WHAT'S ON THE WATCH LIST

VIRUSES

Crimean-Congo hemorrhagic fever virus, Eastern equine encephalitis virus, Ebola viruses, equine morbillivirus, Lassa fever virus, Marburg virus, Rift Valley fever virus, South American hemorrhagic fever viruses (Junin, Machupo, Sabia, Flexal, Guanarito), tick-borne encephalitis complex viruses, *Variola major* virus (smallpox virus), Venezuelan equine encephalitis virus, viruses causing hantavirus pulmonary syndrome, yellow fever virus

BACTERIA

Bacillus anthracis, Brucella abortus, Brucella melitensis, Brucella suis, Burkholderia (Pseudomonas) mallei, Burkholderia (Pseudomonas) pseudomallei, Clostridium botulinum, Francisella tularensis, Yersinia pestis

RICKETTSIAE

Coxiella burnetii, Rickettsia prowazekii, Rickettsia rickettsii

FUNGI

Coccidioides immitis

TOXINS

Abrin, aflatoxins, botulinum toxins, *Clostridium perfringens* epsilon toxin, conotoxins, diacetoxyscirpenol, ricin, saxitoxin, shigatoxin, *Staphylococcal enterotoxins*, tetrodotoxin, T-2 toxin

sarily have to be filched from a lab.

A proposal to bar nonresident aliens from possessing a select agent also troubles some researchers. "People we may need to work with—including Canadian and British research—could be affected by this," says Atlas, who was expected to testify this week before a Senate committee on behalf of the American Society for Microbiology (ASM). He notes that the bill (H.R. 3160), which passed the House last week, allows the Secretary of Health and Human Services to issue waivers but worries that the process could be "cumbersome."

One idea getting better reviews is to create a national registry to track select agents. Bioterrorism experts have long urged Congress to require researchers who possess deadly materials to register their collections with CDC, and the agency has been embarrassed by its inability to specify how many U.S. labs might have produced the anthrax that has contaminated U.S. mailrooms. A 1996 law requiring the CDC to license laboratories that ship or receive select agents didn't include an inventory reporting requirement; it also exempted researchers who had stockpiled strains in freezers but weren't planning to share them. The current attacks, says ASM's Janet Schumaker, make it prudent "to reexamine all the issues surrounding possession."

–DAVID MALAKOFF AND MARTIN ENSERINK

U.S. SCIENCE POLICY

Marburger Shakes Up White House Office

After winning unanimous Senate confirmation last week, presidential science advisor John Marburger has moved swiftly to make radical changes to his office.

Marburger has eliminated two of the four senior positions within the Office of Science and Technology Policy (OSTP) that he heads, subsuming environmental matters and national security under either science or technology. "I felt the office was too fragmented to be effective, and I wanted to have more direct control," says Marburger.

The changes have unsettled some members of the science and technology community. Eliminating the national security position "is a big blow" to forging links to the powerful National Security Council, says one former OSTP official. The need to incorporate science into the burgeoning war on terrorism suggests that Marburger "is moving in the wrong direction," says Al Teich, head of science and policy at the American Association for the Advancement of Science (which publishes *Science*). Dropping the environmental job, Teich adds, is a "surprising move" given the importance of global warming and related issues.

Several science policy analysts and former OSTP officials also expressed concern about the nomination of Richard Russell, now OSTP chief of staff, to serve as technology chief. Russell worked for nearly 7 years on the House Science Committee, but unlike most of his forerunners, he does not have an advanced scientific degree or extensive experience in industry. Russell declined comment, but Marburger acknowledges that researchers have questioned the choice.

"This is not an academic appointment, and dealing with academic aspects of technology is only part of what we do," says Marburger, the former director of Brookhaven National Laboratory in Upton, New

CREDIT: MARTY KATZ

In charge. John Marburger says new OSTP structure gives him "more direct control."

ScienceScope

NIH Grapevine Cancer researchers are circulating a rumor that President George W. Bush favors Andrew C. von Eschenbach to be the next director of the National Cancer Institute (NCI). Von Eschenbach, a leader in prostate cancer treatment and a clinical researcher at the University of Texas M. D. Anderson Cancer Center in Houston, is close to the Bush family and has been active in the American Cancer Society. Ruth Kirschstein, acting director of the National Institutes of Health (NIH), says she has no information about the search for a new NCI director, although other NIH leaders say the White House has already made its decision. Von Eschenbach declined comment through a spokesperson.

PAC 'Em In Spurred by the recent creation of a political action committee designed to fund only Republicans (*Science*, 7 September, p. 1747), three Washington science advocates last week set up their own—but this one will be fervently nonpartisan. Called U.S. Science (www.us-science.org), the organization will contribute cash to U.S. political candidates who place a high priority on government support for science.

The first order of business will be to set up an advisory board of eminent science supporters who will decide who gets donations, says Kevin Marvel, an American Astronomical Society spokesperson who is one of the three co-directors. "If there is a referee-type process, then scientists will be willing to give money," he says. Once the board is in place, they intend to go after contributions. He adds that while they applaud SciPAC, the Republican-only group, "we felt it is more important to broaden support for science."

Brain Gain The Royal Society of London is launching a program designed to lure top postdoctoral researchers from the United States to the United Kingdom. Beginning in June 2002, it will fund 10 American postdocs to work in leading British laboratories for up to 3 years.

The program, the product of years of discussion with the U.S. National Academy of Sciences, is aimed at sharing talent between the two nations. "We want to do it in the context of brain circulation, not just brain gain," says Sir Brian Heap, vice president and foreign secretary of the society. Stipends will be commensurate with those available in the U.S., he says. Postdocs interested in making the jump must apply by next February. Full details available at www.royalsoc.ac.uk/funding/ig_fr.htm.

York. The search for a science chief is still on, he says, adding that his goal is to build a team with complementary skills.

Marburger adamantly rejects speculation by some analysts that the White House dictated the changes at OSTP. "I was under no pressure to do this," he says. "It was not suggested by anyone in the Administration."

–ANDREW LAWLER

FORMER SOVIET UNION

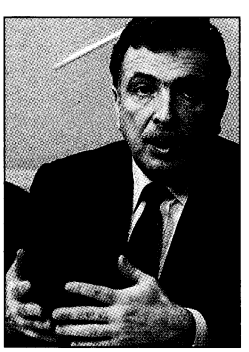
Cautious Optimism, But Progress Is Slow

LONDON—When he learned a few years ago that a molecular biology lab run by GlaxoSmithKline was due to close, Ivan Gout of the Ludwig Institute for Cancer Research in London made sure none of its equipment ended up on the scrap heap. Instead, with crucial support from Peter Campbell of the Federation of European Biomedical Societies, he shipped the surplus equiptment—along with DNA and protein sequencers donated by the Ludwig—to the Institute of Molecular Biology and Genetics in Kyiv, Ukraine. This high-tech bonanza helped persuade a colleague in the United States, Valery Filonenko, to return to run the newly outfitted lab as a joint project with the Ludwig. "There are so many people who would go back to Ukraine if they could have even 10% of the capability of U.S. labs," says Gout. "We have to build on the idea that scientists need to repatriate."

A short time ago, that idea would have been unthinkable. The dissolution of the Soviet Union in 1991 spurred a mass exodus of scientists, some fleeing persecution, others fleeing subsistence salaries, aging equipment, and poorly stocked libraries. Russian science "suffered the most precipitous decline in financial support known in modern history," according to Loren Graham, a historian of Russian science at the Massachusetts Institute of Technology. That prompted some observers to augur the death of Russian science, but "we now know that these predictions were false," says Graham.

Indeed, at a meeting here last week on international support for Russian and Ukrainian science, there was cautious optimism about the future. Graham and Irina Dezhina of the Institute for the Economy in Transition in Moscow pointed out that after years of short-changing researchers, the Russian government fully paid institute budgets and salaries in 2000 and 2001, while graduate student enrollment in the natural sciences rose during the turbulent '90s. And the ranks of scientific staff in Russia have stabilized at roughly 500,000, about a third of the total 20 years ago.

Some of the credit for saving science in Russia and other former Soviet states must go to "perhaps the largest program of scientific assistance the world has ever seen," says Gloria Duffy, board chair for the U.S. Civilian Research and Development Foundation (CRDF). In the past decade, the International Science Foundation launched by financier George Soros, the CRDF, the European Union's International Association for Cooperation with Scientists from the former Soviet Union program, and scores of other players ploughed more than $3 billion into research in the region.



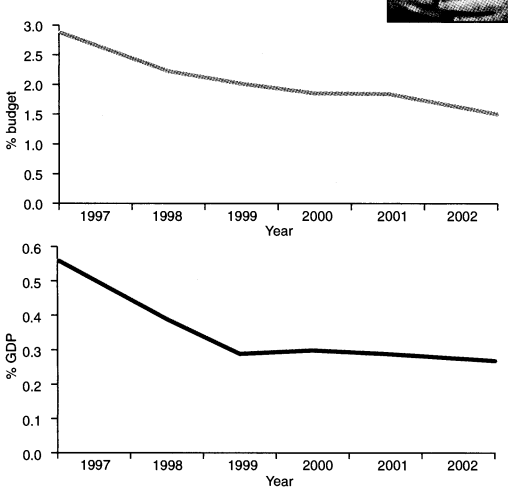
But recent developments could still undermine the optimism voiced in London. For example, at its annual meeting next month, the Russian Academy of Sciences (RAS) is expected to reelect Yuri Osipov to a third 5-year term as president, suggesting that there will be no change in its policy of keeping all its 325-odd institutes running, whatever the cost. "The hopes of the more radical reformers have turned out to be unrealistic," says Graham. Putting the RAS's glacial pace of change in vivid relief are the rapid strides by the Chinese Academy of Sciences to cull deadwood and embrace peer review. "China is going ahead from a very low level at great speed," says Sir Brian Heap, Foreign Secretary of the Royal Society, which hosted the London meeting with the Virginia-based CRDF. "Looking at Russia, there's just no comparison at the moment."

And the attitude of the Russian government toward science continues to be capricious. Earlier this month, the government abruptly dissolved the post of science minister, leaving vice premier Ilya Klebanov in complete control of federal science policy. He's expected to continue a year-long tilt toward applied research. "The government wants science to provide not only new knowledge, but knowledge useful to industry," explains Mikhail Alfimov, director of the Russian Foundation for Basic Research. The challenge is to build up high-tech industry on anemic government support for R&D (see chart). "The most important enemy of science in our country is the Ministry of Finance," says physics Nobel Prize–winner Zhores Alferov, director of the Ioffe Physico-Technical Institute in St. Petersburg.

Lack of funding to replace and upgrade aging equipment continues to be a serious problem. "Everything we have—telescopes and other large equipment—was constructed during the Soviet period," says Yaroslav Yatskiv, director of Ukraine's Main Astronomical Observatory. And the Western system of competitive grants and peer review has been slow to take root. Peer review "has been adopted to a very limited degree," says Heap. There is, however, at least a glimmer of hope that the RAS may be warming to peer review: A new academy program allots a sliver of its budget to competitive projects in 11 priority areas.

All that suggests that reversing the brain drain of the past decade is still an unlikely prospect. Western agencies say they would rather build infrastructure than fund repatriation grants, banking on the hope that well-equipped labs will lure homesick talent. Sharing that sentiment is the Ukrainian government, which is considering setting up a fund for supporting top-gun expats. That's one indication, at least, that the worst is over. "The time for bailing out science in Russia and Ukraine has ended," says CRDF president Gerson Sher. But the long rebuilding process has only just begun.

–RICHARD STONE



Ever more anemic. Ilya Klebanov now has sole control over science, but R&D funds are dwindling.

ASTROPHYSICS

Pulsar Pulls Mass From Distorted Companion

The astrophysical zoo contains a dizzying variety of pulsars, spinning neutron stars that flash radio beams across the galaxy. Among the rarest of these dense stellar corpses are the "millisecond pulsars," which can whirl hundreds of times per second. Now, astronomers may have spied one of these exotic beasts at a critical point in its development: It's locked in a dance with a bloated star that may have just finished revving up the pulsar to a breakneck pace.

Data from an Australian radio telescope

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