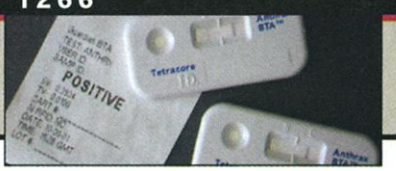
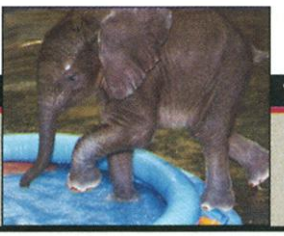
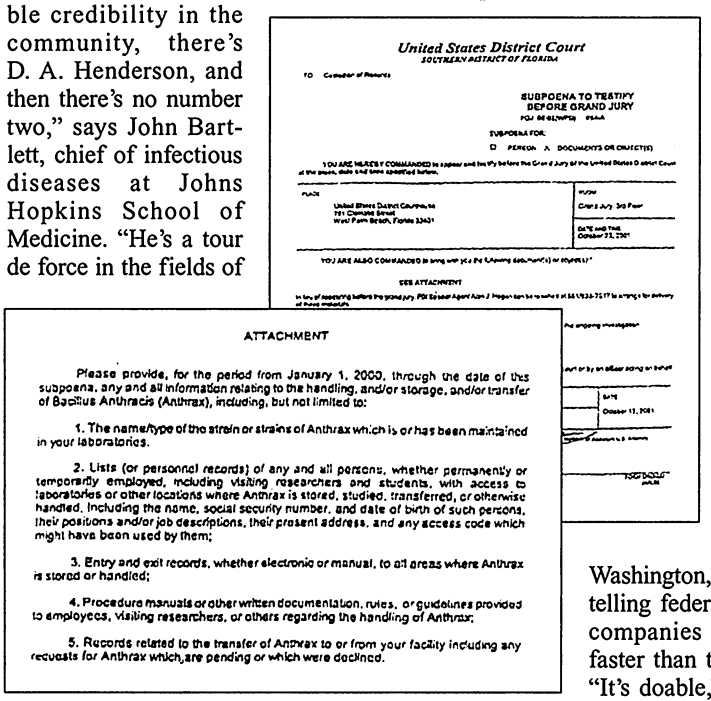




opment and production.

Henderson, who has previously worked both as deputy assistant secretary of HHS and as associate director of the White House's Office of Science and Technology Policy, is leaving his job as director of the Johns Hopkins Center for Civilian Biodefense Studies in Baltimore, Maryland. "If you asked who is a giant in the field of bioterrorism as a scientist, who has incredible credibility in the community, there's D. A. Henderson, and then there's no number two," says John Bartlett, chief of infectious diseases at Johns Hopkins School of Medicine. "He's a tour de force in the fields of both science and public health." Whereas Henderson will orchestrate the many branches of HHS that deal with bioterrorism, insiders say that Russell will have a more defined main task: to speed the development of a new anthrax vaccine.



United States District Court
SOUTHERN DISTRICT OF FLORIDA

SUBPOENA TO TESTIFY BEFORE GRAND JURY

SUBPOENA FOR:

ATTACHMENT

Please provide, for the period from January 1, 2000, through the date of this subpoena, any and all information relating to the handling, and/or storage, and/or transfer of Bacillus Anthracis (Anthrax), including, but not limited to:

1. The name/type of the strain or strains of Anthrax which is or has been maintained in your laboratories.

2. Lists (or personnel records) of any and all persons, whether permanently or temporarily employed, including visiting researchers and students, with access to laboratories or other locations where Anthrax is stored, studied, transferred, or otherwise handled, including the name, social security number, and date of birth of such persons, their positions and/or job descriptions, their present address, and any access code which might have been used by them;

3. Entry and exit records, whether electronic or manual, to all areas where Anthrax is stored or handled;

4. Procedure manuals or other written documentation, rules, or guidelines provided to employees, visiting researchers, or others regarding the handling of Anthrax;

5. Records related to the transfer of Anthrax to or from your facility including any requests for Anthrax which are pending or which were declined.

Tough questions. Academic researchers have received government subpoenas seeking information on their anthrax stocks.

The failure of U.S. producers to maintain a viable stockpile of anthrax vaccine for civilians has been an acute embarrassment for the government. The contractor hired by the Department of Defense to produce a vaccine for the Pentagon has been closed down for repairs since 1998 (*Science*, 19 October, p. 498). Two prominent groups have now urged Congress to resolve the impasse by authorizing a new, government-owned, contractor-operated facility dedicated to the manufacture of critical vaccines. A panel chaired by retiring Virginia Governor James Gilmore told Congress last week that "direct government ownership or sponsorship" of a vaccine lab is "the only reasonable answer." And the governing council of the Institute of Medicine, chaired by IOM president Kenneth Shine, concluded on 5 November that a "National Vaccine Authority" is "long overdue."

Industry officials have been in close talks with HHS about these ideas for the past 2 weeks, says Jeffrey Trewhitt, spokesperson for Pharmaceutical Research and Manufacturers of America in Washington, D.C. The company executives think they can fulfill the government's needs without a vaccine agency, Trewhitt says: "Let's set the goals and see what they can do; they believe they can meet the goals" faster than a federal agency can. Carl Feldbaum, president of the Biotechnology Industry Organization in Washington, D.C., also says he's telling federal officials that U.S. companies can make vaccines faster than the government can. "It's doable," he says, if the industry can have a long-term financial commitment and protection from antitrust actions and private lawsuits.

Treaty movement. There's a possibility that the anthrax scare could kick-start stalled talks on measures to beef up compliance to the Biological and Toxin Weapons Convention (BWC). Talks on a BWC protocol broke down last summer, when the U.S. delegation pulled out of negotiations due to concerns that enforcement measures—such as lab inspections—might compromise national security and threaten biotech companies (*Science*, 20 July, p. 414). Keeping a promise to come up with alternative approaches for a 19 November review conference in Geneva, President George W. Bush last week floated several ideas for strengthening the convention. The most compelling U.S. proposal, experts say, is one to allow nations to extradite for prosecution those who mishandle biotoxins. The idea has been kicking around the United Nations for years, but U.S. support may put it over the top.

Overall, however, observers are unimpressed with other U.S. proposals, including one to devise a "code of ethical conduct" for bioscientists. "The [Bush] Administration is still in a state of denial," contends a British bioweapons analyst. One way to mend the rift with other countries, says a U.S. Defense Department official, would be for the government to accept "tempered criticism" at the Geneva conference and then quietly resume negotiations on how to comply with the treaty.

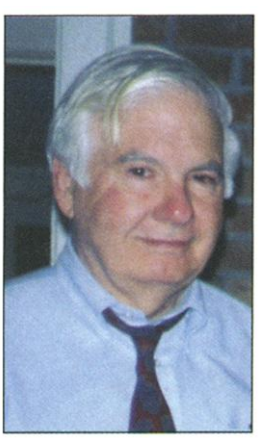
–ELIOT MARSHALL

With reporting by Jon Cohen, Martin Enserink, Joshua Gewolb, David Malakoff, and Richard Stone.

SCIENCE POLICY

Peer-Review Critic Gets NIH 'Rejects'

Two years ago, Stanford University postdoctoral researcher Michael Vagell asked the National Institutes of Health (NIH) for a grant to study how hormones affect the brain. Like about 70% of all grant applications, it was rejected. Normally, Vagell's fate would have remained a secret, because NIH publicizes only the names of grant winners. Last month, however, NIH complied with a court order and reluctantly handed over a list of unfunded applicants to a longtime critic of its peer-review practices.



Show and tell. George Kurzon wants to publicize ideas that didn't make it at NIH.

NIH officials say that the public release of the names and addresses violates the privacy of applicants and could hurt the careers of young scientists like Vagell. But the man who won the list, retired entrepreneur George Kurzon of Portsmouth, New Hampshire, says that employers, tenure committees, and colleagues "already know" who isn't winning grants. Left in the dark, however, says Kurzon, are those who could make a real difference: foundations, investors, and others who might fund ideas that NIH ei-

CREDIT: (RIGHT) GEORGE KURZON

ther rejected or didn't have enough money to fund. He plans to invite rejected researchers to post their ideas on a free electronic bulletin board. That way, he says, scientists can avoid being penalized by a peer-review system that is "inherently flawed, overly cautious, ... and unfriendly to real innovation."

Some researchers at the center of the storm say they don't see the release of their names as a threat. "Even the most successful researchers don't always get funded, but I can see why someone might feel embarrassed," says Mark Blumberg, a neuroscientist at the University of Iowa in Iowa City, who, like Vagell, is on the list but was eventually funded by the National Institute of Mental Health (NIMH). Vagell, who says he doesn't mind the attention, finds Kurzon's information-sharing plan "interesting, ... [but] I can't imagine that funders are facing a shortage of good applicants."

This is the second time that the 71-year-old Kurzon, a Harvard-trained physician who has worked in the pharmaceutical industry and as a venture capitalist, has forced NIH to cough up such a list. In 1980, he won a court order forcing the National Cancer Institute to reveal the names of its unfunded applicants after he learned that it had rejected a proposal from prominent biochemist Albert Szent-Gyorgyi. Kurzon turned the list over to a social scientist studying peer review.

Kurzon went to federal court again last year, after NIMH rejected a 1999 Freedom of Information Act request for a similar list. In July, a judge found that although neither NIH nor Kurzon had made a strong case, the law requires agencies to make records public whenever possible. So on 12 October NIH sent Kurzon a list of the 800-plus NIMH applicants who weren't funded in the spring of 1999, after informing everyone on the list and inviting them to contact Wendy Baldwin, head of the agency's extramural grants agency.

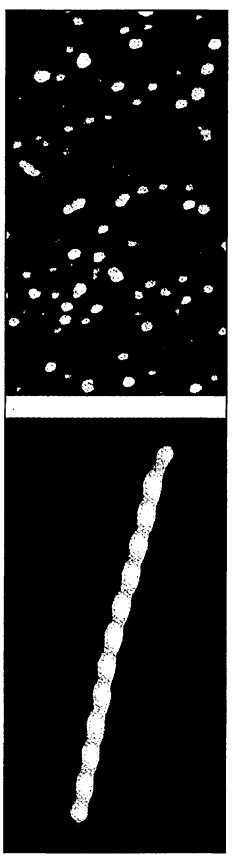
"I can't see how a list of names is ... the most effective way to advance science," says Baldwin. The agency already encourages researchers who don't get NIH funding to approach private donors, she says.

Kurzon thinks that NIH officials are missing the point. The exercise will have been worthwhile if it leads to the funding "of even one overlooked gem of an idea," he says, adding that he plans to ask every NIH institute to provide updated lists of its unfunded applicants. But scientists may cling to their anonymity a bit longer: Kurzon has yet to raise the money to mail out his invitations or set up his Web site. –DAVID MALAKOFF

PARKINSON'S DISEASE

Dopamine May Sustain Toxic Protein

The tremors, stiffness, and slurred speech that accompany Parkinson's disease are rooted in the death of neurons that churn out the chemical messenger dopamine. But precisely what kills these brain cells has long stumped researchers. Now a provocative test tube study suggests that a surprising culprit—dopamine itself—may assist in the neurodegeneration that defines the disease. Parkinson's researchers say the findings are intriguing and worthy of follow-up experiments but caution that they must be confirmed in cell cultures and laboratory animals.



Misfolding. Dopamine may keep α-synuclein in toxic protofibrils (top) by preventing it from forming fibrils (bottom).

Neurons in parts of the brain stricken by Parkinson's disease are marked by tangled deposits called Lewy bodies. These clumps are made of the folded, or fibrillar, version of a protein called α-synuclein. Neuroscientists initially assumed that fibrillar α-synuclein—as opposed to the unfolded form common in healthy brains—is responsible for neural demise. Recently, however, researchers have pursued a version of α-synuclein that hovers between normal and fibrillar, called protofibrillar, which some consider far more toxic than fibrils.

On page 1346, Peter Lansbury of Harvard Medical School in Boston and his colleagues describe their search for compounds that either prevent or encourage protofibril accumulation. Lansbury's team used human α-synuclein produced by bacteria to screen 169 compounds. To the researchers' surprise, of the 15 compounds that inhibited the transition from protofibril to fibril—thus, presumably, making protofibrils stick around in a cell longer—14 belonged to a set of neuromodulators called catecholamines, which includes dopamine.

The results appeared paradoxical; after all, Parkinson's disease is caused by a crippling loss of dopamine. How could dopamine be worsening the disease? "The whole thing led in a very unexpected direc-

ScienceScope

The fall of RISE In May 2000, an advisory committee to the National Science Foundation (NSF) proposed a big spending boost in mathematics and the physical sciences, citing their role in national security and economic development. Committee members hoped that the 20-page manifesto—the Reinvestment Initiative in Science and Engineering (RISE)—would inspire a doubling of the NSF budget, a goal of NSF director Rita Colwell.

But the campaign never took off. Last week the committee vented its anger at NSF's top management for failing to trumpet its message while a recent Defense Department commission led by former U.S. Senators Gary Hart and Warren Rudman attracted national attention by making many of the same points. "NSF had an opportunity to be at the forefront on the role of science in national security and economic development, and it dropped the ball," said chemist Ronald Brisbois of Macalaster College in St. Paul, Minnesota. "RISE could have been on everybody's lips [after 11 September] instead of Hart-Rudman."

NSF staffer Robert Eisenstein says he understands their frustration. But he also told the committee that Colwell *et al.* "are very supportive" of the RISE plan.

Arsenic Déjà Vu Ending one of the biggest scientific controversies of the young Bush Administration, the Environmental Protection Agency (EPA) last week issued a new standard for arsenic in drinking water. It chose exactly the same level of 10 parts per billion (ppb) set by the Clinton Administration.

In March, EPA administrator Christine Whitman suspended that standard and asked for more scientific review, noting that cleanup costs could be high. Her move provoked an uproar among environmentalists and some members of Congress and inspired countless jibes about the president's disregard for the public's health. But if more review was meant to block the standard, it backfired: A National Academy of Sciences panel found that the cancer risks of arsenic were greater than previously thought, suggesting that even 10 ppb might not be protective enough (*Science*, 21 September, p. 2189). The panel's chair, retired pathologist Robert Goyer, declined to comment on EPA's decision. But he said that it's in line with a World Health Organization guideline followed by many countries.

CREDIT: CONWAY ET AL.