# RANDOM SAMPLES

edited by CONSTANCE HOLDEN

## Interest Grows in "Anti-Aging" Drug

DHEA, often called an "anti-aging" compound, has been on the periphery of medicine for years, the object of wide-ranging claims but little research. But now the substance, a steroid (dehydroepiandrosterone) secreted by the adrenal cortex, seems to be coming into the sharper light of mainstream research. Indeed, last month the New York Academy of Sciences devoted a 2-day conference to it, held in Washington, D.C., where they heard the results of a recent human trial suggesting that DHEA supplements have both physical and psychological benefits in older people.

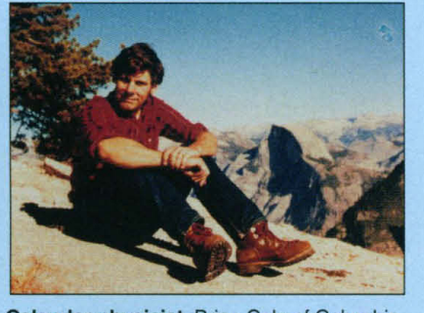
Scientists have long been interested in DHEA, which, unlike other steroids, declines linearly with age in humans. It's widely used in Europe to stave off the burdens of time such as menopause symptoms, and increasing numbers of U.S. doctors are prescribing DHEA. (It's not an approved drug, but pharmacies can obtain this synthetic steroid in unprepared form.)

Research with rodents suggests that DHEA protects against diabetes, obesity, cancer, and heart disease and increases lifespan. What's more, it seems to enhance immune function in both animals and humans. "At present, it's the only steroid that has been demonstrated to activate immune function," says endocrinologist Samuel S.C. Yen of the Department of Reproductive Medicine at the University of California, San Diego.

But if it keeps people young, no one knows how, says endocrinologist John Nestler of the Medical College of Virginia, who organized last month's conference. Clinical studies are few; a recent one was described by Yen, who over the past 3 years has administered DHEA—in amounts just enough to replace age-related losses—to more than 50 men and women over age 50 for 3- to 6-month periods. He said most people felt better while on the drug; muscle mass increased; blood levels of insulin-like growth factor (which helps keep cells healthy) increased; and in men, immune function was activated as indicated by increased interleukin-2 and natural killer cells. Another researcher who has reported encouraging results is reproductive endocrinologist Peter Casson at Baylor College of Medicine in Houston, who focuses on the effects of DHEA in postmenopausal women. Casson believes DHEA not only enhances immune function but offers "a mild cardioprotective effect."

But scientists caution that much more research is needed to evaluate DHEA. Meanwhile they say they could do without the accompanying hype. Last year, says Nestler, a prominent French physician told a reporter that DHEA was a "cure for aging." Since then, "I get a call every week from someone asking if it's the fountain of youth."

## Ph.D. Pinups



**Calendar physicist.** Brian Cole of Columbia University is willing to brighten up a month.

"This is a public understanding of science and technology project if ever there were one," claims Karen Hopkin. Others may see the enterprise in a less flattering light. It's a calendar—"Studmuffins of Science"—being put together for 1996 by Hopkin, who produces *Talk of the Nation: Science Friday* for National Public Radio in New York. After appealing for candidates through the *Annals of Improbable Research* (a spin-off of the *Journal of Irreproducible Results*), Hopkin got about 70 photos of winsome male Ph.D.s, some self-promoted, others nominated by colleagues and wives. She's now making final selections. Each finalist will be accompanied by a Dewar's-style profile, including "favorite DNA purification techniques" for a biologist, for instance, or "favorite geothermal upwelling" for an oceanographer.

Sexist? Sure. But so far Hopkin says she's only gotten a couple of complaints from women. More typical is the response by a female physicist who e-mailed "This calendar will make my life complete." The candidates themselves seem more flattered than concerned about political correctness. Says Cornell University physicist Robert Elia: "Getting my degree was challenging and fulfilling and all, but this is a real honor."

## Shell Pulls a U-Turn

The environmental group Greenpeace has succeeded in pressuring Shell oil company to abort plans to dump a decommissioned floating oil storage tank, the Brent Spar, in the North Atlantic. Now British government officials are fuming, because they say disposing of the thing on land is more hazardous environmentally and will cost four times as much—more than $72 million.

The 14,500-ton, 150-meter-high storage buoy contains an estimated 100 tons of heavy-metal–containing sludge. In mid-June, the buoy was towed from the North Sea to a dumping site 2000 meters deep in the Atlantic's North Feni Ridge. But negative publicity generated by Greenpeace created such a groundswell of public opposition that on 20 June, the eve of the intended scuttling, Shell UK announced it had been ordered by its parent company, Royal Dutch-Shell Group, to tow the tank back home.

GREENPEACE/SIMS

**Headed for land burial.** Superannuated oil platform.

Greenpeace, which labeled the dumping plan another instance of humans "using the sea as a toilet," is delighted. "We won the battle because of public opinion," says campaign leader Paul Horsman.

Government officials, who deliberated for 3 years before finally deciding deep-sea burial was the safest course, are exasperated. They point out that the deep-ocean floor is studded with hydrothermal vents that release millions of tons of heavy metals into the sea each year, so a few hundred kilograms from the Brent Spar are only a drop in the bucket.

Marine toxicologist Paul Johnston, who works at the Greenpeace Research Laboratories at Exeter University, U.K., counters that not enough is known about deep-ocean communities to be confident the sludge will have no adverse effects. The rule should be "if in doubt, don't do it," he says.

Much scientific opinion does not seem to be in accord with Greenpeace, however. For example, Ken Hinga, a chemical oceanographer at the University of Rhode Island, says, "I doubt very much that land disposal is much preferable" to ocean dumping. The fact is, he says, "it's not going to do the local environment any good no matter which place it goes." Land disposal, he adds, might well cause more risk to humans.

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Nonetheless, Shell is now seeking a license for onshore disposal. And the Brent Spar is seeking a temporary mooring off Norway.

## SSC on the Block

You could call it the Biggest Li'l Fire Sale in Texas. This fall some 6500 hectares of land, an almost-completed $65 million linear accelerator, and 14,000 square meters of office and warehouse space go on the auction block. Texas, the owner of this odd lot, is trying to recoup some of the $500 million that it sank into these and other remnants of the defunct Superconducting Super Collider (SSC).

Earlier plans to put the SSC site to a higher use—as a cancer treatment facility or a high-performance supercomputing center—fell through when state officials balked at spending any more money. Instead, they ordered the Texas National Research Laboratory Commission, which oversees the SSC site, to auction off the whole package and buy back as much as possible of the remaining $250 million in state bonds issued to help finance the $11 billion project. The Department of Energy has already written off its $2 billion investment and has shipped the most valuable scientific equipment to other DOE labs.

One small phoenix, however, has risen from the ashes of the SSC: School districts across the state will share $1.8 million worth of equipment, furniture, and portable classrooms to beef up their science programs. The Texas Science Education Collaborative, a consortium of 10 school districts, received the windfall last month, and each district is putting up $100,000 of its own money to develop curricula, software, and other material to put DOE's gift to best use. "We're saddened by the loss to science, but we're pleased that school children across the state will benefit," says the project's leader, James Poirot, associate dean at the University of North Texas.

## Specter at the Feast

Most members of the Behavioral Genetics Association (BGA) strive to keep their young discipline on a strictly scientific track and to avoid entanglement in volatile political issues—such as claims that there are genetically based behavioral differences between races.

Thus many BGA members were stunned last month when their own president gave a banquet speech at the annual meeting in Richmond, Virginia, in which he asserted that crime among blacks could have genetic roots. Glayde Whitney of Florida State University, hitherto best known for work on the genetics of mouse taste, took the occasion of his final speech as president to deliver a talk featuring statistics on black people's disproportionate contribution to crime in the United States and elsewhere. "Like it or not," said Whitney, "it is a reasonable scientific hypothesis that some, perhaps much, of the race difference ... is caused by genetic differences" in things like "intelligence, lack of empathy, aggressive acting out, and impulsive lack of foresight."

Several people walked out during the speech. Says psychologist David Fulker of the Colorado Institute for Behavior Genetics: "By the time he got halfway through I was so appalled I couldn't even listen to it anymore." Whitney's successor, psychologist James Wilson of the Colorado Institute, later circulated an open letter on the BGA's computer network calling the talk "nonscientific, misleading, and cruel," and urging Whitney to resign from the association. Whitney, however, says he's not sorry he gave the speech. "I thought it was appropriate because it's an important issue," he says. "Behavioral geneticists ought to be looking at group differences. ... It's a legitimate scientific topic."

A few people have defended Whitney—notably psychologist John Loehlin of the University of Texas, who wrote another open letter suggesting that "given a choice between bluntness and condescension [toward African Americans], there's a good deal to be said for bluntness." But many behavioral geneticists are now worried that 25 years of hard-won respectability is in jeopardy. Says Australian geneticist Nicholas Martin of the Queensland Institute for Medical Research: "The vast majority of the membership is fully aware of the polemic potential of much in our purview, and we try to avoid getting drawn into politics. To have all this blown in one evening by one insensitive person is galling, to say the least."

## Physical Tennis

If Howard Brody has his way, the balls at Wimbledon are going to get bigger. Brody, a professor of physics at the University of Pennsylvania and a technical consultant to the United States Tennis Association, thinks the use of larger balls in men's professional tennis could solve a problem that has plagued tournaments since the introduction of bigger, lighter racquets: Men's serves have become so fast that opponents don't have time to return them. What's more, the increase in speed and power has all but eliminated the crowd-pleasing sustained rallies on "fast" courts such as the grass at Wimbledon.

No one wants to return to wooden racquets, so something else has to give. Tournaments already feature minor changes—in fact, men at Wimbledon are using slightly deflated balls this year. But Brody has calculated that for the fastest players, a full 20% increase in ball diameter is needed. That, he says, would take 16 to 24 kilometers per hour off serves that can reach 210 kph.

Stan Malless, who chairs the USTA's technical committee, says the proposal, along with other ideas such as shortening the service court or raising the net, will be scrutinized at a meeting of the International Tennis Federation to coincide with Wimbledon this month. Radical changes are unlikely, particularly at tradition-rich (or -bound) Wimbledon. But Brody says something will have to be done soon—otherwise "the next generation of tennis racket may be so good that the rules of the game might have to be changed to keep fan interest."

## Kyoto Prize to Astrophysicist

The lucrative Kyoto Prize for basic science is being awarded this year to a Japanese astrophysicist, Chushiro Hayashi. A professor emeritus at Kyoto University, Hayashi is being honored for revolutionizing the theory of stellar evolution as well as for a general theory on how the solar system was formed. The prize is grand as well: 45 million yen, or $530,000 (a gain of $100,000 over last year).

Hayashi

"It's about time" for Hayashi to be accorded major recognition, says Harvard theoretical astrophysicist Alastair Cameron. Cameron says Hayashi, who turns 75 this month, did his earliest major work 40 years ago, developing what became known as the "Hayashi track" on a plot, called the H-R diagram, relating stellar luminosity to surface temperature. He did this by establishing that the model of a star in its Red Giant phase must have a minimum surface temperature. "I'm delighted Hayashi has this prize, because now his own countrymen may be paying a little more attention to him," says Cameron. He relates that only a few weeks ago he was being interviewed about the origin of the solar system by members of a Japanese film crew who were unaware of Hayashi's existence.

This year's winner in the "advanced technology" category is chemist George William Gray, professor emeritus at the University of Hull, U.K., who founded the science of liquid crystal materials. The prizes, administered by the Inamori Foundation, will be presented in a November ceremony in Kyoto.