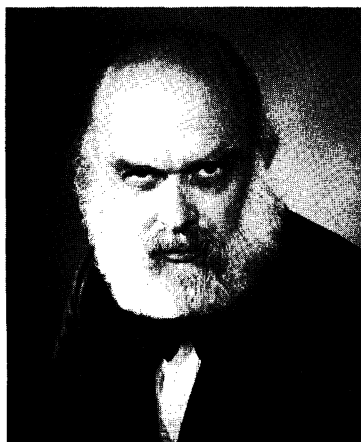


offerings are pharmaceuticals. A handful of firms involved in agricultural genetic engineering, including Molecular Genetics of Minnetonka, Minnesota, made shares available, but there has been less interest in them, says David Manyak, an analyst at Merrill Lynch. "Investors aren't used to agricultural biotech companies." They are also wary of these firms because they take longer to get their products on the market. Plant breeding, even with the help of genetic engineering, still requires a lot of time.

In the past month, a few more companies, including Biogen, located in Cambridge, Massachusetts, and Calgene in Davis, California, have notified the federal government that they intend to make an offering or have already sold shares. But it is unclear how long investor enthusiasm will hold for biotech stocks. Miller says, "it's started to taper off now." Behrens remarks, "I don't know how long this will last. But we may be somewhere near the end. In this kind of cycle, companies [which have already made offerings] have already soaked up a lot of investment dollars." ■ **MARJORIE SUN**

Amazing Randi One of 25 MacArthur Genius Winners

James Randi ("The Amazing Randi"), the magician known to scientists for shooting holes in research on paranormal phenomena, has been awarded one of this year's MacArthur Foundation grants for "outstandingly talented" people.



Randi was cited for his work in exposing the fraud behind "psychic surgery" and for his recent campaign against television evangelists for mulcting their audiences and gulling the sick.

Randi, 57, says he plans to use his \$272,000 award, to be doled out over the next 5 years, in expanding his office and computer system and hiring an assistant.

For the past year and a half, Randi has been on the trail of evangelist faith healers who he says are fleecing the public with the aid of advanced computerized information and mailing systems.

Randi says these men have an enormous amount of information, including everything from the health status of individuals to the names of their pets, gained through mailing lists from a variety of sources such as fundamentalist groups and purveyors of holy water from Lourdes.

Randi says many people are dying because at healing services they are told to throw away their pills. In undercover work in San Francisco and Houston, he says he went through the trash following a service held by the now "vanished" evangelist Peter Popoff, and found a great variety of medications tossed away by the audience, including nitroglycerin, digitalis, and oral antidiabetic agents.

He says he also intercepted transmissions to a receiver Popoff had in his ear as he walked among the audience. Popoff was getting information on peoples' identities, incomes, relatives, and diseases. "You're talking James Bond here," says Randi.

Randi has been spreading his message with appearances on the Johnny Carson show. He has contacted states' attorneys in seven states to alert them to the various violations including fraud and invasion of privacy but, he says, the law won't do anything because these are religious organizations.

The other 24 winners are:

Paul R. Adams, professor of neurobiology and behavior at the State University of New York (Stony Brook); **Milton B. Babitt**, composer, former professor at Princeton University; **Christopher I. Beckwith**, Tibetan studies professor, Indiana University; **Richard M. A. Benson**, Yale University specialist in photographic technologies; **Lester R. Brown**, Worldwatch Institute, Washington, D.C.; **Caroline W. Bynum**, Yale University historian; **William A. Christian, Jr.**, Spanish historian and sociologist in Las Palmas de Gran Canaria, Spain; **Nancy Marguerite Farriss**, director of ethnohistory at the University of Pennsylvania; **Benedict H. Gross**, Harvard University mathematician; **Daryl Hine**, poet in Evanston, Illinois; **John Robert Horner**, paleontologist at the Museum of the Rockies, Montana State University; **Thomas C. Joe**, Center for the Study of Social Policy, Washington, D.C.; **David N. Keightley**, Chinese historian at the University of California (Berkeley); **Albert Libchaber**, University of Chicago experimental physicist; **David Page**, geneticist at the Whitehead Institute, Massachusetts Institute of Technology;

George Perle, composer, professor emeritus at the Aaron Copland School of Music, City University of New York; **David Rudovsky**, University of Pennsylvania law professor; **Robert M. Shapley**, specialist in the neurophysiology of vision, Rockefeller University; **Leo Steinberg**, art historian, University of Pennsylvania; **Richard P. Turco**, "nuclear winter" theorist, Marina del Rey, California; **Thomas Whiteside**, New York journalist who has written extensively on Agent Orange; **Allan C. Wilson**, biochemist at the University of California (Berkeley); **Jay Wright**, poet in Piermont, New Hampshire; **Charles Wuorinen**, composer in residence with the San Francisco Symphony ■

CONSTANCE HOLDEN

Congress Considers Warning Labels on Liquor

Pressure is building up for an idea whose time may have come: health warning labels on alcoholic beverages. A measure to that effect (S. 2595) is now heading for the Senate floor.

Introduced by Senator Paula Hawkins (R-FL) as part of the reauthorization of the alcoholism and drug abuse institutes, the measure would follow the pattern of cigarette warning labels. Four different warnings are proposed, relating to pregnancy and birth defects; driving; combining alcohol with drugs; and the risk of hypertension, liver disease, and cancer. A possible fifth label, to be decided by the Surgeon General, would warn about possible death from massive rapid consumption of alcohol. The measure has the support of Senator Orrin D. Hatch (R-UT), chairman of the Committee on Labor and Human Resources, and Edward M. Kennedy (D-MA), among others.

Support for the labeling idea is widespread among various consumer and anti-drunk driving groups. The American Medical Association (AMA) has also taken a stand, having passed a resolution in favor of alcohol labeling at its annual meeting in June.

The measure is strongly opposed by alcoholic beverage manufacturers, who take the paradoxical position that labeling will have little effect since most people know too much drinking is bad and that problem drinkers will be unmoved by warnings. They also say labels will frighten pregnant women. According to the Center for Science in the Public Interest (CSPI) in Washington, D.C., brewers and vintners are particularly unhappy since beer and wine have the image of being "beverages of moderation." Indeed, this is a theory endorsed by many alcoholics

who try to curb their intake by switching to beer or wine.

Another change long championed by the CSPI (and also favored by the AMA) has been ingredient labeling on alcoholic beverages, a move opposed by wine-makers and distillers. Two federal district courts have ruled in favor of such labeling, and the case is now under appeal in the District of Columbia.

According to the Alcohol, Drug Abuse, and Mental Health Administration, the annual costs of alcohol abuse exceed \$116 billion and it accounts for between 100,000 and 200,000 deaths per year (compared with 300,000 deaths per year from smoking). ■ **CONSTANCE HOLDEN**

EPA Grapples with Regulating Underground Storage Tanks

Underground storage tanks are said to be a big source of ground water pollution in the United States, but no one has had a handle on how big. Figures vary widely. Now the Environmental Protection Agency has completed its first major survey that systematically estimates the number of tanks used to store motor fuels and how many are leaking. The results will be used by the agency to develop regulations for the tanks.

In a separate, but related action, EPA recently tightened rules governing hazardous waste to be stored in new tanks located above or below ground.

EPA estimates that there are 796,000 individual motor fuel tanks at 326,000 establishments, which include gas stations and trucking companies. The estimate is based on extrapolation from a selected sample of about 900 businesses. As many as 35% of the tanks leak and half of them lose as much as 6 gallons of fuel daily, according to the agency results. These findings are based on the actual testing of tanks at 218 businesses. Eighty percent of the tanks are located above the water table. The survey did not include a tabulation of underground tanks that hold hazardous waste.

An agency official cautions that the results concerning leakage may be an overestimate because several factors can skew the data. Joseph Carra, deputy director of waste management at EPA, says that because of these difficulties agency researchers spent much of the 2-year project developing a method to test for leaks in buried tanks. The cost of digging up tanks for analysis was prohibitive.

The containers were subjected to operat-

ing pressure that was slightly higher than normal and then monitored for a drop in fuel level. The equivalent of a big straw was placed in the tanks as a gauge. Carra notes that the higher pressure may cause the tanks, which are usually made of steel, to bulge at the ends, causing the fuel level drop and giving the false impression that fuel is leaking. Temperature variations in the stored fuel can affect the gauge level too.

To EPA's surprise, the survey indicated that fiberglass containers, which constituted 11% of the tanks actually tested, are just as likely to leak as steel tanks that are the same age. Fiberglass was considered to be less likely to leak because it is corrosion-proof, but the fiberglass walls may crack if the tank is not properly installed, Carra speculated.

On 1 July EPA announced a new regulation that requires extra containment of tanks storing hazardous waste. New tanks must now have double walls or concrete vaults built around them to prevent leaks into ground water. According to EPA estimates, there are 4000 locations that store more than 20 billion gallons of hazardous waste annually, but the figures represent only a best guess. ■ **MARJORIE SUN**

Chilean Physicians Under Arrest

Two Chilean doctors who have been active in investigating torture under the dictatorship of General Augusto Pinochet have been arrested by the government.

The physicians, Juan Luis González, president of the Colegio Médico de Chile (CMC), and its general secretary Francisco Rivas, were awarded the AAAS Scientific Freedom and Responsibility Award at the association's May meeting in Philadelphia.

The CMC helped orchestrate a 2-day national strike early this month to bring pressures for democratic elections. The doctors were among 18 leaders charged with planning to destabilize the government. They were formally declared "delinquents" (*reos*) and jailed on 11 July. They are reportedly not being mistreated and the hope is that they will eventually be let out on bail.

There has been much rallying around on the doctors' behalf and the American ambassador, Harry Barnes, has pledged to keep close tabs on the situation. A telegram expressing concern over the doctors has been sent to the Minister of the Interior from the heads of the American Medical Association, the AAAS, the National Academy of Sciences, and the Institute of Medicine. ■

CONSTANCE HOLDEN

OECD Predicts Growing Concentration of Research

Paris

The pressures of international competition, combined with continuing heavy expenditures on military research, are likely to increase the already-growing concentration of the West's spending on research and development in a relatively small number of advanced countries, according to a report* published here by the Organization for Economic Cooperation and Development.

In 1983, says the report, the seven largest OECD countries accounted for 92% of the combined R&D outlays of all its member states, which include almost all the West's industrialized nations. Five countries alone, namely, the United States, Japan, West Germany, France, and Great Britain, provided 86%.

The report says that R&D expenditures in the first three of these can be expected to reach 3% of each of these countries' gross domestic product by the end of the decade. In contrast, in the majority of other OECD countries the maximum will be 1.5%.

The report points out that more than half of the total amount of university-based fundamental research in the natural sciences carried out in all OECD countries takes place in the United States alone.

In the social sciences, it is Japan which occupies the most dominant position, since these subjects take up 40% of the government's spending on university R&D. In the natural sciences and engineering, however, Japan falls well behind the total expenditures of countries belonging to the European Economic Community, whereas the United States still spends the same as Japan and the EEC combined.

The report points out that the United States and Japan are at "opposite ends of the spectrum" in terms of the way that government R&D funds are allocated. In the United States, the biggest beneficiary is private industry, which received between two-fifths and one-half of the total allocated for government support for R&D, compared to one-quarter each for universities and government-owned research establishments.

In Japan, in contrast, the OECD report says that industry receives only about 5% of the government's total funding, while 90% is divided equally between government laboratories and the universities. ■

DAVID DICKSON

*"OECD Science and Technology Indicators, No. 2: R&D, Invention and Competitiveness" (OECD, Paris 1986).