Japan Lays Out Welcome Mat for U.S. Scientists

New programs seek to entice researchers to spend time in Japanese labs, but many fellowships go begging

Wako City, Japan

WHEN AMERICAN BIOCHEMIST Marianne Spada stepped off the train in Wako City, a town on the outskirts of Tokyo, to start a fellowship at a government-funded laboratory, she says, "I prepared myself for the worst" in adjusting to her new environs. A month into her program, Spada says she has found the research culture here quite different from that in the United States, but on the whole, "I have good things to say."

Japanese officials and the U.S. National Science Foundation (NSF) hope more Americans will strike out like Spada and go to Japan to conduct research. Spada, a postdoc from the Sloan-Kettering Institute for Cancer Research, is the first American to study in Japan under new fellowship programs for foreign researchers established by the Japanese government.

The Japanese government recently has stepped up its efforts to attract visiting researchers. Japan's public and private sectors have offered fellowships for foreign researchers before, but last year the government broadened the scope by establishing more than 100 new fellowships for American scientists and engineers to conduct research in Japan.

This initiative is in part a response to complaints from American science leaders, including President Reagan's science adviser William Graham, that Japan has not permitted U.S. scientists sufficient access to its laboratories. Japanese officials acknowledge that there have been relatively few fellowships available in Japan, while there are plenty of opportunities for Japanese researchers to work abroad. But they also point out that Americans have not shown much interest in working in Japan.

Indeed, only a fraction of the old and new fellowships have been filled. NSF officials say Americans are not taking advantage of important research opportunities in Japan.

The number of Americans applying to participate in a long-standing exchange program between NSF and Japan has remained steady for many years. It is, however, too early to judge whether the new government fellowships established last year will attract more interest.

Even in Japanese corporate labs, many fellowships have gone begging, much to the frustration of NSF officials. "What we can learn about here is manufacturing technology," says an American official in Tokyo. According to a 1987 NSF report, 124 Japanese companies that employ at least 30 researchers said that they have already hosted or are willing to receive foreigners. But only 45 Americans had worked at these companies during the previous year.

American and Japanese officials say they don't know exactly why more Americans are not attracted to study in Japan. Some Americans authorities speculate that a lot of researchers doubt that the Japanese are at the cutting edge of research. Japanese officials have suggested that Americans are likely discouraged by Japan's high cost of living, its modest housing accommodations, the language barrier, and the problems of settling a family into such a foreign culture.

The lack of American interest is sufficiently troubling that the Japan office of the National Academy of Sciences in January began a series of meetings for senior managers and scientists from Japan and the United States to discuss differences between the research cultures in the two countries.

To drum up more applicants, NSF officials are redoubling their efforts to spread the word about the availability of fellowships in Japan. NSF offers several different kinds of fellowships for young to senior scientists who want to study at Japanese universities, government institutes, or corporate laboratories for varying periods of time.

Last year, NSF announced it would serve as a broker to help match American scientists and engineers from the public or private sectors with a Japanese laboratory, particularly those researchers who are considering stays of 6 to 18 months. The foundation is in the process of hiring another person in the Tokyo office who will help find out where the best work is being conducted in Japan on a particular topic, says Charles Wallace, NSF's senior program manager for exchange programs with Japan. In the past month, Wallace himself says he has been doing "dog and pony shows" on campuses across the nation to spread the word about fellowships available in laboratories funded by MITI, the Ministry of International Trade and Industry.

About a dozen researchers from the United States and Europe, interviewed in Japan about their impressions there, say they have found their particular laboratories equipped well, if not superbly, and the caliber of work very high. All of them said they are awed at how hard the Japanese work and the long hours they keep. Spada said that in her laboratory, for example, where she is studying antibiotics found in soil, researchers work from 9 in the morning until about 11 at night. And government scientists work every other Saturday. The Japanese may have to put in longer hours because public and even private sector laboratories hire few technicians or secretaries. The lack of support staff is a common source of complaint among the visiting researchers.

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But Frank Curzon of the University of British Columbia in Vancouver, who has been a fellow at Hitachi Central Laboratories for more than a year, remarked, as did others, that Japanese researchers don't seem as willing to experiment and make mistakes as Westerners. Frank-Jürgen Stützler, a German who has worked for the past 2 years in the semiconductor research laboratory at NEC, the Nippon Electric Corporation, says that the Japanese regard for societal hierarchy "makes free exchange difficult" between lab superiors and subordinates, teachers and students. The Japanese watch their proper rank in society, so "it is hard to find a hot discussion here," he says.

Several of the foreign researchers noted that the importance of the group and subordination of individuality in Japanese society also pervade the research laboratory, which is very different from the research culture in the United States and Europe.

The visiting researchers said that lack of knowledge of the Japanese language has not been a major barrier in the laboratory. Although many of them are learning Japanese or have even become fluent, their Japanese colleagues speak English in the laboratory as much as possible to accommodate visitors. The foreigners noted, however, that outside

the laboratory, coping with daily life without knowing the language was a serious problem.

To ease the culture shock, the Japanese government is trying harder to make its fellowships more appealing in practical ways. In January, for example, the Science and Technology Agency (STA), which administers one of the new fellowship programs, set up a liaison office in Tsukuba City, which is northeast of Tokyo an hour and a half by train and is known as Japan's "science city" because of the many government labs located there. A staff of six will help visiting foreign researchers and their families arrange housing, locate schools for their children, and offer Japanese language classes, for example. The government is also providing $3.2 million in fiscal 1989 to begin construction of 54 new housing units in Tsukuba for foreign researchers, says Kaname Ikeda, director of international affairs at STA.

The STA program will even pay rental expenses, no small matter in Japan where up front costs are enormous. According to an STA official, the average rent in Tsukuba is about 130,000 yen or about $1,040 at current exchange rates. A tenant typically must pay in advance not only 1 month's rent, but 1 to 2 months' rent as "gift money" to the landlord, 2 to 3 months' rent as a deposit, and 1 month of rent as a commission to the rental agent.

Riken laboratories in Wako City are also rolling out the red carpet for visiting researchers. With government funds, they have built new apartment houses that are spacious by Japanese standards and are even furnished with Western beds. (Westerners, however, are politely advised to take off their street shoes and wear slippers inside as is Japanese custom.) Other Riken housing for foreign researchers is traditional in that visiting scientists sleep on futons, but the apartments are equipped with modern appliances, including a computerized iron, television, and a washer and dryer.

One encouraging sign that more Americans may opt to study in Japan in the future is the interest in a new NSF program that subsidizes Japanese language training for scientists and engineers. The half-million dollar program is wildly oversubscribed "by many, many dozens," says Wallace of NSF. "I am dumbfounded at the overwhelming response to learn Japanese."

Japanese government officials say they are trying hard to woo more foreign researchers to Japan. Says Tohru Kikuchi, head of the new liaison office, "The key to success in Japan is flexibility" among visiting scientists. They must have the "mind of a cultural adventurer." ■ **MARJORIE SUN**

Psychiatrists Examine Soviet System

Although the number of political prisoners held in psychiatric hospitals in the Soviet Union has been greatly reduced, treatments and conditions, especially in the prison-like "special psychiatric hospitals," leave much to be desired, according to fragmentary reports from an American psychiatric delegation that returned from a recent visit to the U.S.S.R.

Delegation members are not supposed to comment on the trip pending completion of a report in the next 2 months which will then be submitted to Soviet authorities for comment. However, several told the *New York Times* that some patients still appear to be confined for political reasons and that some are being subjected to ineffective, outdated, or harmful treatments. The *Washington Post* quoted delegation member Peter Reddaway of George Washington University, an outspoken critic of Soviet psychiatry, as saying that his concerns remain "basically unchanged."

Soviet authorities were reportedly generally cooperative during the 2-week visit. At a press conference held in Moscow on 11 March, delegation leader Loren Roth, a forensic psychiatrist at the University of Pittsburgh, said "we were able to see virtually everyone we wanted to see." Interviews were held with 27 individuals selected by the delegation, including 15 who were still hospitalized. Roth said "in a few instances" authorities attempted unsuccessfully to discourage patients from being interviewed. Group members also visited seven mental hospitals, including three of the special hospitals.

The Soviets are believed to have permitted the visit in hopes of bolstering their bid to rejoin the World Psychiatric Association (WPA), from which they resigned under pressure in 1983. The next congress is to be held in Athens in October. Soviet General Secretary Mikhail Gorbachev is also said to be interested in cleaning up the record in preparation for a human rights conference to be held in Moscow in 1991.

The 19-member delegation, including representatives from the State Department and the American Psychiatric Association, was divided into four teams. One team visited hospitals; the other three interviewed and examined medical records of patients and ex-patients who were brought to Moscow or Leningrad. In some cases, family members were also interviewed.

One delegation member told *Science*, "we basically saw what we expected." He said the conditions and treatment at the special psychiatric hospitals were "terrible," with very long hospitalizations and outdated and painful treatments. He said the treatments include subjecting patients to long periods of isolation, keeping them in restraints, injecting them with drugs that cause high fever and other negative effects, and beating them.

Coinciding with the delegation's visit was the formation of a new Independent Psychiatric Association by 18 Soviet psychiatrists and mental health specialists. The purpose of the group, headed by Viktor Lanovoy, is to monitor professional practices and defend the rights of patients. Lanovoy announced after a 2-day meeting of the group in his apartment that it had applied for membership in the WPA.

From the information available, it seems highly unlikely that critics of Soviet psychiatry will favor the readmission of the official Soviet psychiatric society to the WPA so long as authorities continue to deny the existence of abuses. In the view of many, genuine reform will be contingent on the replacement of the country's two top-ranking psychiatrists: Georgii Morozov, head of the Serbsky Institute for Forensic Psychiatry, and Marat E. Vartanyan, director of the All-Union Research Center for Mental Health.

Vartanyan, the chief defender of Soviet psychiatry, apparently remains secure in his position despite a scathing public attack on him written last November by a subordinate, Viktor Gindilis, who is reputed to be the country's top psychiatric geneticist. Gindilis, head of the genetics laboratory of the center's Brain Research Institute, wrote an open letter to the U.S.S.R. Medical Science Academy to protest Vartanyan being given the title of "academician." Among his allegations were that Vartanyan is "completely incompetent" in medical and psychiatric genetics and that Gindilis himself is the author of "almost all" the publications and research intiatives attributed to Vartanyan.

Vartanyan has made no response to the allegations. Both he and Morozov made themselves unavailable to the delegation during its visit. ■ **CONSTANCE HOLDEN**