

JAPAN

Postdocs Get Primer on How to Survive Abroad

The U.S. approach to intellectual property rights is foreign to many Japanese scientists. But ignoring it could mean jail

KYOTO, JAPAN—Takuhiro Hoshino has just entered a master's degree program in medicine at Kyoto University. But he's already mapping out plans to become a postdoctoral researcher in the United States. His to-do list includes spending long hours studying the basic regeneration processes of the human immune system and reading Stephen King novels to hone his English-language skills. Hoshino is also boning up on U.S. intellectual property rules—the latest survival skill for Asian scientists hoping to avoid the legal traps that have ensnared some of their colleagues.

Last month Hoshino was one of about 50 participants in a roundtable discussion entitled “Working in the U.S.: Advice for Young Scientists” at the annual meeting here of the Japanese Biochemical Society. The subtext: “We want to explain how to go abroad without being arrested,” quipped Ken-ichi Arai, dean of the University of Tokyo's Institute of Medical Science and a co-organizer of the event, which featured advice on a variety of topics from 10 Japanese scientists who have spent many years in North American laboratories.

Arai might have been exaggerating, but the discussion is an outgrowth of recent incidents of alleged industrial espionage involving Japanese researchers. In May 2001, the U.S. Justice Department charged two Japanese-born scientists with conspiring to “benefit a foreign government” by stealing trade secrets in the form of cell lines and DNA samples from a laboratory at the Cleveland Clinic Foundation in Ohio, where one had worked from 1997 to 1999 (*Science*, 18 May 2001, p. 1274). U.S. prosecutors are still seeking the extradition of Takashi Okamoto from Japan (*Science*, 10 May, p. 1003).

That case, which was splashed across the Japanese media, was followed barely a year later by the arrest of a research couple for-

merly at Harvard University—one a Chinese native, the other from Japan—for allegedly conspiring to steal Harvard-owned trade secrets and for shipping university property across state lines. The case is slowly making its way through the U.S. legal system (*Science*, 28 June, p. 2310).

The two incidents reflect the chasm between Japanese and U.S. practices regarding



Words of advice. Ken-ichi Arai (left) and Yoko Fujita-Yamaguchi use the Kyoto meeting to reinforce suggestions from the Japanese government (*inset*).

the handling of academic research materials and data, says Yoko Fujita-Yamaguchi, a biochemist at Tokai University near Tokyo and a co-organizer of the roundtable. U.S. laws that foster the commercialization of federally funded research have prompted academic labs to become increasingly concerned about protecting intellectual property rights, says Fujita-Yamaguchi, who returned to Japan 2 years ago after more than 20 years in the United States, primarily as a principal investigator at the Beckman Research Institute of the City of Hope in Duarte, California.

“You must always remember that, as a postdoc [in the United States], your research results belong to your boss,” she bluntly told the audience. “Without your boss’s acknowledgment, you must not take samples or data away from the lab.” In contrast, she says, Japanese researchers and institutions are only now developing an interest in patenting

research results, and materials and information are still typically passed around without any written agreements.

The Japanese government is beginning to recognize the problem this cultural difference can pose for expatriate researchers. In July, the Ministry of Education, Culture, Sports, Science, and Technology distributed a “checklist of things to be aware of” to universities and research institutes, asking them to forward it to any researchers headed overseas (see table). There’s a special concern about contracts, says Toichi Sakata, deputy director-general of the ministry’s Research Promotion Bureau.

Contracts in Japan are simple documents, he says, and are often modified verbally to suit changing or unforeseen circumstances. In contrast, U.S. contracts are detailed and are interpreted strictly. “America is a contractual society,” he says. “In Japan, what’s important is to maintain harmonious relations between parties.” That difference, he adds, might not be clear to a freshly arrived Japanese postdoc who’s asked to sign a complex agreement that “is probably baffling to a nonnative speaker of English.”

U.S. universities probably don’t do enough to help foreign postdocs understand the complex issues of intellectual property, conflict of interest, data management, and authorship, agrees Penny Rosser, who directs the international office at the

Massachusetts Institute of Technology in Cambridge. Postdocs are “bombarded with documents” upon their arrival and might not know where to turn, she says. That’s also the case at Stanford, says Leland Mad-

den, assistant director of the international center at Stanford University in Menlo Park, California. “I assume most [foreign postdocs] sign these documents without giving them a lot of scrutiny,” he says.

Some U.S. universities are trying to do more, taking steps that will also benefit domestic postdocs. Last year, for example, the University of North Carolina, Chapel Hill, created an office of postdoc services, with legal counsel available to discuss intellectual property issues. “We’re responding to a need to provide better advice,” says Sharon Milgram, a cell biologist and faculty adviser to the new office. “Until a postdoc is faced with an issue involving intellectual property or conflict of interest, they don’t treat it as that important,” she says. “And that’s true for faculty, too.”

—DENNIS NORMILE AND ANDREW LAWLER

HOW NOT TO GET ARRESTED

- Learn the rules for handling research results and materials
- Make sure you understand what you’re signing
- Abide by domestic laws