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## OMB Releases Revised Policy for Circular A-110

Proposed changes to the Office of Management and Budget's (OMB) Circular A-110, a regulation governing research grants to universities and non-profit institutions, are moving closer to a final promulgation. The original directive in Public Law (P.L.) 105-277 required OMB to amend the circular to allow underlying data produced through federal funds be made available through procedures established under the Freedom of Information Act (FOIA). As a result of the first comment period, OMB redrafted changes to the circular and opened a second comment period (see *Federal Register*, August 10). OMB continues to seek clarity of four key concepts that were problematic in the first proposal: the definition of "data" and "published", clarification of "used by the Federal Government in Developing Policy or Rules," and how to reimburse costs.

The original language in P.L. 105-277 would allow the public to request access to "all data." OMB, however, did not clearly define the term and received numerous comments asking for clarification since "data" could comprise all the components

of research including phone logs, physical equipment, financial records, private medical information, or proprietary data. In the August 10 notice, OMB defines data as "the recorded factual material commonly accepted in the scientific community as necessary to validate research findings, but not any of the following: preliminary analyses, drafts of scientific papers, plans for future research, peer reviews, or communications with colleagues. This 'recorded' material excludes physical objects (e.g., laboratory samples)." Furthermore, OMB restricts the definition of data to omit proprietary trade secrets or private information such as medical files.

Concerns regarding the definition of "published" stemmed from fears that requests for data would occur before an investigator completed a study. This could cause the release of incomplete data and possibly hamper the scientific process if scientists had to answer to criticism of preliminary findings. Therefore, OMB has defined published as "either when (A) research findings are published in a peer-reviewed scientific or technical journal, or

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## Conferees Vote to Create New DOE Agency

On the last day before Congress left Washington for the August recess, the House and Senate conference committee for the defense authorization bill (S. 1059) reached an agreement to reorganize the Department of Energy (DOE). The legislation would establish a new semiautonomous agency within DOE with responsibility over the nuclear weapons laboratories and production facilities, marking the first major reorganization of the department since it was created in 1977. In a press release following the release of the conference report, House Armed Services Committee and Conference Chairman Floyd Spence (R-SC) stated, "This agreement takes an important first step to streamline and make more accountable what has become a dysfunctional organization. This legislation will provide for cleaner lines of authority and accountability to ensure that our nation's most vital nuclear secrets are properly managed and secured."

The conference agreement directly responds to a recent investigation into security threats at DOE weapons laboratories conducted by the President's Foreign Intelligence Advisory Board (PFIAB) chaired by former Senator Warren Rudman. The

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# Cuts to R&D Funding Appear Likely

As the September 30 deadline looms for approval of all fiscal year (FY) 2000 appropriations bills, Congress is deeply split on R&D funding, with the House approving significant cuts and the Senate favoring spending increases. Budget analysts are predicting that the FY 2000 appropriations process is likely to grind to a halt because of severe restrictions on discretionary spending and steep cuts to domestic programs. Funding for R&D is likely to be decided as a minor item in high-level, closed-door negotiations between the President and Congress over the shape of the federal budget. In such an environment, it is difficult to predict how federal R&D will fare, but the proposed cuts already on the table stand a fair chance of becoming reality.

The House has drafted twelve out of the thirteen appropriations bills, except for Labor, Health and Human Services (Labor-HHS) which funds the National Institutes of Health (NIH). Because of tight budget caps within which defense spending would rise considerably, the House would make cuts to key R&D programs and deny funds for several White House initiatives. The Senate, meanwhile, has approved only nine appropriations bills and drafted two more, with Labor-HHS and Veterans, Housing, and Independent Agencies (VA-HUD-IA) still to be drafted. Working under the same budget caps the Senate would provide increases for R&D because it has made R&D a high priority and would provide less money for defense than the House, freeing up funds for domestic programs. But the Senate still must deal with two of the most difficult bills including the VA-HUD-IA bill which funds the National Science Foundation (NSF), National Aeronautics and Space Administration (NASA), and the Environmental Protection Agency (EPA).

So far, the House would cut nondefense R&D 5.1 percent or \$1.1 billion from FY 1999 funding levels. Especially hard hit would be R&D in NASA (\$9.0 billion, down 7.0 percent); the Department of Commerce (\$844 million, down 21.5 percent), and the Department of Energy (DOE; \$6.8 billion, down 2.9 percent). Even NSF, which received increases in previous years, would see its R&D decline by 2.7 percent to \$2.6 billion. Among the large agencies, only the Department of Transportation (DOT) would see an increase, to \$656 million (up 8.9 percent) because most of its funding is under separate budget caps.

In contrast, defense R&D would receive favorable treatment in the House. The Department of Defense (DOD) appropriations bill would provide a total of \$40.9 billion, a cut of \$304 million or 0.7 percent below FY 1999, but this would be \$2.4 bil-

lion more than the Administration request. The Senate's appropriation would be similar. The cuts would be concentrated in DOD's development activities and would be partly offset by increases for basic and applied research. The "Science and Technology" portion of DOD's budget, which encompasses basic and applied research, and exploratory technology development, would increase by 5.6 percent to \$8.2 billion.

Basic research in agencies whose budgets the House has approved would be up by 2.2 percent to \$9.0 billion. There would be increases for basic research in DOD (up 3.1 percent), Department of Agriculture (up 2.3 percent), and even NASA (up 7.1 percent). But NSF, the second-largest funding source for basic research and the leading source for most non-life sciences disciplines, would see its basic research funding decline by 0.3 percent to \$2.3 billion. DOE basic research would stay nearly level at \$2.2 billion because of flat funding for basic research-oriented programs such as High Energy Physics, Nuclear Physics, and Basic Energy Sciences.

The following are highlights of the appropriations for key R&D agencies. The summary focuses primarily on the House proposed bills since that chamber has progressed further than the Senate.

The **National Aeronautics and Space Administration (NASA)** budget would decline steep-

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(B) a Federal agency publicly and officially cites the research findings in support of an agency action.”

Perhaps the most significant change involved OMB’s definition of a federal regulation. OMB’s initial proposed change to Circular A-110 cited that only data “used by the Federal Government in Developing Policy or Rules” would be available through FOIA. This statement, however, is and hence, any action taken by an agency that was influenced by a research study would place that study under scrutiny. OMB, in its new proposal, argues that too broad a definition would prove to be a burden for agencies and proposes to narrow the phrase to “used by the Federal Government in developing a regulation.” OMB cites the definition of “regulation” as it has already been defined in the Administrative Procedures Act. Also, OMB goes further by requiring that the regulation meet an \$100 million economic impact threshold, a precedent set by other laws.

Finally, OMB is requesting comments on the cost structure of the new proposal. P.L. 105-277 mentions that agencies can charge a “reasonable fee” for the cost of obtaining data. The cost of retrieving data, for what some anticipate to be a deluge of FOIA requests, could be problematic for grant recipients, their institutions and federal agencies. OMB would like comments on potential costs incurred by the agencies and other parties that will have to be used to release data, and whether grant recipients can charge these costs to their federal grants.

The new proposal seems to have leaned more towards the concerns of the scientific community than proponents of the original amendment introduced by Sen. Richard Shelby (R-AL). Supporters of the Shelby amendment have long argued for a broad interpretation where access to all forms of data culminating from federally funded research is possible so that the complete scientific process can be scrutinized. *Science* magazine quotes a representative of the U.S. Chamber of Commerce, Louis Renjel, calling the new OMB interpretation, “unac-

ceptable.” Senators Richard Shelby (R-AL), Trent Lott (R-MS), Ben Nighthorse Campbell (R-CO) and Phil Gramm (R-TX), submitted a joint letter to OMB in early September expressing disagreement with the new changes. The letter states that “the August 11<sup>th</sup> proposal represents a significant retreat from OMB’s original February 4<sup>th</sup> proposal as to render the provision potentially meaningless in its ability to improve the public’s access to federally funded research data.”

Meanwhile, some opponents of the Shelby amendment still see the use of FOIA as an unfair mechanism for disclosure of scientific data. In its response to the second proposal, the Association of American Universities (AAU) characterizes the Shelby amendment as “misguided and represents bad policy.” AAU, however, was generally pleased with OMB’s second proposal but submitted comments recommending that the economic impact threshold be raised to \$500 million, and that the revised circular only affect future research and not studies that have already been completed. The National Academy of Sciences in its response to OMB states, “within the constraints of the existing wording and limited scope of the Shelby amendment, OMB has done a masterful job of listening to public concerns and trying to craft an amendment... in a fair and reasonable way.” Thus if FOIA is used, the science community, on the whole, seems to be amenable to the new proposal.

While this new proposal clearly shows that OMB listened to the science community’s concerns, several issues still need to be meted out. Issues such as allowing access to research done by institutions other than nonprofit grantees, the trigger needed for FOIA action, and the proposal’s effect on public/private partnerships are not addressed. If it were to move forward as it is currently written, it is highly likely that the differences between P.L. 105-277 and OMB’s proposal will be argued in the courts.■

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ly in the House plan, from \$13.7 billion in FY 1999 to a proposed \$12.7 billion, a cut of 7.4 percent. NASA's Science, Aeronautics and Technology (SAT) account, which funds most of NASA's R&D, would decline 12.0 percent to \$5.0 billion because of deep cuts to the Earth Science and Space Science programs. The House would cancel several missions, and dramatically reduce planning and development funds for future missions in the Discovery and Explorer space science programs. The House would also reduce supporting research and technology funds and mission support funds, which could affect all NASA programs. The Senate has not acted yet on the NASA budget.

The House would cut the **National Science Foundation (NSF)** budget by 2.0 percent to \$3.6 billion. Most of the research directorates would receive level funding; NSF had requested increases between 2 to 5 percent. Cuts in facilities funding would result in a 2.7 percent decline in total NSF R&D. The House would dramatically scale back first-year funding for the Administration's proposed Information Technology for the Twenty-First Century (IT<sup>2</sup>) initiative. NSF requested \$146 million for its role in IT<sup>2</sup>, but the House would provide only \$35 million. The new Biocomplexity initiative would receive \$35 million, less than the \$50 million request. The Senate has not acted yet on the NSF budget.

The House would slash R&D in the **Department of Commerce** by nearly one fourth. The House would provide only \$844 million for Commerce R&D, a reduction of \$231 million or 21.5 percent from FY 1999 funding levels. The House would eliminate the Advanced Technology Program (ATP) and make cuts to most R&D programs in the National Oceanic and Atmospheric Administration (NOAA). Intramural research in the National Institute of Standards and Technology (NIST) would remain at the FY 1999 level. The House would provide sufficient funds for a two-track 2000 census, one with and one without statistical sampling. The Senate, in sharp contrast to the House, would provide generous increases to most Commerce R&D programs, including ATP, for a 15.8 percent increase in total Commerce R&D (\$1.2 billion).

In the wake of growing congressional anger over allegations of security breaches and mismanagement at **Department of Energy (DOE)** weapons labs, the House would impose restrictions by withholding \$1 billion until DOE is restructured, and would also cut funding for R&D programs. DOE's R&D would total \$6.8 billion, 2.9 percent less than FY 1999. The Stockpile Stewardship program,

which funds most of the R&D performed at the weapons labs, would receive \$2.0 billion, a reduction of 6.0 percent after several years of large increases. The DOE Science account, which funds research on physics, fusion, and energy sciences, would receive \$2.6 billion, a cut of 2.8 percent. The House would deny the requested \$70 million for DOE's contribution to the IT<sup>2</sup> initiative, and would also trim the request for the Spallation Neutron Source from \$214 million down to only \$68 million. R&D on solar and renewable energy technologies would decrease 7.7 percent. The Senate would provide increases for most DOE programs, without restrictions, for a total R&D appropriation of \$7.3 billion, an increase of 4.9 percent.

The House would boost **Department of Defense (DOD)** funding of basic and applied research above both the President's request and the FY 1999 funding level. DOD's basic research ("6.1") would total \$1.1 billion, 3.1 percent above FY 1999, while applied research ("6.2") would total \$3.4 billion, more than 7 percent above the current year funding level. The House would provide \$60 million for DOD's role in the IT<sup>2</sup> initiative, down from the request of \$100 million. The House would also create a separate \$250 million appropriation for medical R&D, including \$175 million for breast cancer research and \$75 million for prostate cancer research. The Senate would provide similar increases for DOD "6.1", "6.2", and medical research accounts.

The **U.S. Department of Agriculture (USDA)** would receive \$1.6 billion for its R&D, a cut of 2.1 percent. This would be far below the request of \$1.85 billion because the House would block a new, non-appropriated competitive research grants program from spending a planned \$120 million in FY 2000. (The Senate would allow the release of \$50 million.) An existing competitive grants program, the National Research Initiative, would be cut 11.6 percent from the FY 1999 level to \$105 million. Congressionally designated Special Research Grants, however, would receive \$63 million, \$8 million more than this year and \$58 million more than USDA had requested. The Senate would be more generous with an appropriation of \$1.7 billion for total USDA R&D (up 3.8 percent).

The **Environmental Protection Agency (EPA)** would receive \$643 million for its R&D from the House, a decline of 3.5 percent, but this would be the same amount as the agency request. Most research programs would be funded at FY 1999 lev-



PFIAB report, *Science at its Best, Security at its Worst*, concluded that DOE had failed in countering security threats, and that it is a “dysfunctional bureaucracy that has proven it is incapable of reforming itself.” The PFIAB report recommended two organizational solutions, to either create a semi-autonomous agency or a wholly autonomous agency. The idea of creating a wholly autonomous agency could not garner a majority interest and met with severe opposition from the Administration, hence, the concept of a semiautonomous agency gained momentum through two legislative vehicles — the intelligence and defense authorization bills.

Senators Jon Kyl (R-AZ), Frank Murkowski (R-AK), and Pete V. Domenici (R-NM) offered amendments to the intelligence authorization bill (H.R. 1555) in July that would also create a nuclear security agency within DOE. The authors also worked in amendments to address concerns from the Administration and Senate Democrats with respect to the ability of weapons and non-weapons laboratories to conduct related research and to ensure that environmental, health and safety requirements are met. Shortly after the Senate passed H.R. 1555, defense authorizers (already primed for conference) rightly claimed jurisdiction over the energy laboratories and incorporated language into their conference agreement to create the semiautonomous agency (S. 1059, House Report 106-301).

The agreement would establish within DOE a National Nuclear Security Administration (NNSA). According to the conference report, NNSA would be a “semi-autonomous agency within the Department that would be responsible for nuclear weapons development, naval nuclear propulsion, defense nuclear nonproliferation, and fissile material disposition.” The NNSA is to be headed by an Administrator for Nuclear Security who would also be considered the Undersecretary for Nuclear Security subject to the “authority, direction, and control of the Secretary of Energy.” The new Undersecretary/Administrator would, however, have authority over agency-spe-

cific policies, the agency’s budget, personnel and legislative and public affairs.

The issue of the line of authority is of immediate concern to the Administration that fears the creation of an insular agency with vague accountability to the Secretary, no clear links to non-weapons activities within DOE or responsibility to environmental, health, and safety issues. Echoing the Administration’s concerns, Sen. Carl Levin (D-MI), Ranking Member of the Senate Armed Services Committee, released a statement outlining a memorandum prepared by the Congressional Research Service (CRS) that raised questions regarding the reorganization. The CRS Memorandum states that “the Department’s staff offices will be unable to have authority, direction or control over any officer and employee of the [new] Administration.” It also highlights concern that the NNSA would not be subject directly to the DOE General Counsel, Inspector General, or Chief Financial Officer. In addition, a letter from 46 state attorneys general was sent in early September to Congress expressing worry that the reorganization would undercut a 1992 law that gives the states regulatory control over DOE’s hazardous waste management and cleanup activities. Defense conferees countered that the proposal does not undermine the authority of the Secretary of Energy over the new agency and that existing state regulatory controls still remain in place.

Both the House and the Senate recently passed S. 1059. The only mechanism to stop the reorganization from moving further forward is a Presidential veto, which is unlikely. While Secretary Richardson has voiced dismay with the Armed Services proposal, S. 1059 also includes language for many popular items such as increases for combat readiness and training, pay raises, health care, and spending for military service programs. The White House has yet to release a formal statement of its intention with respect to the bill. ■



# Reports and Publications

## GENERAL ACCOUNTING OFFICE

Copies of GAO Publications are available by calling 202/512-6000 or via the Internet at <http://www.gao.gov>.

*Technology Transfer: Report Requirements for Federally Sponsored Inventions Need Revision* (RCED-99-242). This report is an overview of procedures outlined under the 1980 Bayh-Dole Act concerning ownership of inventions created under federally funded research projects. Under the Act, the inventor is to retain ownership if certain requirements are followed, however, the report found agencies and inventors have largely ignored these requirements.

*Nuclear Safety: Information on the International Nuclear Regulators Association* (RCED-99-243). This report focuses on the mission of and the U.S. role in an international association consisting of senior administrators from eight countries with civil nuclear power programs. The report notes that consensus exists among senior regulators that the International Nuclear Regulators Association is a good forum for exchanging ideas. But, it also cites several concerns including overlapping of topics already addressed by other nuclear regulatory associations, questionable benefits to the U.S. Nuclear Regulatory Commission, and the exclusion of some countries with nuclear programs such as Russia.

*Federal Research Grants: Compensation Paid to Graduate Students at the University of California* (OSI-99-8). This report examines the use of grants for payments to Graduate Student Researchers at the University of California. It examines the application of OMB Circular A-21 that governs the use of grant monies for compensation to graduate students. The study found that the university was in compliance with the guidelines except that the compensation exceeded the allowable costs that could be charged to grants.

*Chemical and Biological Defense: Coordination of Nonmedical Chemical and Biological R&D Programs* (NSIAD-99-160). The report identifies federal programs that conduct nonmedical chemical and biological R&D and describes mechanisms for coordination between the programs. It identifies four agency R&D programs that lack several features in its coordinating mechanisms. Participating agencies, however, are aware of the deficiencies and are trying to correct them.

*DOD Animal Research: Controls on Animal Use Are Generally Effective, but Improvements Are Needed* (NSIAD/HEHS-99-156). The report focuses on the management and oversight of the Department of Defense's (DOD) animal research programs. It examines whether DOD used animals in research for

necessary defense objectives, for duplicated experiments, or whether alternative forms of research could have been used. It found that DOD's controls were sound but some improvements were needed.

*Space Station: Cost to Operate After Assembly is Uncertain* (NSIAD-99-177). This report gives an overview of post-construction costs of the International Space Station (ISS). It states that NASA's estimates of operating and maintaining the ISS are uncertain due to factors such as Russian reliability and outdated estimates for a different space station configuration.

## NATIONAL ACADEMY OF SCIENCES, NATIONAL ACADEMY OF ENGINEERING, INSTITUTE OF MEDICINE, NATIONAL RESEARCH COUNCIL

Government offices may obtain single complimentary copies by calling the Office of Congressional and Government Affairs at 202/334-1513. Others may order copies from the National Academy Press by calling 800/624-6242 or via the Internet at <http://www.nap.edu>.

*Improving Student Learning: A Strategic Plan for Education, Research and Its Utilization* (ISBN 0-309-06489-9). This publication proposes a new strategy to improve the state of the nation's school system by better integrating education research. In order to foster a better discussion, the report asks four key questions concerning education and education research.

*Industrial Environmental Performance Metrics: Opportunities and Challenges* (ISBN 0-309-06242-X). This report is a corporate-focused analysis of environmental metrics in industry. It examines how metrics may be utilized to determine the environmental responsibility of industries beyond the factory. It also examines implications that arise from increased demand for comparability of business metrics by the investment community and environmental interest groups.

*Pathological Gambling* (ISBN 0-309-06571-2). This report is in response to greater involvement in legal gambling by government institutions. State sponsored lotteries and gambling arenas are now generally accepted as forms of economic development but questions remain as to whether this new age of gambling creates more pathological gamblers. This report examines this question and explores possible solutions and outcomes.

*The Changing Nature of Work: Implications for Occupational Analysis* (ISBN 0-309-06525-9). This volume explores the increasing demographic diversity of the workforce, the fluidity of boundaries between lines of work, the interdependence of how work is struc-

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els. The Senate has not acted yet on the EPA budget.

Much of the **Department of Transportation (DOT)** budget is exempt from the caps because of two new categories of spending created last year for transportation programs. Spending on these categories automatically augments with increased gas tax revenues. As a result, the House would allow DOT's R&D to increase 8.9 percent to \$656 million in FY 2000, with substantial increases for highway, aviation, and transit R&D. The Senate would provide similar amounts.

Congress will struggle this September to draft the remaining appropriations bills, but no one expects all of them to be signed into law by the October 1 start of FY 2000. It is likely that the President will veto some of them and others will contain fund-

ing cuts so severe that they will cause delays in House-Senate conferences. Any appropriations bills not signed into law by October will likely be bundled into an omnibus appropriations bill, and funding levels will be hammered out in high-level negotiations between the Republican leadership and Administration officials behind closed doors. Agencies funded by the unfinished appropriations will receive temporary funding (most likely at FY 1999 levels) through continuing resolutions until final appropriations levels are decided. ■

*Kei Koizumi*

*AAAS R&D Budget and Policy Program*



#### REPORTS, from page 6

tured, and the need for an integrated systematic approach to understanding how work is changing. It states that while there is a consensus that the nature of work is changing, there is a great debate on how it is changing.

*Children of Immigrants: Health, Adjustment, and Public Assistance* (ISBN: 0-309-06545-3). This publication examines the circumstances, health, and development of children in immigrant families and the delivery of health and social services to these families. It presents a detailed analysis of over twelve datasets.

#### CONGRESSIONAL RESEARCH SERVICE

Copies of CRS reports for congressional use are available by calling 202/707-7132.

*Internet: An Overview of Key Technology Policy Issues Affecting Its Use and Growth* (98-67 STM). This report summarizes several key policy issues that could affect the growth and use of the Internet. These issues include encryption, electronic signatures, cybersecurity, Internet privacy, protecting children from viewing unsuitable material, junk e-mail, Internet Domain names, and access to broadband services.

*Government Performance and Results Act: Brief History and Implementation of Activities During the First Session of the 106<sup>th</sup> Congress* (RS20257). This report summarizes recent actions to implement the Government Performance and Results Act (GPRA). It critiques the agendas of various agencies to implement GPRA, for example, failure to articulate goals or to link goals to day-to-day activities.

*Electric Power and the Year 2000 Computer Problem* (RS20267). This report analyzes the vulnerability of the nation's electric utility system to the Y2K computer problem. The probability of failure of the systems is about the same as those that customers regularly face in difficult situations such as severe weather. However, 10 percent of the utilities' critical systems and 35 percent of nuclear power plants will not be Y2K ready until the last half of 1999.

*Renewable Energy and Electricity Restructuring* (RS20270). This report provides a brief overview of the debate over renewable energy provisions in federal legislation to restructure the electric power industry. It focuses on the debate surrounding the appropriate role of the federal government in restructuring the industry, and whether to create incentives for renewable energy. ■

## HEARD OFF THE HILL



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British researchers are close to testing a bubonic plague vaccine on human subjects. Scientists at Britain's top secret Porton Down chemical and biological warfare center are apparently at an advanced stage of development for the genetically engineered vaccine and are about to begin testing it on humans. The research is sponsored by the government's Defense Evaluation and Research Agency. *BBC Online* August 26, 1999.

Scientists at an Australian research center are trying to help developing countries tailor genetic engineering techniques to their specific agricultural needs. Instead of developing gene modifications for a model system and then applying the technique to real world, researchers at the Center for the Application of Molecular Biology to International Agriculture (CAMBIA) are allowing scientists from the developing world to tailor the genetic modifications to their surroundings. CAMBIA allows open access to their technologies and also posts a web site that helps scientists negotiate intellectual property issues. *Science* September 3, 1999.

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On the domestic front, scientists in California are hoping to conduct human subject trials of a vaccine against the addictive properties of cocaine later this year. Researchers at the Scripps Institute have been able to attach a protein to a derivative of cocaine so that the immune system is able to recognize the cocaine molecule and break it down before it reaches the brain. So far, tests in rats have shown it to be effective. *Reuters* August 23, 1999.

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The United States Department of Agriculture (USDA) has been conducting research on biocontrol agents that would kill only marijuana plants. The USDA is experimenting with a variety of fungus, *Fusarium oxysporum*, that specifically attacks cannabis plants by infecting their vascular systems and making them wither. Opponents fear that this is a form of "biological warfare" that could eventually infect other plants. The USDA is confident it only works on cannabis and the state of Florida may consider using the fungus to eradicate its illegal drug crop. *New Scientist* September 11, 1999. ■



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