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HGH

**THE PERFORMANCE-
ENHANCEMENT
PIPELINE IS GUSHING.
THE SOURCE IS HIDING
IN PLAIN SIGHT**

**MADE IN
CHINA**

中国制造

BY SHAUN ASSAEL

ON THURSDAY, SEPT. 20, MORE THAN 100 U.S. DRUG
Enforcement Administration agents began to fan out across 27 states, knocking down doors in suburban cul-de-sacs and pushing their way into basements and kitchens. Their targets: dozens of homemade-drug labs that had taken root in the shadows of schools and supermarkets and now produced and sold steroids, human growth hormone, even Viagra. The owners weren't exactly secretive. One Long Island man had 800,000 doses of raw steroid powder stacked in plain view in his garage, right next to his shiny new Corvette; nearby, a locker housed empty vials and printed address labels for thousands of clients throughout the country. An electrician who was running another lab, in New Jersey, had stashed 40,000 doses in his basement, along with the tub and centrifuge he used to turn the powder into street-ready drugs. In a third raid, on a Midwestern home, the living room floor was so thick with steroid powder that agents left footprints behind.



By the time "Operation Raw Deal" ran its course four days later, 124 people had been arrested and 56 labs shut down. Hundreds of thousands of intercepted e-mails went into a database of names that the agents promise will lead to more arrests down the line.

What links these raids isn't the intended destinations of the drugs—pro athletes, gym rats, even high school kids—it's their source: China. Raw Deal represents more than a year of tracing this Mainland-to-Main Street pipeline. In addition to the arrests and seizures made on these shores, DEA agents also identified 37 Chinese factories they blame for juicing most of the underground trade.

It's the latest embarrassment for a Chinese government that is going to remarkable lengths to make sure everything is squeaky-clean for next summer's Olympic Games, in Beijing. An official campaign urges citizens to smile when they meet foreigners. The worst-polluting factories within 30 miles of Beijing will be closed and more than a million cars banished from the roads three months before the opening ceremonies to give the city's sickly orange sky a chance to breathe. Beijing's official Weather Manipulation Office even plans to seed clouds with chemicals that will induce an early rain and guarantee clear skies for the Games.

But it will take more than smiles and blue skies to conceal the tide of Chinese pharmaceuticals that currently feeds the world's underground doping economy. Over the past seven years, the size of China's drug industry has ballooned from \$22 billion to an estimated \$67 billion. Steroid powders and



By Sept. 23, Raw Deal had busted 56 labs in 27 states, seizing 11.4 million doses of steroids.



This owner of an HGH lab in Long Island, N.Y., was one of 124 arrests in the federal crackdown.

HGH are a significant chunk of that business, and despite a government-licensing process for drug manufacturers, both are widely available to anyone with an easy-to-get prescription.

In anticipation of the Olympics, the Beijing Organizing Committee has pledged to conduct more drug tests than any previous host nation has (see *Coming Clean*, below), and Chinese lawmakers have forbidden anyone from selling or providing doping substances to athletes, coaches or sports federations from any country. But not even the Chinese

government can control everything.

IT'S A sweltering June day, and thousands of drug manufacturers have set up shop at the Shanghai

In fact, the World Anti-Doping Agency believes Chinese-made growth hormone dominates the international underground doping trade. As one supplements-industry figure with experience in China puts it, "People there will make whatever you want. They will in Eastern Europe too, but the Chinese are better and faster and do it with less hassle."

On a recent trip to Shanghai, we found out just how accommodating these drug companies can be.

New Exposition Centre for the Convention on Pharmaceutical Ingredients Expo. Factory owners from Beijing to Gansu pour in to what is being billed as "the biggest pharmaceutical ingredients exhibition in the world." They're here to meet Fortune 500 executives who are in the market for raw materials that will become pain medicines and herbal teas and antiviral drugs. Friendly faces and four-color brochures are the eager come-on of China's pharmaceutical industry.

By noon, the exhibition hall teems with people; millions of dollars have already changed hands. Under the circumstances, a writer from *The Magazine* has no trouble posing as the owner of a sports-nutrition website with a pocketful of cash

match it against her own. But her British boss intervenes. Glancing at the wrinkled paper, he shooes away the prospective buyer and his translator. "We may not be the best place for you," he says, wary of breaking American laws.

Steroids are a controlled substance in the States, so before a drug company may sell them here, it has to register with the Food and Drug Administration. Buyers must be licensed by the DEA. Anyone with a legitimate need—doctors, dentists, pharmacies—may get a license. A sports-related website may not. If a manufacturer sells to an American who doesn't have a proper license, "a crime has been committed as soon as those drugs hit the U.S.," says DEA spokesman Steve Robertson.

Still, in an economy in which the average laborer makes \$232 a month, a couple of thousand dollars goes a long way. The farther one ventures into the Expo hall, the more it seems the exhibitors are willing to overlook the rules.

Wedged into a long aisle of displays, a young woman from a steroids company based in Hunan province takes our list. "We have all of these," she says. Asked if shipping to the U.S. is a problem, she replies, "Is Federal Express okay? We do it for our other American clients."

Her openness is no anomaly. At the booth of a small company from China's southern Zhejiang province, a young woman quotes the seductive price of about \$266 for a kilo of testosterone. That weight can be converted into 10,000 single doses at \$12.50 a pop, or \$125,000, once it hits the street. "Selling these supplements is

THE HGH CONNECTION



1. The segment of DNA responsible for growth hormone production is placed into bacterial cultures to replicate. The growth hormone is then isolated and removed in a purification process, leaving a pure powder known as somatropin.



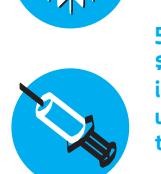
2. Somatropin is shipped in overnight mailers to the U.S. (It is odorless and thus undetectable.) A single gram of raw powder (cost: \$3,000) will yield roughly 3,000 doses.



3. In the lab, the powder is diluted by combining it with a mixer such as baking soda and dissolving it in water. The resulting solution is doled out into 10-ml vials.



4. The vials are placed in a machine called a lyophilizer, which freeze-dries the liquid into 3 mg of powder.



5. The vials are sold in kits (cost: from \$500 to several thousand dollars) and include a sterile saline solution. End users mix the solution with the powder to create injectable doses of HGH.

can be made with relative ease."

Another exporter agrees to sell us stanozolol, the drug that got Ben Johnson stripped of his gold in Seoul and Oriole Rafael Palmeiro suspended for 10 games. The exporter suggests we use another chemical's name on the shipping label to avoid detection. "They can call it a million things," says a veteran U.S. drug agent. "The bottom line is, we don't have enough agents to man our import facilities. That's why this stuff is getting in literally by the boatload."

American efforts to stanch the flow have been mixed. At the end of 2005, the DEA scored a major coup with Operation Gear Grinder, which shut down eight Mexican pharmaceutical companies that were swamping the U.S. with high-dose steroids. After 23 people were indicted and several websites shut down, the shelves of border pharmacies in places like Tijuana were suddenly noticeably devoid of 'roids.

But that victory was short-lived. Turns out, the Mexican labs got most of their raw materials from Chinese suppliers. When the middlemen were closed down, the suppliers just began to sell direct. "It created a void," says an agent who worked on the Mexican case. "And that was an opportunity for

COMING CLEAN

CHINA'S DOPING CONTROL CENTER RACES TO GET READY FOR THE GAMES

Wu Moutian, head of China's Doping Control Center, is already losing sleep over next summer's Olympics, not to mention his government's vow to host the cleanest Games ever. "I never had experience organizing such a big lab," he says.

Don't worry, he'll have help. Lab directors from around the world will fly in to supervise the estimated 4,500 tests Wu expects to conduct. His 5,000-square-meter facility, which is still under construction, will house 150 drug testers and the largest collection of detection machinery ever assembled for a sporting event. "We will be operating—how do you say in English?—24/7," says Wu.

Olympic organizers are counting on him to burnish China's rogue image. Doping rumors have dogged its national teams for years. In 1993, the country's previously unheralded female distance runners set three world records in one week. Their coach, Ma Junren, credited turtle blood and caterpillar fungus, but no one was surprised when, in 2000, he and 27 athletes were banned before the Sydney Games for "suspicious blood test results."

More recently, in August 2006, officers raided a sports camp in the northeastern province of Liaoning, where they found trainers openly injecting students. The refrigerator in

the headmaster's office held 300 doses of EPO and 141 bottles of steroids. Zhao Jian, head of the Anti-Doping Commission of the Chinese Olympic Committee, says the bust proves China's seriousness. "If we hear of someone using drugs," he says, "we will show up to their house."

Wu should benefit from a more-sensitive blood test to detect growth hormone, which the World Anti-Doping Agency hopes to debut before Beijing; the test used in Athens in 2004 didn't catch a single user.

"Each Olympics has problems," Wu says, "and we will have ours. You can't solve everything in two years. But we will have a lot of help."

-S.A.



Wu (left) and Zhao promise brighter skies for Beijing.

CLOCKWISE FROM TOP RIGHT: COURTESY DEA; ANDREW ROWAT; COURTESY DEA (2); ILLUSTRATIONS BY JASON LEE

THE FARTHER ONE VENTURES INTO THE EXPO HALL, THE MORE IT SEEMS THE EXHIBITORS ARE WILLING TO OVERLOOK THE RULES.

and a shopping list that could keep an underground lab busting for months. The list includes kilogram quantities of three popular testosterone and nandrolone deconate blends that can be turned into deca-durabolin, a bodybuilding favorite.

The expedition starts slowly. At a booth for a Shandong-based subsidiary of a U.K. company, a Chinese hostess takes the list and politely tries to

more profitable than selling cocaine and less dangerous than selling methamphetamine," says Mark Haskins, an investigator with the New York State Department of Health who has helped to arrest more than two dozen doctors and pharmacists in the past two years for violating drug laws regarding steroids. "You're not dealing with fertilizer or other flammable ingredients. Steroids

traffickers and manufacturers from China to play a larger role in the illicit U.S. market."

WHILE THE underground steroids trade is profitable, black-market HGH is worth even more: WADA pegs worldwide sales at about \$600 million. Up to \$480 million of that comes from China.

The FDA has approved HGH to treat children and adults with growth hormone deficiency and AIDS patients with wasting syndrome. But many anti-aging clinics—like the one that supplied MLB first baseman David Segui—prescribe it for off-label uses such as reversing the hormone deficiencies that are a by-product of growing older.

One of the most popular HGH formulations is made by a Chinese chemist named Jin Lei. In the early 1990s, while receiving his Ph.D. at the University of California at San Francisco, Jin learned to make synthetic HGH. After he returned to his native China, he opened his own government-licensed company north of Beijing. He called his company Gene Science, or GenSci, and named its most successful product after himself: Jintropin.

Jin portrays himself as a pharmaceutical patriot who sells low-cost HGH to Chinese patients who



At GenSci headquarters, founder Jin Lei churns out his popular eponymous formulation—but no longer, he says, for American consumption.

Because Jintropin costs a fraction of what American- and European-made versions do, its following has grown rapidly, expanding beyond the bodybuilding and medical worlds. In February, Sylvester Stallone was stopped and detained while trying to enter Australia without a prescription for the 48 vials of Jintropin he was carrying. At about the same time, the FDA added GenSci to a special

need it. That doesn't stop him from also shrewdly courting the sports world. This pitch appears on the GenSci website: "HGH also strengthens and heals connective tissues, cartilage and tendons. These uses are what make it so attractive to athletes in all sports, and in bodybuilding in particular."

TO CATCH A SUPPLEMENT MAKER

HOW EASY IS IT TO BUY ILLEGAL STEROIDS ONLINE? THIS EASY

Europa Sports Products is a familiar name in the supplements world. The Charlotte, N.C., wholesaler sponsors exhibits at bodybuilding shows like the Arnold Classic and stocks shelves in Gold's Gyms and GNC stores nationwide. But as a recent investigation by *The Magazine* found, it also keeps online pharmacies well-supplied with designer steroids.

Acting on a tip, we posed as the

founders of a new supplements company—creating the website ProGymGear.com to back our ruse—to see exactly what Europa offers. When we informed a sales rep by e-mail that we were "targeting the hard-core gym customer," he didn't ask for a business license—or any other ID, for that matter. He went right into a pitch for Bulk Tabs, a product of Florida's IDS Sports. Explaining that the supplement is "highly

androgenic," he wrote that it is made from "real-deal ingredients" and, with regard to drug tests, that it would "come out false." We paid \$1,000 for four boxes of Bulk Tabs and two other IDS offerings: Mass Tabs and Sostonol. When we asked for something "similar to Superdrol," a drug whose sale the FDA prohibited in 2006, the rep suggested AnEvol, by Evolution Labs of Florida. "It is [the] identical formula to Superdrol," he wrote. "People are going to go ape s— over this."

The package arrived by regular mail to a post office box we'd set up, and we promptly sent off samples to Aegis Sciences, a Nashville lab that does the drug testing for the WWE. In a standard analysis for 11 known steroid compounds, everything tested negative.

Was the stuff really drug-free or just able to fool a test, as advertised? That was a question for Don Catlin, the head of LA's Anti-Doping Research Institute. Catlin's deeper analysis showed that one of Sostonol's many-lettered ingredients is chemical code for Madol, a powerful designer steroid originally developed by BALCO chemist Patrick Arnold. Another, Oral Turinabol, was a favorite of the old



Europa's designer goods passed a first test (below); follow-up screens were more revealing.

Drug Class	Result	Quantitation
Steroids and Precursors	POSITIVE	
19-Norandrostenediol	NONE DETECTED	
19-Norandrostenedione	NONE DETECTED	
19-Nortestosterone	NONE DETECTED	
19-Norandrosterone	NONE DETECTED	

Europa's salesman was as good as his word about AnEvol, though. Catlin found it to be directly related to Superdrol and to contain the prohibited synthetic steroid methasterone. A letter from us asking for comment—sent by FedEx—to the manufacturer's address on the box went unreturned.

Eric Hillman, Europa's CEO, didn't return a message seeking comment about our findings either. But he might be happy to know his reps are on top of things. Our contact continues to e-mail us about placing our next order. -S.A.

CLOCKWISE FROM TOP LEFT: ANDREW ROWAT (2); JOE RODRIGUEZ

watch list of companies with products that can be turned away at the border. In response, Jin quickly updated his site with a stark English-language declaration that GenSci does not ship to the States.

Judging from the elaborately constructed GenSci booth at the Shanghai Expo, the retrenchment has not hurt business. A gilded, noodle-shape sculpture rises from the booth's center, representing a strand of DNA. Surrounding it, half a dozen rotating displays boast that GenSci is the biggest biotech company in China.

Putting to the test GenSci's promise not to ship to the U.S., we approach a woman whose business card identifies her as the company's "Director of Regulatory Affairs." Is she willing to fulfill an order for a U.S. sports-related website? The woman says U.S. sales have stopped. But after a few minutes of conversation, she warms up. "I have someone who does this whom I have to talk to," she says. "If he

"YOUR GOVERNMENT IS VERY STRICT. WE NEED TO CHANGE THE REAL PRODUCT NAME. IF YOU NEED THE GOODS, WE CAN USE 'WATERMELON EXTRACT.'"

says it is possible, I will then have to talk to the big boss, our CEO." That would be Jin.

We don't pursue the request. There are plenty of other places to go. A former employee of GenSci reportedly left the company recently to open a rival plant that now supplies brokers around the world, including in the U.S. And an article in the small but influential bodybuilding magazine *Body of Science* reports that at least seven other manufacturers in China currently make HGH.

One of those companies is working the far end of the Expo. A corkboard display of molecular diagrams lends the look of a high school science project. A salesman who introduces himself as "Jerry" nods when he comes across HGH on our shopping list. "Our factory makes this," he says in crisp English. Then he adds, "Your government is very strict. You should not place too large an order, because it might be dangerous."

In a subsequent e-mail, Jerry is explicit

about how a transaction could work. "Our most competitive price is \$1.88/IU," he writes before leaving no doubt that he knows about American law. "We need to change the real product name for express," he continues. "If you need the goods, for example, we can use 'watermelon extract.'"

It is "watermelon extract" like Jerry's that winds up online and in American pharmacies. Haskins, the New York investigator, spent the past year investigating web shops that import raw somatotropin powder from China and mix it into sellable doses of growth hormone (see *The HGH Connection*, page 93). Signature Pharmacy in Orlando reportedly sold \$150,000 worth of testosterone and HGH to Richard Rydze, a doctor on the Steelers staff, and filled a yearlong HGH prescription for Cardinals pitcher-turned-slugger Rick Ankiel in 2004. (Rydze denies supplying any Steelers, and Ankiel had a doctor's prescription for his HGH.) Records also show that

Signature served Patriots safety Rodney Harrison, who was suspended for the first four games of this season for using HGH. A second pharmacy, in Mobile, Ala., reportedly sold HGH to boxer Evander Holyfield and Angels outfielder Gary Matthews. (Both deny using HGH.)

IT'S UNCLEAR how effective Operation Raw Deal will be at closing off the spigot from China. "This will make a difference, but let's put it in perspective," says San Diego-based DEA agent Dan Simmons. "We considered Gear Grinder a preseason game. We consider Raw Deal a regular-season game. There's still a long season to go." In February, agents from his office traveled to Beijing to meet with their Chinese counterparts. "They said, 'Give us what you know,'" says Simmons. "We'll prosecute and arrest for you."

The Americans told the Chinese agents about the 37 factories they had identified as sources. Seven months later, Simmons has been told of just one factory's having been closed. As another federal official involved in the case remarks, "China has been very on-again, off-again about its cooperation. You have to remember, its people make a lot of money selling this stuff."

In any event, the doping pipeline is a flexible one. Just as the Chinese filled the vacuum left by Operation Gear Grinder, a break in the Chinese supply line easily could be filled by suppliers in India, Greece or Russia. From suburban basements and ball fields to antiaging clinics, demand has never been greater. And in a global economy in which a mouse click can connect New Jersey to Northern China, satisfaction is never far away. ☀

Shaun Assael is the author of the forthcoming book *Steroid Nation* (ESPN Books).