plains near Venice, where he is now a successful real estate developer. "He was the very first coach who worked on 360 degrees—every aspect—of a rider's training and life: his diet, nutrition and not only training but living the life of a cyclist. Before, we didn't even understand why we had sore legs. With the new methods, we understood why, and we could make changes. He didn't change the amount of training, he changed the methods, so it became more structured and more disciplined, with definite intervals and recovery periods. Thanks to him, I learned more about myself and my own engine. As a consequence, I became convinced of my own talent, my own physical capabilities."

He had some engine. The very next season, 1990, Argentin won the Tour of Flanders, Flèche Wallonne and a stage of the Tour de France. He won Flèche again the following year, as well as Liège-Bastogne-Liège and another Tour stage. In all, Argentin won more than a dozen races and stages in the five years he worked with Ferrari.

"He was the best then, and the best now," says Argentin. Slim and soft-spoken, he still looks like the elite athlete he once was. His well-tailored tweed jacket, and his brand-new Volkswagen SUV, speak of a comfortable post-cycling life. He's been out of

cycling since retiring after the 1994 season, but he well remembers the furor his beloved coach caused with that infamous "orange juice" interview, because he'd won his third Flèche that same day. (Ferrari was right, by the way: Erythropoietin, used to treat anemia, is often cited by medical trade journals and other expert sources as one of the top-selling, and safest, prescription drugs.)

"Ferrari said what we all thought," says Argentin. "There are 3,000 products on the doping lists, and only 30 that can be found in a test. I think that's really what Michele wanted to say. You can't just accuse people of doping. You have to verify."

He takes a little sip of coffee, then continues: "I don't deny my past with him. I'm proud to have worked with him. He never prescribed me anything. He did lots of other things, like tests, training, diet, experimental things. We did everything that was legally possible, yes. I'm not saying I'm a virgin. I did everything possible and legal to be good. I didn't hold back, because I knew it was the only way to be competitive."

Pause. Sip.

"Cycling at that level wasn't good for my health," Argentin says. "I've got the sacrosanct right to give back to my body everything that it consumes. You can be replaced on a team, you know, so your engine has to work, always work."

Ferrari understands the stresses of elite sport. He was an athlete from the age of 12. Growing up in Ferrara, a wealthy and sports-mad university town, he had access to good facilities and coaches, and by the time he was 17 he'd won a national championship running the 1,000 meters, and had made the national track team. But a year or so later, he had to make a choice between sports or school.

In a good-role-model decision any parent would applaud—and unlike most of his future clients—Ferrari chose education, entering the University of Ferrara to study medicine. He had no time to train seriously but kept running, often with his professor and mentor, Dr. Francesco Conconi, also a serious amateur runner.

"I did a few marathons, just for fun," Ferrari says, "in two hours, thirty minutes." A time of 2:30 would have placed him 53rd out of 36,562 entrants in the 2004 New York Marathon. He quit running at the beginning of the '80s after injuring his lower back, and picked up cycling. He became a regular at local amateur races, and did a few triathlons as well, no big deal to hear him tell it, though he does not neglect to mention that he was ranked third in Italy in 1986.

He was much more interested in the work he and Conconi were doing in their lab. As it still is, the University of Ferrara was an important center for sports medicine. During the first half of the 1980s, Ferrari helped Conconi develop a simple field test, now known as the Conconi Test, that allowed endurance athletes to determine their anaerobic threshold—essentially their maximum cruising speed. Previously, this crucial training point could be measured only in a lab, using cumbersome breathing masks and electrodes, a process that often failed to produce an accurate value, and was impractical to regularly administer to an athlete.

The Conconi Test revolutionized endurance sports. It let athletes easily tailor workouts to their engines. It allowed coaches and trainers (and doctors) to quantify goals, not just in terms of speed but by increasing power output at a given heart rate.

FERRARI

The test soon proved its value. One of the most storied marks in cycling is the hour record, which at the time the Conconi Test was created had stood for more than a decade since Eddy Merckx rode 49.431 kilometers in 1972. Ferrari realized that, with the test, he could determine any rider's maximum sustainable speed. The guesswork—could this cyclist go far enough to break the record?—was eliminated. All that was necessary was the right rider.

Enter Francesco Moser. A powerful cyclist with a supple pedal stroke, Moser was one of the dominant racers of his generation, winning everything from the 1977 world championship to Paris-Roubaix. In 1983, he was 32 years old and looking for a new challenge in the sport. When Conconi and Ferrari put Moser through his paces on the Ferrara velodrome, the numbers said Moser could beat Merckx's record. Ferrari began working with the cyclist.

On January 19, 1984, Moser rode 50.808 kilometers, beating Merckx by almost a mile; just four days later, he bettered himself, riding an astonishing 51.151 kilometers. Over the next few years, Moser also rode sea level and indoor hour records. After one attempt in Stuttgart, Germany, in 1986, Moser's blood and urine were sent to a drug-testing laboratory; in a brief book about the project, Conconi wrote: "The unequivocal response was that in Stuttgart as in Mexico, Milan, Moscow and Vienna [other sites of Moser's record attempts], drugs had nothing to do with this extraordinary athlete's performance."

In 1999, Moser revealed in an interview with a journalist that he'd achieved his hour records with the help of blood doping, a process in which an athlete stores his own blood for weeks or months, then receives a transfusion before a major event, thus increasing the amount of oxygen-transporting red blood cells in his body.

He may not have used banned drugs—and blood doping was not forbidden at the time, either—but Moser's hour record was still "non-physiological," as his former trainer at Mapei, Aldo Sassi, puts it. "The ethical perception of doping then was not the perception that we have today," says Sassi, who later became Mapei's team director. "What today is doping, in that period, was science."

Ferrari, with his mentor Conconi, was at the forefront of sports science. When a new biotech miracle drug called erythropoietin appeared in the late 1980s, the two doctors quickly realized its potential for endurance athletes. By boosting red blood cell counts, EPO increases the body's ability to transport oxygen, improving aerobic power and endurance. Conconi reportedly even used it on himself, then rode the legendary Stelvio climb outside Milan, dropping a good amateur rider roughly half his age.

Beginning in 1984, Ferrari had been moonlighting as the team doctor for Moser's squad, Gis Gelati-Tuc Lu. He found that he preferred working with riders to the stuffy protocols of the august University



THE CLIENT: FILIPPO SIMEONI. PRE-FERRARI: ADMITTED EPO USER HAD DISQUALIFYING HEMATOCRIT OF 50.7. WITH FERRARI: HEMATOCRIT DROPPED TO 46.

The Theory of Uphill Relativity

Ferrari and now other top trainers believe in a black and white calculation when it comes to ascents: For every kilogram (2.2 pounds) of body weight lost while maintaining the same power output, cyclists strip 1.25 percent from their climbing times. For instance, if you (lost 11 pounds [5 kilograms]) when doing a climb that used to take you 15 minutes, you'd reach the top in 14:04—nearly a full minute faster.—B.S.

DOCTOR'S ORDERS

2

of Ferrara, which was founded in the 14th century, and is the Oxford of Italy. The speed-seeking athlete-doctor didn't have the patience to sit around waiting for tenure. "It was too slow," he says. By 1988 he was working mainly with pro cyclists.

"My athletes would say, 'I go to Ferrara to do the test,' and they'd have big improvements afterward," says Sassi. "I was one of the first to use the Conconi Test—but I never found such big improvements in the riders' condition."

As coach of the Mapei team beginning in 1996, Sassi forbade his riders from consulting with outside doctors—a policy that Mapei CEO Giorgio Squinzi, a strong opponent of doping, says was specifically intended to keep Mapei riders away from Ferrari.

"I think he is one of the most knowledgeable and best trainers in cycling," Squinzi says, "but I also think he is a person who operates without any moral restrictions whatsoever."

On the first day of the 2001 Tour de France, London's *Sunday Times* revealed that Ferrari had been working with Lance Armstrong, who at the time had won the last two Tours in commanding style. Pandemonium broke out. To the European press, which filtered the news through Ferrari's doping reputation, it was as if Armstrong had virtually tested positive for banned drugs. If you were seeing Ferrari, the consensus held, that meant you were doing something.

Besieged by reporters, Armstrong emphasized the good Ferrari—the innovative trainer and number cruncher. The cyclist and his U.S. Postal team issued a statement saying that Armstrong's coach was Chris Carmichael, and that Ferrari was consulted on a limited basis only. In an interview with Italy's *Gazzetta dello Sport* Armstrong said, "Ferrari's been following my progress since 1999, but it's only recently—with my desire to break the world [hour] record—that I've had more contact with him."

At the same time that he distanced himself from Ferrari, Armstrong remained one of his most steadfast defenders—PR be damned. "I view him as innocent; he's a clean man in my opinion," he said during a 2001 Tour press conference.

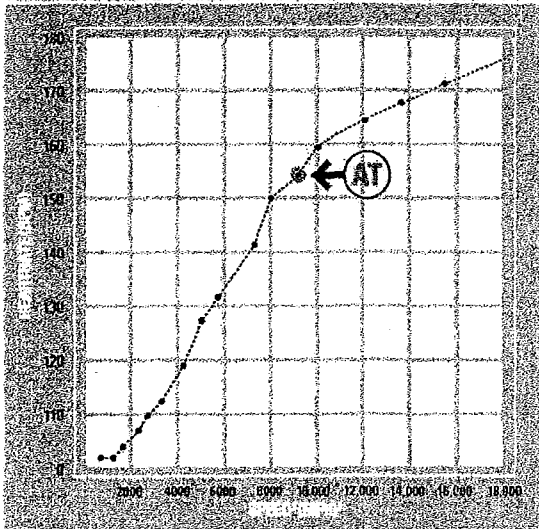
The Conconi Test

With his medical sports scientist Francesco Conconi, Ferrari developed the first simple, non-laboratory field test that lets cyclists pinpoint training zones. The Conconi Test identifies a cyclist's anaerobic threshold, or AT, the point at which the body cannot manufacture sufficient energy by burning oxygen. Above this point, a cyclist can't sustain an effort very long. Just below this point, you achieve your fastest long-term speed.

AT training has since been supplanted by the more accurate lactate threshold, which identifies not when a cyclist goes anaerobic, but the intensity just below the point when the production of lactic acid, which causes that familiar muscle burn, overwhelms the body's ability to clear it away. A generally accepted field test for finding your AT is to measure your average heart rate on a 3-mile time trial. It's 102% (44 percent) of the average.

Even so, the Conconi test is interestingly simple and helpful — your test just below your AT. To take it, you need a stationary trainer and either a computer that measures heart rate and saves split-time information, or a friend to record the data for you. Warm up for 20 minutes. Begin the test in a gear you know you won't be able to spin out by the end. Pedal at a steady 10 mph. At the end of one minute, record your speed and heart rate, then increase your speed by 2 mph. Repeat until you can't continue, then cool down.

On the horizontal axis of a graph, chart your speed. Cubing it (mph x mph x mph) makes it easier to graph. On the vertical axis, chart your heart rate for 10-beat increments. The data points will rise to a straight line, then curl slightly before straightening out again. The point of the curl is your AT. —B.S.



"Lance is very loyal," says Carmichael. "Michele is a very bright person, and he's really aided and helped Lance in his performance."

There was much more help than Armstrong had admitted. In June 2004 *Sunday Times* writer David Walsh (along with French journalist Pierre Ballester) published *LA Confidential*, a book that attempts to list every bad thing Armstrong has allegedly ever done. (Armstrong is suing for libel, and the French-language book has never been published in English.) The book doesn't spell out exactly what Ferrari is supposed to have done for Arm-

strong. But the authors did discover that the relationship between the doctor and the rider was closer, and began much longer ago, than Armstrong had previously acknowledged.

From Italian investigators, who had access to hotel records, Walsh learned that Armstrong had visited Ferrara on numerous occasions, which he listed: "two days in March 1999, three days in May 2000, two days in August 2000, one day in September 2000 and three days in late April/early May of this year [2001]." Those visits came at key points, for Tour preparation and just before the 2000 Olympics, where Armstrong wanted a medal.

Their relationship began as long ago as 1995, when Eddy Merckx had called Ferrari, asking him to take on a new client, a young American who'd won a Tour stage as well as the San Sebastian

THE CLIENT: LANCE ARMSTRONG. PRE-FERRARI: ONE-DAY, CLASSIC-RACE PHENOM WHO CONTRACTED CANCER. WITH FERRARI: NEW RIDING STYLE LED TO 7 TDF WINS.



Classic that year. Ferrari wasn't interested, he says, but Merckx persisted, and in November of 1995 Lance Armstrong came to Ferrara for "the test."

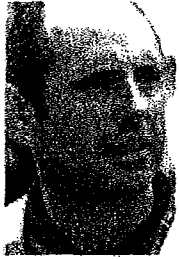
At the time, Armstrong was riding for Motorola and living in Como, Italy, about three hours from Ferrara by car. He was primarily a one-day rider who aimed to win Classics: long, tough one-day races with short, steep climbs. Ferrari was impressed by the test results, and Armstrong became a regular visitor, coming every three or four weeks, Ferrari says. The doctor, Armstrong and Carmichael also went to San Diego that year for a personalized training camp of the sort that later became a centerpiece of Armstrong's training program. Armstrong started the next season, 1996, with increased strength. He won the Classic Flèche Wallonne, and America's biggest race at the time, the Tour DuPont, against an international field. But by the Tour de France, he was strangely off form, and abandoned halfway through. In October, he was diagnosed with cancer.

In January of 1997, just after he had finished chemotherapy, Armstrong paid Ferrari a visit and, when he resumed training in anticipation of his comeback in 1998, the close relationship with Ferrari resumed, the doctor says. Ferrari says he now traveled to meet his famous client, first to Nice, where he'd test Armstrong on the Col de la Madone climb just outside town, and then to Girona, where Armstrong moved in 2001. Ferrari also says he began working with Kevin Livingston and Tyler Hamilton, Armstrong's top lieutenants in those days. But even then, Ferrari's reputation was problematic for some riders. Frankie Andreu, another loyal Armstrong teammate, declined to work with Ferrari, he says, be-

FERRARI

cause of the doctor's reputation.

In the following years, Ferrari established a working relationship with the U.S. Postal Service team. He has tested George Hincapie and Floyd Landis, for example; often, he says, team director Johan Bruyneel would send him a new recruit or a young prospect for evaluation. During 2004, Ferrari paid several visits to Girona, and conducted training camps in Switzerland and the Canary Islands, according to Daniel Coyle's 2005 book, *Lance Armstrong's War*. Armstrong even bestowed a telling nickname



THE CLIENT: TONY ROMINGER PRE-FERRARI: CHAMPION OF 3 GRAND TOURS, SLOWING AT AGE 33 WITH FERRARI: SET HOUR RECORD TWICE IN ONE YEAR AND WON FIRST GIRO.

on Ferrari, calling him Schumi, after Formula One driver Michael Schumacher.

One early indication of Ferrari's importance happened during the 2000 Tour, when Johan Bruyneel called the doctor from the team car during Stage 16 to Morzine. Marco Pantani had opened a threatening gap with a hard attack on a climb, and Bruyneel and Armstrong knew Ferrari could tell them if the wispy climber could maintain the withering pace. Like most Ferrari stories, this one was reported as a kind of mini-scandal—as if Ferrari had somehow injected some kind of drug over the phone. Bruyneel was less interested in EPO than in VAM, a measurement devised by Ferrari to quantify a rider's ability to climb.

"I remember, I was walking in the woods," Ferrari says. "I probably said three words: 'Let him hang.'"

Pantani cracked.

In September 2001, the trial of Dr. Michele Ferrari began. By that point, the Italian police had been investigating him for more than five years. They had noticed that a pharmacy in Bologna was moving a huge volume of EPO and other performance-enhancing drugs and supplements, so they wiretapped the store. On one recording, the store owner cackled, "Ferrari has emptied my pharmacy!"

On August 12, 1998, police had raided Ferrari's home, seizing files and records, including riders' training diaries. At one point, Ferrari says, he asked the lead officer what exactly they were looking for. "He says to me, 'We want to see what you do.'"

Instead they found out who Ferrari did it with. Among the riders whose files were found were Claudio Chiappucci, Axel Merckx (son of Eddy), Kevin Livingston and Gianluca Bortolami, whose Festina team had been at the center of that year's Tour de France

drug scandal. They also seized the diary of a young rider named Filippo Simeoni. There was very little pertaining to Armstrong, who'd spent the 1997 season battling cancer.

There were charts and tables of the riders' blood tests, with their all-important hematocrit values, showing the percentage of red cells in their blood. (Livingston's went from less than 42 percent to 49.9, just one-tenth shy of the 50-percent limit imposed by the UCI in 1997; Armstrong's highest was just below 47 percent.) None of the diaries seemed to document drug use. They appeared to be ordinary training logs, with each week's workouts detailed in Ferrari's own hand. The investigators noticed asterisks on specific days, but there was no key to help them decipher the marks.

Six months later, the asterisks were decoded. In February 1999, prosecutor Giovanni Spinosa—himself an avid cyclist—questioned several riders at an early season race in Italy. After two hours and 45 minutes of post-race interrogation, a weary Bortolami admitted that the marks on his training program were coded reminders of when he should take EPO and steroids.

A few months later, a raid on another former Ferrari client turned up evidence of actual EPO use. Unlike the other riders, this one seemed willing—after a little legal encouragement—to testify against his doctor in court.

On a rainy afternoon, Filippo Simeoni goes out of his way to meet me at a small airport outside Rome that caters to budget airlines. He's on his way to a training camp for his new team, and he has three hours yet to drive, but he feels it's important to talk—even after the trouble that his mouth has gotten him into.

Tall and lean and tan, he has the polished look of a professional athlete, and he looks much younger than his 34 years. His long face is dominated by a nose so sharp it might give him an aerodynamic advantage in the long breakaways that have become his specialty. In the 2001 Vuelta a España, he won a stage in such a breakaway, and dedicated his win to the victims of September 11, clipping out at the finish line and raising his bike over his head. He won another stage the following year, and came close at 2004's Tour de France, getting caught within 100 meters of the line.

In another stage of the '04 Tour, one of the last of the race, he tried again, leaping out of the pack and powering up to a four-man break. Unfortunately, he had the yellow jersey on his wheel. The U.S. Postal Service team was on the front that day, and as Simeoni rode past, he says he heard Armstrong shouting "Go! Go! Go!" at his teammates. When none chased, the yellow jersey took it upon himself. None of the other top contenders followed.

When the two of them reached the break, Simeoni says, Armstrong told the others that he would leave only if Simeoni did. If Armstrong stayed, it would doom the group's escape because his rivals in the pack wouldn't let him ride off and gain more time. Simeoni says he dropped back and, as the pair drifted to the peloton, Armstrong patted him on the back and said, "Nice move."

After the stage, Armstrong told reporters, "All he wants to do is destroy cycling and destroy the sport that pays him, and that's not correct." Armstrong denies Simeoni's version of the story, saying he expected his rivals to chase and, when they didn't, instead of dooming the break he left as a goodwill gesture.

**DOCTOR'S
TALKS**

The VAM

Using a calculation he calls VAM (velocity ascentale media, or average climbing speed), Ferrari says he is able to pinpoint a cyclist's fitness level and do things like determine if a climber can sustain an attack at the current speed. Because of this, VAM is the rare physiological statistic that can be used strategically as well as in training. At the most basic level, VAM is determined based on the beginning and ending altitude of a climb, distance and speed. However, the numbers vary based on gradient and the steepness of the climb (false flats or dips must be factored in). For instance, Ferrari calculates that a rider with a VAM of 1,200 (meters per hour) on an 8-percent climb will ride at a VAM of 1,340 to maintain the same speed on a 5-percent climb. Ferrari says a cyclist needs a VAM of 1,450-1,500 to win a mountain stage in a Grand Tour. Santiago Perez maintained an amazing VAM of 2,067 for the last 5.5 km of a climb in the 2004 Tour of Spain.

What's your VAM? Ferrari says you can ballpark it by multiplying your watts per kilogram ratio by 300. For instance, a rider who produces 6 watts per kilogram is likely to have a VAM of 1,800 on a climb between 7 and 10 percent.

Simeoni says the tactic was payback for testifying against Ferrari and for suing Armstrong for defamation; at one point during his defense of Ferrari, Armstrong called Simeoni a liar. "Armstrong wants to depict me as a black sheep," Simeoni says through our translator, Stephan Farrand. "It's not the truth. It's actually him that's not well liked, because of his air of superiority."

The Italian was still a young rider when his team paid for a consultation with Ferrari, in late 1996. In his agenda for that day, Simeoni had written, "Go to Ferrari to see *Il Mito*." The Legend put the racer through the usual tests, and started him on a new program, with steadily increasing training loads. Like a lot of Ferrari clients, he showed immediate improvement. The next season, 1997, he was finishing mountain stages with Pantani.

In the courtroom, five years later, Simeoni said, "Ferrari spoke of EPO from the first moment." He also said the asterisks on the training program were reminders of when to take Andriol, a steroid, usually after long training rides. He was to buy the Andriol, as well as the EPO and other drugs, from Swiss pharmacies. If he was called for doping control, he was to use a product called Emagel to dilute his blood and lower his hematocrit.

Ferrari wasn't the first to suggest that he take drugs, Simeoni admits. He'd been taking EPO since 1992, when he was an amateur, and he continued taking it after he left Ferrari in 1997, up until the time he was caught, two years later. At the time he testified, he was serving a six-month suspension from cycling, which had been reduced from nine months.

"I didn't really think I was doing anything wrong," Simeoni says, at the airport. "It was normal, what everybody did." Only later did he realize he was wrong, he says, and felt he should speak

out. "I'd reached the point where I realized that I'd overdone it, and it was time to change things. I wanted to be at peace with myself, and my conscience. When the proof was there, I didn't feel like I could deny it. You have to be a criminal to do that."

In fits and starts, the trial dragged on for more than three years, despite or because of the absence of key witnesses such as Axel Merckx and Kevin Livingston, who said they couldn't make it to Bologna to testify. Bortolami did, contradicting what investigators said he'd told them, in court he said the asterisks meant he was supposed to take "innocent vitamins and amino acids." The only rider to testify in detail against Ferrari was Simeoni.

He'd stopped seeing Ferrari after one season; his team would no longer pay *Il Mito's* substantial fee. He says he also felt Ferrari was paying more attention to big-name riders who paid him more. "For a lot of riders, it was worth it," Simeoni says. "They got big results, and they wouldn't have gotten them without Ferrari. He's a real scientist. He spends hours studying; he's a genius. He's the best of all for training programs—but also pharmacologically."

Simeoni pauses, fiddles with his chunky black watch with many dials. He has a long way to drive, to meet up with his new team, Naturino-Sapore di Mare, a second-tier squad sponsored by a seafood company. He's done well for a bricklayer's son from the south of Rome, but he won't be riding the Tour this year—or, likely, ever again. Few top teams seem interested in him.

"I never suggested to a rider to take banned substances," Michele Ferrari is saying, staring intently across the table at me, in a coffee bar in a hotel in central Ferrara where we met for the first print interview he's given in four years. "Never," he says.

But what about all the riders who said you told them—

He interrupts: "It is possible that some guys were taking illegal drugs, but not under my suggestion." He speaks in quick, staccato English punctuated with Italian expressions, with the manner of someone too intelligent, and too impatient, for a world of petty rules. "You can get the same results with natural methods—with the right training, and for example with altitude, or hypoxic chambers."

He looks older than the Ferrari of the pictures I've studied, his teeth less white and his skin less tan. He's dressed like an academic, in a fraying lambswool sweater, and he seems completely sincere when he insists, "There is no reason not to follow the rules."

From his briefcase, the doctor pulls a clear plastic folder and selects a page. It is a photocopied graph showing Simeoni's hematocrit values. When he came to Ferrari in 1996, the chart shows, Simeoni's red blood cells were at 50.7 percent; the rules prohibit riders from competing if they're above 50. Ferrari says he suggested that Simeoni donate blood, to reduce his hematocrit, which was dangerously high—as it often is in doping cyclists.



THE CLIENT: KEVIN LIVINGSTON. PRE-FERRARI: HEMATOCRIT OF 42. WITH FERRARI: HEMATOCRIT OF 49.9, JUST ONE-10TH SHY OF THE UCI LIMIT.

"I am not an expert in doping," he says, framing the last word in air quotes. "This is just to prove that this guy is a liar."

After an hour and a half of desultory answers, the doctor seems to have perked up. He tosses a stack of documents on the table and leans forward, showing the same intensity he displayed during his trial when, spontaneously, he took the witness stand in his own defense. On that day in court, he talked from 10 in the morning until 7 at night, pulling documents from a huge folder to illustrate his points, and sweating through his chic T-shirt and sportcoat.

After the bloodletting, he explains, Simeoni's hematocrit dropped to a normal 41, before rebounding to what Ferrari calls his "natural" level of 45-46 percent, where it stayed throughout the year the doctor trained him.

In court, the prosecution's expert testified that Simeoni's change from 41 to 47, could be the result of EPO. "That is absolute bullshit," Ferrari says. The judge agreed, admitting that he could not say for sure that any of the riders' changing hematocrit levels were the result of doping; hematocrit is a constantly fluctuating value, depending on many factors, such as one's state of dehydration, and even whether one is standing or sitting.



**THE CLIENT:
MORENO ARGENTIN.
PRE-FERRARI: FORMER
CHAMP ON VERGE OF
RETIREMENT. WITH
FERRARI: COMEBACK
INCLUDED 12 RACE AND
STAGE WINS IN 5 YEARS.**

Il dottore pulls another document from the stack, marked "After Ferrari," which shows that in October 1997, Simeoni's hematocrit had leaped to 52.5 percent. "Simeoni did not need any instruction about doping," he says, "because he was already an expert."

He pulls out another document, this one a page from Simeoni's 1997 training diary. There are asterisks beside certain days, which Simeoni had said were reminders to take Andriol. But at the top of the page, there is a note showing that the asterisks mean he is to take 10-12 grams of amino acids, with Gatorade.

Proof of the innocence of those marks? Perhaps—but then Ferrari stains the moment as he continues talking. During this week, the doctor explains, Simeoni was to race two or three times, which meant the risk of being subjected to a doping test was high. "Andriol is easily detectable for several days, in a normal urine test," Ferrari explains. "So, it is impossible that I suggested he take one Andriol, 20 hours before another race." He repeats, for emphasis, "impossible," and for a moment his indignation shines through, as if he's been professionally insulted.

Despite all the evidence amassed by the investigators, over more than five years and two separate inquiries,

one big thing was missing: a positive drug test by one of Ferrari's athletes.

Nor could authorities find a single piece of paper, in Ferrari's handwriting, explicitly directing an athlete to take any banned substance. The prosecution did produce a single prescription for Animine, no longer banned, and 500 capsules of DHEA, a steroid found in almost any vitamin shop in the U.S., but available only by prescription in Europe. It was medicine for his elderly father, Ferrari said, and he was acquitted on a charge of distributing doping products.

For a man who'd supposedly been the godfather of cycling's doping culture, Ferrari left a meager paper trail. The police files on Ferrari's riders included blood-test results but even those were anything but incriminating; with one or two exceptions, Ferrari's riders stayed well below the UCI's 50-percent hematocrit limit.

"There was no smoking gun," says prosecutor Lorenzo Gestri. In his appeal, Ferrari points this out, as well as the conflicting testimony of Simeoni (who originally told investigators the asterisks were reminders to take amino acids and vitamins), and also claims that the offense for which he was convicted, "sporting fraud," is not applicable to his case, because the law was originally written to cover horse racing. To read his appeal brief, and to talk with the man personally, is to believe in the good Ferrari, the one who quit his old team when he found a drug, and the one who uses altitude tents and hard training instead of EPO and other banned methods, even though, as he says, "it's much easier to do an injection than to organize a training camp in Vail, and to train and work hard."

"I am always in the rules," Ferrari says, pushing back his chair to conclude our meeting. "Always. In the past, now, and in the future. Within the rules."

And with that, *Il Mito* stands, extends a hand, and walks out the swinging hotel doors into the winter.

The most insidious aspect of cycling's doping culture is not what it does to the athletes' bodies, but what it does to the fans' minds—and hearts. Just when you've resolved to believe in someone's guilt or innocence, another fact, another theory, another possibility, another anecdote arises. As I researched this article, I was told a story by Eugenio Capodacqua, a crusading anti-doping journalist at the Italian newspaper *La Repubblica*.

Ferrari's daughter, Sara, was also a gifted athlete, Capodacqua told me. At one point, she ran a sub-2:30 marathon, even faster than her old man in his heyday. In 1999, she was competing in a triathlon in Lavarone, Italy. At 22 years old, she was ranked in the top 25 in Italy, and seemed sure to improve. On the bike leg of the race, however, she was spotted receiving a push from an older male cyclist, who turned out to be wearing a fake race number.

She was disqualified. The pusher: Her father.

The story had been reported in the European press, but I'd never seen it and I was reluctant to trust hearsay. So my translator and I tracked down Italo Botter, one of the judges present at that race. Botter confirmed the story. He said he even keeps a report of the infraction framed on his office wall.

I called the doctor at his home, in October 2005. "That," said Michele Ferrari, "is another complete bullshit." **Ⓢ**

LEFT: AP/WIDE WORLD; RIGHT: TIM DE WAELE/CORBIS