



INTERNATIONAL

Russian Scientists Learning to Commercialize Ideas

A Russian scientist and entrepreneur quoted Archimedes in describing the impact of the three days he had spent learning how to turn his ideas into marketable products.

"Give me a place to stand and I will move the earth," the participant wrote in an anonymous evaluation of a AAAS training workshop on technology commercialization and commercialization principles that was held from 25 to 27 June at a retreat facility in Berezki, a city about 600 kilometers east of Moscow.

"Russia has a great scientific-technical potential," said Andrey Yumin, international marketing manager for the Nizhniy Novgorod Science and Information Center (NNIC), which helped organize the workshop in Russia. "The problem is that for a long time, Russian science was sponsored by the government, and scientists did not need to think what they would do with their

developments or who would buy them... The situation has completely changed. It has become necessary for scientists to have at least a general idea of the business commercialization process."

The 25 scientists and engineers who attended the AAAS workshop had to demonstrate they had an idea that was commercially viable in order to be chosen. Among them were microbiologists, chemists, physicists, a geologist, and a civil engineer. A grant of almost \$600,000 from the U.S. Commerce Department covered the cost of the workshop in Berezki, as well as two other workshops for Russian scientists in 2002—one in the United States earlier this year, and another one planned for Russia in September.

The workshops for the Russian scientists fit into AAAS's efforts to build capacity for science and technology in other nations.

"Commercializing technology is basical-



AAAS's Stella Siegel speaks to Russian scientist.

ly a process of applying science to human needs," said Stella Siegel, the AAAS senior program associate who organized the workshop. "And investing in technology has a positive impact not only on Russia but on the entire global economy."

The grant falls under a commerce department program known as SABIT (Special American Business Internship Training Program), which provides training opportunities for "gifted scientists from the NIS (New Independent States of the former Soviet Union) to apply their knowledge and skills to peaceful research and development (R&D) in the civilian sector, in such areas as defense conversion, medical research, and environmental technologies."

"By giving scientists some of the necessary tools to commercialize their technologies, the SABIT program hopes to untap the tremendous potential that Russian science can contribute to the world economy," says SABIT Director Liesel Duhon.

Among the issues of greatest concern to the Russians was that of how to protect their intellectual property rights—both under international and Russian law. The workshop trainers—two Americans and one Russian—gave a short course on the law. Participants also worked on how to seek out venture capital and negotiate with potential strategic partners, and did role playing to better understand how to communicate with foreign entrepreneurs. Their enthusiasm and ambition impressed Tom Ruddy, one of the workshop trainers and president of Trykor, Inc., a Boston-based firm that helps inventors patent their work and commercialize their inventions.

"They seem to have their ears and eyes open to business issues, and an intense curiosity," Ruddy said. "They are going up against significant odds, but I didn't see any fear of failure."

AAAS

New Dues Rates Approved for 2003

The AAAS Board of Directors has approved a dues increase for 2003. The Board authorizes increases to cover two kinds of expenses: unavoidable costs associated with running AAAS and publishing *Science*, and new expenses that add value to membership. Postage increases and expanding online resources are examples of the kind of expenses the Board anticipated in setting the 2003 rates.

The new rates are effective for terms beginning after 31 December 2002. As listed below, they do not include postage for international members, which is additional.

Regular professional members	\$125
Postdocs and K-12 teachers	\$95
Emeritus members who receive print <i>Science</i>	\$95
Students	\$70
Patrons	\$275
Supporting and emeritus members who do not receive print <i>Science</i>	\$56*

The Board also set the institutional subscription rate for print *Science* at \$335 for high school and public libraries and \$425 for all other institutions. For further information, including subscription rates for *Science* Online, librarians should contact AAAS or their catalog agents, or go to www.sciencemag.org/subscriptions/inst-sol-access.dtl on the Web.

All members will be advised of the new dues rates on their renewal notices for 2003. Member dues and voluntary contributions form the critical financial base for a wide range of AAAS activities. For more information, contact the AAAS Membership Office at 202-326-6417, www.aaas.org/membership/.

* Supporting member dues rate is set by the membership department

INTERNATIONAL

Communication, Travel Key to Advancing Science

When the U.S. Congress held a hearing recently for a proposed bill that would ease restrictions on travel to Cuba, AAAS CEO Alan I. Leshner was one of the witnesses. It's a role that the Association has often been called on to play in its efforts to strengthen ties among scientists, regardless of international conflict.

In his testimony, Leshner explained AAAS's support for "open international scientific exchange" within the context of the Association's mission, "To advance science and innovation throughout the world for the benefit of all people."

"Modern information and communication technologies, as well as the ease of international travel, have transformed what once were individual national scientific communities into a world community," Leshner told the Subcommittee on Western Hemisphere, Peace Corps and Narcotics Affairs of the Senate Foreign Relations Committee on 19 June. "We also have learned that in the 21st-century context, it works against everyone's interest to isolate any individual national scientific community."

AAAS has often served as a bridge between the international scientific community and scientists in countries such as the former Soviet Union and Chile, during times of political conflict that divide nations. The Association's board reinforced such activities in 1999 when it issued a statement supporting "open communication among scientists and freedom in the conduct of science."

"We of course recognize the primary need to protect individual and national security, but there is no credible reason to limit international collaboration in nonclassified research," said Leshner in testimony regarding the proposed Bridges to the Cuban People Act of 2001, which is also designed to increase humanitarian aid to Cuba.

Former AAAS President Rita R. Colwell notes that Cuban research, particularly in biotechnology, has been of particular interest abroad because the quality of the science is high and because scientists are functioning well despite limited resources.

Colwell, director of the National Science Foundation (NSF) recently described her impression of a fact-finding mission to Cuba in 1997 to prepare a publication, *Biotechnology in Cuba: A Report on a Scientific Mission to Cuba*.

"The most vivid image I have is of very bright, highly committed young scientists making do with limited laboratory supplies and old-fashioned equipment, and [still] producing some remarkably good results."



View of the Capitolio and nearby buildings in Havana, Cuba.

Many American scientists and academics continue to have difficulty obtaining permission to travel to Cuba, and Cuban scientists have been stymied in efforts to enter the United States to attend conferences or conduct research.

EDUCATION

ENTRY POINT! Program Heralded on Capitol Hill

Kent Cullers, the blind physicist who served as the model for the character in the movie "Contact," explained last week why he was planning to come to Capitol Hill on Tuesday, 23 July 2002, to celebrate the accomplishments of a group of young disabled scientists who have "made it over the wall" and into careers in computer science, biology, mechanical engineering, and aerospace.

"I've met some of these students, and I've been impressed by their phenomenal intelligence and motivation," said Cullers, Director of R&D, Search for Extraterrestrial Intelligence (SETI) in Mountain View, CA. "They have been given the opportunity to use their talents in a way that might never have been possible in the past."

The purpose of the Capitol Hill briefing, planned to coincide with the 12th anniversary of the Americans for Disabilities Act (ADA), was to draw particular attention to the role that young people with disabilities can make in satisfying the nation's continuing hunger for people with scientific and technical skills, and to demonstrate the success of AAAS's ENTRY POINT! internship program in helping them to make the transition into jobs.

As part of the 23 July event, AAAS also issued a publication, "New Career Paths for Students with Disabilities," reporting that the ENTRY POINT! program has placed more than 350 interns, and that 92% of the program's alumni are either working in the fields of science and engineering, or are in graduate school.

The report credits the following factors as critical to the success of the young people:

- assistive technology such as computers, software programs, and other technology;
- family and community support;
- mentors and role models; and
- internships.

The report suggests that future legislative and policy efforts focus on protecting existing laws and on encouraging corporations to institute internships and employment opportunities for scientists and engineers with disabilities. It also encourages businesses and educators to support technology that allows students and workers to operate independently.

The ENTRY POINT! experience suggests that "exposure to competent interns with disabilities helps eliminate employers' fears and dispels prejudice within an organization," the report noted.

"The students come to us with terrific skills, great academic records, and often with a background of tremendous support from their families and communities," said ENTRY POINT! director Virginia Stern. "Our job has been to serve as the bridge to employment for these young people, but they are the ones whose talent and hard work make them attractive to employers."