A Thin Lifeline to Genome Researchers

Although the West has been increasingly frustrated in its efforts to stem the decline of Russian science (see accompanying story), a program sponsored by the Office of Health and Environmental Research at the Department of Energy (DOE) is off to a hopeful—albeit modest—start.

Last December, David Galas, then head of DOE's part of the U.S. Human Genome Project, led a "grand tour" of Russian molecular biology with the hope of identifying projects that might mesh with DOE's research. The question, recalls Galas, was, "What could we do by sending them a small amount of money?" Galas, who recently left DOE to become vice president for research and development at Darwin Molecular Technologies, a new company in Seattle, was accompanied by two noted genome researchers: molecular biologist and computer scientist Elbert Branscomb of Lawrence Livermore (California) Laboratory and Raymond Gesteland, head of a National Institutes of Health-funded genome center at the University of Utah, who works on new sequencing technologies. The team visited a dozen research institutes and interviewed more than 100 scientific teams in Moscow, St. Petersburg, and Novosibirsk.

Although the review was perhaps less than rigorous, Galas concedes, the U.S. scientists had no difficulty identifying 22 worthy Russian teams. Drawing on its genome project funds, DOE is sending $5,000 a year to each of 21 groups; one very large team is receiving $30,000. These modest awards, which are going directly to the investigators, not their institutes, may be spent on anything from salaries to supplies and equipment. In return, the groups have promised to update DOE on their progress and to publish in the open literature.

Galas says DOE began sending the money this summer in "dribs and drabs," because they weren't certain it would get there at all. After DOE gets word that an installment has been received, it sends off the next small parcel, sometimes by direct wire, says DOE molecular biologist Marvin Stodolsky, whom Galas credits with working out the details of the program. So far the money has been getting through. But it's not clear how much the scientists will get to keep because the tax status of foreign funds is in flux, says Stodolsky. To circumvent these and other difficulties, some of the Russian grantees have designated U.S. scientists, or Russian colleagues already working here, to receive the money and buy the supplies for them.

The future of this small experimental program depends on Russia's economic stability, but Galas and Stodolsky hope it can be kept alive. "We are getting good science from excellent groups very economically," says Stodolsky. "We think it is in the U.S. benefit, the Russian benefit, and the world benefit that these groups can maintain their integrity, and we are making a very small contribution in that regard."

–Leslie Roberts

nals to the FSU that was announced early last year (*Science*, 14 February 1992, p. 793) by the American Association for the Advancement of Science (AAAS) is only now getting off the ground after frustrating logistical delays. Flying journals to the Moscow airport is simple enough, says AAAS international programs staffer Beth Boswell, but getting them through customs usually requires a bribe, something AAAS wanted to avoid. And there's no good way to distribute the journals to libraries outside Moscow. Eventually, AAAS signed a contract with Matrix International Logistics Inc., which takes shipments through St. Petersburg without paying off customs officials and delivers them throughout the country. The first shipment of journals left last month.

The American Physical Society (APS) has also overcome daunting challenges to get a small grants program under way. It spent nearly a year setting up an aid program in Ukraine, for example, only to have to start again when the government there collapsed in 1992. So far, it has distributed $1.3 million in grants, travel stipends, and journals in a program that became the model for the Soros initiative.

The greatest challenge for societies like the APS has been to get the money into the hands of FSU researchers. The APS essentially set up its own international banking network by brokering special agreements between U.S. banks and those in the FSU countries to allow FSU researchers to cash checks. This wasn't easy, says APS organizer Irving Lerch; in one case, the premier of the new Republic of Belarus personally had to set up a dollar account in the local bank to distribute grants. Two of the first U.S. groups to deliver aid to FSU science—the American Mathematical Society and the American Astronomical Society—sent travelers' checks or commissioned couriers to pass envelopes of $20 bills to FSU scientists, and Sun Microsystems Inc., a U.S. computer company, actually filled a suitcase with money to pay one group of FSU researchers.

Reinventing government

Although the efforts of a few scientific societies are beginning to pay off, the international foundation created by Soros is by far the biggest game in town. By the end of the month it will have spent nearly $20 million on emergency grants, travel awards, and operating a staff in the FSU. Over the next 2 months, it will begin the process of reviewing applications for most of the rest of the promised $100 million (see sidebar, p. 1381).

But even with ready cash and the ability of a private agency to leap bureaucratic hurdles, the ISF faced the problem of awarding grants in a society lacking an adequate financial infrastructure. "In order to [distribute money] we had to essentially set up a banking system in a country that doesn't have one," says ISF executive director Harley Balzer. Most bank tellers have never seen a check, and bank-to-bank transfers, even within the same city, take weeks.

It took ISF officials nearly a year to reach a money-transfer agreement between the Bank of New York and the Moscow-based Menatep Bank that allows the ISF to print checks with the name of the FSU grantee and his or her passport number. The FSU scientists pick up the checks from the ISF's Moscow office, and cash them at the Menatep bank. But getting money into the hands of researchers isn't all that's needed. The ISF team discovered that it had to provide many of the services that a Western funding agency would take for granted. Take travel. Because government passport officials often withhold approval until just a day or two before departure—usually too late to buy tickets—the ISF decided to create its own travel agency to buy cheap tickets on a few hours' notice.

The ISF also wanted its grantees to be able to work in laboratories with electricity, heat, and a working roof—no longer a given at many FSU institutions. So each grant contains an extra 20% for overhead at the scientist's institution. And ISF will also handle the necessary accounting, by establishing a fund to pay electrical bills and other invoices it receives from institutions. The net effect, says ISF consultant Alex Goldfarb, a former Russian biologist now at the New York City Public Health Research Institute, is that ISF has taken on "both the role of funding agency and university business office." Soros hopes that this system will pass muster with U.S. Internal Revenue Service auditors, who monitor the foundation.

As the ISF hacked its way through this administrative jungle, some of the fiercest opposition came from the very group it is