

## TRADE POLICY

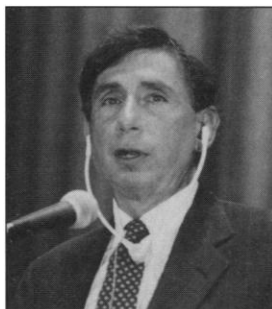
## Will Federal Funds Attract Tariffs?

Officials in government research agencies have been hitting the alarm button in the past few weeks over what they perceive to be a new threat to U.S. companies in international trade. No, it's not the latest computer chip from Japan, but an idea being pushed by their colleagues in another government agency: the Office of the U.S. Trade Representative. The problem is a draft clause in the General Agreement on Trade and Tariffs (GATT), under negotiation in Geneva, which could trigger international tariffs and sanctions against some U.S. companies that receive government research funding.

The clause, like much of the rest of GATT, is intended to create a level playing field for industrial competitors around the world. Because heavy government subsidies tilt that balance, GATT would allow countries to tax imported products that have benefited from such subsidies. The tax is primarily targeted at state-owned companies—common in Japan and France, for example—that are able to sell their products at below-market prices.

Although there is consensus that the principle behind the tax is sound, officials from U.S. science agencies and technology companies have belatedly realized that such penalties could cripple the Clinton Administration's campaign to foster closer research ties with industry, including one popular technology transfer mechanism known as a Cooperative Research and Development Agreement (CRADA, see *Science*, 22 October, p. 496). The GATT provision "would severely impair the Administration's ability to forge new relationships with industry," says one White House official. "It's a serious, serious concern."

Their concern is being channeled into a last-ditch effort to convince Mickey Kantor, the U.S. trade representative, that the provision must be dropped or rewritten to protect the delicate bloom of industry-government research collaborations. So far, however, their pleas have fallen on deaf ears: Negotiators have spent years trying to eliminate the trade imbalances caused by huge state subsidies, and they are in no mood to undo their efforts because of a sudden anxiety attack among high-tech industries. "What the science agencies talk about is a chilling effect on potential developments," says one trade official. "What we're facing on the other side are massive ongoing subsidies" for research and development by foreign nations.



**Tough trader.** Ambassador Mickey Kantor weighs last-minute plea from agencies.

The current draft of GATT tries to improve on existing rules by spelling out the degree of government support that would trigger an added tax. It allows countries to impose tariffs equal to the percentage of government funding in the total cost of products for which the government puts up more than 25% of total applied research costs or 50% of basic research costs. Any joint government-industry research project in which the federal contribution is expected to fall below that threshold would be protected from such tariffs, but it must be declared exempt ("green boxed") from the outset. That's a stiff test to meet, says one official from the White House Office of Science and Technology Policy, because it's not always possible to

tell in advance what fraction of the total research costs of a particular project the government will eventually provide. Indeed, the official predicts that most programs would not meet that test. Products from programs that have not been declared exempt could be challenged by other countries; to escape the tariff, manufacturers would have to prove that federal funds did not exceed allowable limits.

Officials at the Office of the U.S. Trade Representative, who are racing to finish ne-

gotiations by a deadline of 15 December, say that such challenges, permitted since 1979, are rare. The GATT language, they say, only specifies in greater detail the boundaries of permissible government subsidies. "The idea of the green box was to provide a safe harbor," says one trade official. Even so, the official agrees that requiring a government to tell its trading partners in advance which research programs are exempt could be regarded as "a sign that says 'hit me'" for the rest.

The uncertainty about industrial use of federal research funding has already led some biotechnology companies to forgo CRADAs, which are the form of subsidies most likely to be challenged, says Fran Heller, an executive at Celltrix Pharmaceutical Inc. in Santa Clara, California. Other industries that have expressed concern include the aerospace, chemical, automotive and electronic sectors. In addition, the National Institutes of Health, the Department of Energy, the Department of Commerce, and the National Aeronautics and Space Administration have written letters to the White House opposing the clause.

At the moment, however, the outlook appears bleak for the agencies and their supporters. Trade officials have so far shown little sympathy for the scientific concerns, and common ground has been hard to find. Science and trade officials are "talking past each other," says one trade official, who says his colleagues are unlikely to abandon a hard-won subsidy agreement because of what appears to them to be largely hypothetical fears by the science and technology community.

—Christopher Anderson

## TECHNOLOGY RESEARCH

## Dutch Foundation Says It Gets It Right

Can government research agencies pick commercial winners? A small Dutch agency says it has a formula that seems to work.

The Utrecht-based Technology Foundation (STW), created in 1981, spends some \$25 million a year on university-based applied research. A new study of its first round of grants, awarded 10 years ago, has found that the projects judged by its reviewers to be the most promising commercially have indeed had the greatest success. The list includes a lightweight aluminum and polymer laminate, invented by a team at Delft Technical University, that's now used by the European Airbus consortium, as well as a device to measure the performance of microwave antennas.

The foundation's director, Kees le Pair, attributes the success to his agency's evaluation procedures. Rather than relying on subject-specific review panels to judge projects on their scientific merit, and separate groups of business experts to assess their commercial

potential, STW appoints broad panels, consisting of scientists from various disciplines, corporate research directors, and even the occasional politician, to rank proposals using both criteria. The study found that what correlated most highly with success was not the size of the grant—once it decides to support a project, STW almost always provides the full amount requested—but rather its ranking of commercial promise assigned by the panel.

Some technology policy experts remain skeptical about the value of very broad-based review panels. "You can upset the peer-review system by bringing in people who are demonstrably not peers," argues Richard Bradshaw of North Atlantic Research, a Washington, D.C. consulting firm. But unless other agencies can produce similar analyses showing that the traditional approach works better, funding sources may do well to take a page from STW's book.

—Peter Aldhous