# Alvin Trivelpiece of DOE Is Named New Executive Officer of AAAS

Alvin W. Trivelpiece, who holds a presidential appointment as assistant secretary for energy research in the Department of Energy, will succeed William D. Carey as executive officer of the AAAS. Board chairman Gerard Piel made the announcement at the AAAS meeting in Chicago, saying that Trivelpiece "brings to his new post a background of achievement and leadership in the physical sciences in the university, in industry, and in government." He "has had a strong hand in the making of science policy and the renewed commitment of the federal government to basic research," Piel said.

Trivelpiece's role in winning presidential endorsement of the Superconducting Super Collider (SSC) is one of his most recent accomplishments.

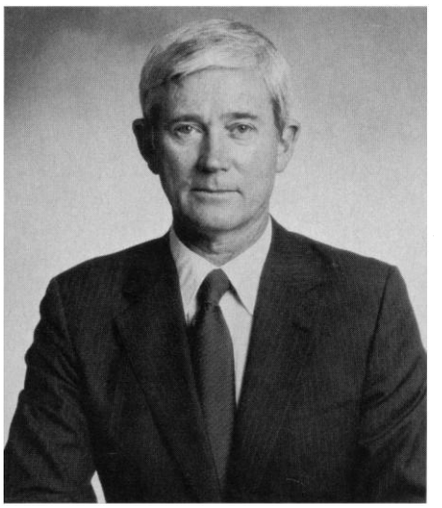
Trivelpiece told the press that the United States will be best served if industry, the national laboratories, and universities work together collaboratively rather than competitively when it comes to the science budget. "It is essential that these entities work together," he said.

Speaking about science education, Trivelpiece stated that the real control lies with the states but that the federal government and, he hopes, the AAAS can exert strong leverage in fostering imaginative programs. "The child starts out as a natural intellectual," he said, but is often stifled in school. At present, the AAAS is launched on a major science education project.

Trivelpiece, 55, graduated from California Polytechnic State College, and received his masters and doctoral degrees from the California Institute of Technology. A nuclear physicist, he was on the faculty of the University of California at Berkeley from 1959 to 1966, when he left for a faculty position at the University of Maryland. His experience also includes a position with the old Atomic Energy Commission, and work in industry. He was vice president for engineering and research at the Maxwell Labs in San Diego from 1976 to 1978, and then corporate vice president of Science Applications, Inc., in La Jolla, until he joined DOE in 1981.

Trivelpiece will pick up the AAAS reins from Carey in April. Carey, who has been executive officer since 1975, will continue to serve on the boards and committees of organizations including the Mitre Corporation, the National Academy of Sciences, and the Institute of Medicine. In addition, he will work as an adviser to David A. Hamburg, president of the Carnegie Corporation of New York. Says Carey, "I'm abdicating but not retiring." ■

BARBARA J. CULLITON



**Alvin W. Trivelpiece**

# BioTechnica Tests EPA Review Process

BioTechnica International Inc. is hoping to field test genetically engineered strains of *Rhizobium meliloti*, a bacterium involved in nitrogen fixation in alfalfa. The engineered strains have increased alfalfa yields more than 15% in greenhouse tests by increasing nitrogen uptake. The Cambridge, Massachusetts, company says this technique also can be applied to other legumes, including soybeans and peanuts.

BioTechnica's microorganism is the first to be reviewed by the Environmental Protection Agency (EPA) under biotechnology guidelines published in the *Federal Register* on 26 June.

The company voluntarily submitted to EPA and the Department of Agriculture (USDA) its plans to field test the modified bacteria at its new Chippewa Agriculture Station in Arkansaw, Wisconsin. Officials at EPA say the company did not have to file a "premanufacturing notice" for this product under the Toxic Substances Control Act because the law exempts research and development. In the coming months, however, EPA plans to revise rules to cover such field experiments.

BioTechnica's recombinant microorganism was constructed by taking nitrogen-fixing genes from *R. meliloti*, cloning them, and inserting them back into the same organism—thereby increasing the number of nitrogen-fixing genes in the organism. This rearrangement was done for two separate strains of *meliloti*, according to EPA. To achieve this enhancement, BioTechnica used a bacterial plasmid that it has not divulged publicly. New strains developed in this way apparently will be classified by the agency as "inter-generic" organisms subject to agency review.

USDA is reviewing BioTechnica's microorganism in the context of the Plant Pest Act, but is coordinating its effort with EPA and state officials in Wisconsin. The company's submission of its plans to USDA also was voluntary. The department's rules currently are binding only for USDA-funded research. Both agencies hope to act on BioTechnica's proposal within 90 days. The review is expected to be uneventful because strains of the naturally occurring bacterium already are widely used in alfalfa production in the United States. ■

MARK CRAWFORD

*Briefing:*

## EPA Okays Field Test

Advanced Genetic Sciences, Inc. (AGS) has obtain approval to proceed with field experiments of genetically altered microorganisms. The Oakland, California, company wants to test strains of *Pseudomonas syringae* and *Pseudomonas fluorescens* that have been modified to reduce the formation of damaging frost on crops.

AGS previously held an EPA permit to conduct a field test. But the permit was suspended in March 1986 after it was disclosed that the modified organisms had been injected into fruit trees atop the company's headquarters building (*Science*, 4 April 1986, p. 15) without EPA's knowledge.

The company is no longer seeking to conduct its experiment in Monterey County. AGS now wants to test its "Frostban" bacteria on strawberry plants at a more rural location. AGS has identified two potential sites in San Benito County and a third field in Contra Costa County. The company has yet to obtain local approvals, but AGS officials hope to proceed with their experiments this spring. EPA has inspected the proposed sites and found them acceptable. ■ **M.C.**