

began in 1988, when a faculty review of the institute turned up charges of financial mismanagement and sub-par research. Alarmed, IU officials called for Reinisch to quit. But she refused—and was backed by the institute's trustees. In January, Ehrlich finally withdrew IU's 1988 request for Reinisch's departure.

So why leave after such a victory? Reinisch offers several reasons: No one, she told *Science*, "should be a director of an institute like this for more than 10 or 15 years," adding that after heading the Kinsey for 11 years, she had wanted to leave but "couldn't even consider moving on until I had been exonerated." And then there was a more personal reason: In her formal statement of retirement, she said that the long struggle with IU had extracted a "substantial personal cost."

As to the beleaguered institute, trustee Eugene Eoyang, an IU professor of comparative literature, is likely to serve as acting director until a permanent director can be found. Officially, an IU spokeswoman refused to comment on Reinisch's departure or the Kinsey's future.

NAS Director to Move to Carnegie

With 3 months left in his 12-year term as president of the National Academy of Sciences (NAS), Frank Press has announced that he won't have far to move his personal files. Next September, Press will become the first Cecil and Ida Green Senior Fellow at the Carnegie Institution's Geophysical Laboratory and Department of Terrestrial Magnetism, located in Washington, D.C., a few miles from Press' current office. At Carnegie, Press says, he'll be surrounded by people in "my own field of geophysics," and he intends to devote most of his time to writing and speaking on issues that affect science and technology. He'll talk at several college campuses this fall and will spend the summer checking page proofs for his new textbook, *Understanding Earth*.

Meanwhile, Press has sent a farewell letter to all academy members in lieu of giving a final speech. The reason: He'll be in Tokyo the day of the academy's annual meeting, receiving the \$400,000 Japan Prize (*Science*, 22 January, p. 461). In his letter, Press takes pride in boosting the number of government requests for academy studies and raising the NAS endowment from \$28 million in 1981 to \$128 million in 1993.

But Press' letter also expresses concerns about the future: As the



Frank Press

academy gains influence, he writes, it may begin to draw political attacks. Press also worries that the NRC has reached "a maximum manageable size" and is in danger of becoming too bureaucratic if it grows further. Press says he will propose to his successor, Bruce Alberts,

that NAS cut out a layer of management and replace it with oversight committees made up of academy members. "I like this idea," Press writes, "because it anchors the NRC more firmly to the core of the membership."

Bioengineered Bubbly

Purists may shudder at the thought, but by the end of the century the corks could be popping from the first bottles of transgenic champagne. Nine French laboratories have just completed a 3-year, \$3 million project to engineer vines to resist the grape fan-leaf virus (GFLV).

GFLV is transmitted by nematodes, microscopic parasitical worms, and is endemic in the soils of many wine regions. The malformation and degenerations the virus causes in vines can result in serious reductions in yield—and at present is tackled using pesticides to control the nematode vectors, and wasteful fallowing of land. But the French researchers, led by Michel Boulay of the Moët-Hennessy-Louis Vuitton plant research center in Colombes, near Paris, have now used *Agrobacterium tumefaciens*—the classical vector for gene transfer in plants—to introduce viral coat protein genes into cells of a hybrid vine variety commonly used as a rootstock.

The precise mechanism of resistance to GFLV isn't known, but the insertion of coat protein genes has been used to engineer disease resistance into a number of plant species. The tricky part, says Boulay, was regenerating plants from the transformed cells. But now that hurdle's been crossed and the French researchers are optimistic that their transgenic vines will remain disease-free in forthcoming trials.

It will take 5 years before these experimental vineyards produce appreciable quantities of wine—and a further 2 to 3 years for secondary fermentation to produce the bubbles that turn the wine into champagne. But how will the wine drinkers view the transgenic brew? Boulay sees no reason why the flavor should change. But he promises a tasting session so experts can judge for themselves before a widespread planting of transgenic grapes on the famed slopes of the Marne Valley.



TERRY SMITH

MREs From Heaven

It sounded ludicrously simple to experts in aerial supply—so simple they hesitated to use it—but no-parachute food aid got the ultimate test last week when food packages began arriving free-fall on Bosnian sidewalks.

This unorthodox method for feeding war victims was suggested by former U.S. nuclear weapons researcher Bill Wattenburg, an ex-Lawrence Livermore physicist turned radio talk show host. No shrinking violet, Wattenburg contacted the National Security Council staff at the White House last month to pitch a notion he'd first hatched 2 years ago, when the United States was involved in Iraq. Back then, he'd told U.S. Army officials that, instead of bundling food in huge, bulky packages and parachuting it to spots easily targeted by hostile soldiers, they'd be better off omitting the parachutes and scattering small, durable U.S. snack packs directly onto trails and fields. Being a scientist, he'd even performed the crucial experiments—dropping granola bars from high buildings and leaving them exposed to the weather. Eureka: They remained intact and edible.

Still, obdurate Army officials passed up their golden opportunity to scatter granola bars for hungry Iraqi Kurds. And that left Wattenburg to wait for his second hearing. This time around, it was only a few days after his call to the White House that U.S. airplanes began using the new technique—which the military dubbed "fluttering"—over the hostage Bosnian town of Srebrenica.

Rather than granola bars, the Army is raining down surplus "Meals Ready to Eat," or "MRE meteors," as one Clinton official calls them. These Army rations may be less tasty and more dangerous than candy bars when airborne, but, says one White House official on background, "they're better than nothing," and certainly better than starving.

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New Idea for Bosnian Relief — Dropping Food in Smaller Bites

By Michael Taylor
Chronicle Staff Writer

The Pentagon has changed the way it is dropping supplies over eastern Bosnia, showering hundreds of thousands of individual food packets across the area after weeks of shoving 1,500-pound bundles out of the C-130 cargo planes.

The bundles had missed drop zones and drawn the unwanted attention and firepower of the well-armed Serbs to the Muslims the food was intended for.

Maverick Bay Area engineer Bill Wattenburg — known for his bizarre, yet effective inventions — said he persuaded the Pentagon to initiate the change. Pentagon officials acknowledged that his idea was received with a fair amount of enthusiasm, although they said the change in relief supply strategy could have been "coincidental," because others had also broached the idea.

The Pentagon began using the new scattering method Saturday night, when three U.S. planes flying out of bases in Germany dropped about 17 tons of military-style TV dinners over the besieged eastern Bosnian city of Srebrenica.

"You can shove a half a million of these things out the back of a C-130," Wattenburg said. "The people out there who are starving, they're shouting, 'Hallelujah, food's raining from the sky!' And they pick them up and eat them."

Wattenburg said he initially suggested to President Clinton and the military that U.S. forces drop millions of granola bars on the Muslim refugees. But Pentagon nutrition experts dismissed the bars in favor of MREs because the meals designed for combat troops pack more nutrition and energy into small packages. Each MRE packet contains three 1,300-calorie meals that can be eaten hot or cold.

In the packets are a basic meal, usually either meat, chicken, spaghetti or turkey loaf, as well as cheese and crackers, condiments, powdered coffee and sugar.

Dangers of Pallets

One stumbling point of the 3-week-old U.S. relief program has been that the large pallets of food, airdropped from an altitude of about 10,000 feet, either miss the drop zone and end up in Serb hands or land where the huge white parachutes can be seen the next morning from Serb gun positions high up in the hills. Serb gunners reportedly fire on civilians trying to pick up the supplies.

But dropping individual packets in their 10-inch by 6-inch by 2-inch tough plastic wrappers makes recovery much easier.

"This scheme removes the danger aspect of parachute drops," Wattenburg said, "and allows immediate delivery to the most desperate — the children who starve before bulk supplies arrive weeks or months later."

How the Drop Works

Using the new distribution system, Air Force crews stack thousands of MREs on the deck of the aircraft, near the rear loading ramp. When the plane is over its drop zone, the ramp is opened and the loosely bagged MREs are pushed out. When the bags reach the end of their tethers, according to one Pentagon source, they break open and the MREs drop to earth.

Wattenburg, 57, is a Chico engineer who has frequently acted as a consultant to the Air Force and the Lawrence Livermore National Laboratory.

Two years ago, he made headlines when, working with Livermore lab colleagues, he modified agricultural plows into a 1,200-square-foot blanket of clanking chains and blades that, when towed behind a helicopter, could be used to clear more than 500,000 mines left in the Kuwaiti desert after the Persian Gulf war.