"It's a revolution for Japanese science," says Shosaku Murayama, CEO of Kyoto-based iPS Academia Japan, a company tasked with commercializing Yamanaka's iPS cell technology. "The supplementary budget items will be short term, but from the perspective of industrialization, the effect will be huge," he adds.

Others, even those within the regenerative medicine camp, are less sure. The University of Tokyo's Hiromitsu Nakauchi says he will be happy to see more money in the underfunded Japanese venture capital market, but the focus on iPS "is not healthy for Japan." He says it has become a political talking point but that the focus is diverting funds that could support "the hunt for the next big thing."

Hardy Kagimoto, CEO of the Retina Institute Japan, a RIKEN venture company aiming to put iPS cell–derived retinal sheets into patients in clinical trials, says the investment is "a big gamble." "Japan lacks the managers needed to develop these biotech ventures," says Kagimoto. He adds that the ministries lack staff versed in the application of science, so "they'll just end up doing research for research's sake."

Masafumi Matsuo, of Kobe Gakuin University, whose Duchenne muscular dystrophy treatment is being commercialized by the Orphan Disease Treatment Institute, worries that the budget will fund just a narrow slice of the biotech pie occupied by big projects run by an "insider's circle." Matsuo is concerned that "they don't understand the need for small-scale research, and that hasn't changed with this budget," adding "instead of giving five billion yen to one project, they should give a hundred million yen to 50."

Akifumi Matsuyama, director of the department of somatic stem cell therapy and health policy at the Institute of Biomedical Research and Innovation in Kobe, is more circumspect. Matsuyama says that improvements to the supercomputer K and Spring 8, part of the supplementary budget, should help improve the efficiency of drug discovery. But he says Japanese science has become too focused, with clear "winner and loser" groups evident over the past 25 years. "We've lost our diversity," he says. He is especially concerned how policies, like the Y120 ($1.25)-billion technology transfer initiative, have supported major universities at the expense of local ones. "It's sad what has become of the local universities," he says. "Technology seeds from major universities have been exhausted. We can't hope to see many seeds for the next generation," he says. These government policies are "the beginning of the end for Japanese science and technology."

Yamanaka says he's "thrilled" about the support and is more positive. "To take full advantage of this investment, we will [collaborate] closely with researchers in Japan and abroad to give [stem cell therapies] a vigorous push" into the clinic.

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Around the world in a month