

## PROSPECTS

# Japan's postdocs open to alternative work

The government and universities must highlight non-academic careers and nurture a diverse skill set, say Toshiyuki Misu and Akira Horoiwa.

Postdocs in Japan have had a tough time finding permanent positions, either in academia or in the private sector. In a 2005 survey by the National Institute of Science and Technology Policy (NISTEP) to identify postdocs' career intentions, we investigated people's awareness of and desire for non-traditional science jobs (NISTEP Report 161). We asked about 10% of the postdocs in Japan to participate, 66% of whom responded.

Why get a postdoc job? Of the 1,035 people who responded, 73% chose their present positions because they wanted to either continue research or become a researcher. More than one-tenth did so because they could not find other employment. As expected, about three-quarters of the participants

"strongly wanted" to become academic researchers. However, more than half had a positive opinion about working in industry as researchers or engineers. In a survey conducted 4 years ago (NISTEP Report 86), only one-quarter of the respondents said they would consider jobs in the private sector, suggesting that postdocs' perceptions of industry jobs have changed substantially.

To assess career needs, we asked the participants about what sort of work they would like to do at the same time as their main postdoc project. More than one-quarter said "teaching work", and around one-fifth cited "research and development work in a private company" and "research activities different from the current research topic". Relatively few postdocs (13%)

did not "particularly desire" activities other than their current research.

We also investigated how many couples had difficulties in finding positions that fitted in with the circumstances of their partner's job. Of the married women, 44% said that they would apply only for jobs that worked well with their partner's job. Comparatively, 11% of married men said they would limit their applications in this way. More than one-quarter of the women said they had been forced to "live separately from their spouse". Clearly, family considerations play a big part in job-seeking activities, especially for women postdocs.

Our survey revealed a group of postdocs who are open to new and alternative paths as a way to

develop their skill set and career. The government has been some help in this respect. In 2006, its Ministry of Education, Culture, Sports, Science and Technology started the Project for Promoting Diversification of the Career Paths of Human Resources in Science and Technology. Twelve institutions and organizations received money to help postdocs and doctoral students to diversify their career options.

Clearly, Japanese postdocs are coming to realize that an open mind and a diverse set of skills are key. We should continue to monitor postdocs' sentiments — and their future plans. ■

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## NEWS

## Biotech job projections bleak

Three months after the global biotechnology market announced its first profitable year, the market has taken a "pounding", according to a venture-capital expert. The resultant restructuring of biotechnology companies means that jobs in the industry will remain scarce well into 2010 — even at firms that have successful products on the market and a promising pipeline.

Steven Burrill, chief executive of Burrill & Company, a venture-capital firm and merchant bank based in San Francisco, California, says that despite a profitable year last year, the biotech industry has a bleak job outlook for the next 18 months. "The driver of jobs in the industry has less to do with profitability and more to do with the capital markets, which are extraordinarily messy," he says. Biotech companies are struggling to raise enough money to operate. Borrowing is also difficult, owing to the credit crunch that precipitated the stock-market fall, he says.

"Even if you have a fabulous product pipeline, it's no good if you don't have the money to develop it," says Peter Winter, the company's director of communications. Companies

that have a steadily dropping value have no money to pay for new research or to hire employees, Winter explains.

A report published by Burrill in March, called *Biotech 2009: Life Sciences — Navigating the Sea Change*, found that at the end of 2008 there were 356 public biotech companies in the United States, and 44 had a market capitalization (the value of a company based on its shares) of more than US\$1 billion. But by the start of this month, there were only 344 public biotechs. And last year was one of the worst ever for biotech initial public offerings, with only one biotech offering its stock to the public for the first time, for \$6 million. Even in a down year, about ten companies usually enter the market, and each is typically valued at \$20 million. And 120 publicly traded companies were operating with less than six months of cash — almost twice as many as in 2007. As a



**Steven Burrill: capital markets are currently messy.**

result, 90 biotech companies are now restructuring — pursuing mergers and layoffs, says Winter. "Companies are down-sizing, just to extend the limited cash that they have," he says. "It's not a good time to be looking for a job."

There could still be jobs, however, just not with conventional companies. Small new firms are increasingly going 'virtual' — retaining only a few management staff and outsourcing their other functions to consultants, external managers and clinical-

research organizations. People working in these roles will be able to pick up some of the lost opportunities from within biotech companies. "If you're not going to do it in-house, someone else has to do it," Winter says. The Biotech Industry Organization and the Pharmaceutical Research and Manufacturers of America, both in Washington DC, declined to comment on the Burrill reports and their employment implications. ■

**Paul Smaglik**