

# Embracing new collaboration to accelerate product development

Takeda aims to create a vibrant, 'open innovation' ecosystem in Japan. Shonan will become the place where diverse researchers and projects translate Japan-born, **CUTTING-EDGE SCIENCE INTO INNOVATIVE HEALTH SOLUTIONS**, for the benefit of patients locally and across the globe.

In a 400-metre-long building, about an hour south of Tokyo, a revolution is taking place that may not only improve and save people's lives; it has the potential to alter the very fabric of Japanese corporate culture.

The revolution centres on what is now known as Shonan Health Innovation Park in Fujisawa City. Here, the owner Takeda Pharmaceuticals is opening its state-of-the-art facility to external researchers. This move is intended to fast-track scientific discovery by nurturing an entrepreneurial culture and supporting startup and venture capital companies.

Toshio Fujimoto, the general manager of Shonan Health Innovation Park, says the decision is a response to the rapid pace of scientific discovery. "Science is progressing in some areas almost exponentially," Fujimoto points out. "And the reality is that in-house research is no longer keeping up with progress in areas such as stem cell therapy, bioinformatics and gene therapy."

He cites examples from the United States and Europe, where increasingly venture and startup companies

commercialize research that they then pass on to pharmaceutical companies.

"We have to adapt to this external reality," Fujimoto says. "In the past the pharmaceutical industry emphasized in-house research with a great amount of secrecy — but times have changed. Today, we're embracing an externalization strategy that puts emphasis on partnerships with the best in the field."

It is a bold step with no guarantees, as Fujimoto admits:

## CREATING AN ENTREPRENEURIAL CULTURE REQUIRES A CHANGE IN MINDSET TO PUSH BOUNDARIES

"But we believe this is the right path and we're deeply committed."

Just how 'different' Takeda's approach is within Japanese culture cannot be overstated. Seigo Izumo, head of Scientific Affairs Japan, global head of Takeda's Regenerative Medicine Unit, and a former Harvard academic who spent many years working in the United States, points to the American approach as a comparison.

"The culture in the United States is that if you create a

startup and you fail, it isn't a problem. The fact you try and fail has value," Izumo says. "In Japan, once you fail you have a strong sense of shame as an individual and that is attached to you as well by society. That leads to risk-averse behaviour. This tendency for risk aversion is also prevalent even among venture fund managers in Japan."

This cultural difference, Izumo believes, underpins the large gap in the numbers of startup companies between

Japan and the United States.

Creating a culture where risk is embraced requires a change in mindset to push boundaries. Takeda is working with staff to help them embrace this transformation through training and leadership workshops, as well as mentoring them during the process of creating their own companies.

"It is very exciting, and at times it can be hard for those who are averse to change, but I think it is a model that really enriches people's lives through

being exposed to different environments and people," he says. "These are real opportunities for staff to get out of their comfort zone and push their boundaries."

The new approach has grown organically since Takeda's partnership with 2012 Nobel laureate Shinya Yamanaka.

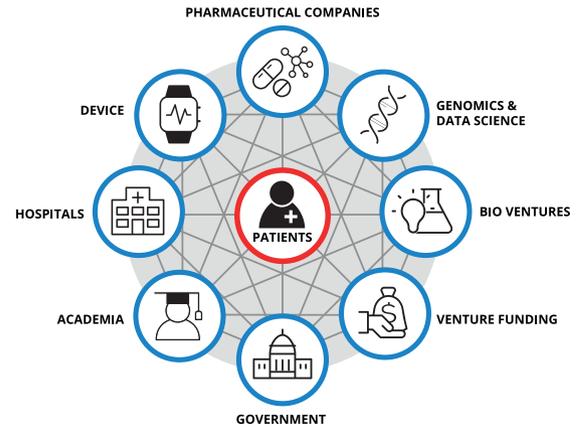
Yamanaka's discovery in 2007 that mature human cells could be reprogrammed into immature cells, with the ability to develop into all types of cells in the body, has led to new research into induced pluripotent stem (iPS) cells.

"Professor Yamanaka wanted to see the fruits of his research come to clinical fruition," Izumo recalls. In December 2015, Takeda and Kyoto University's Center for iPS Cell Research and Application (CiRA), led by Yamanaka, launched a 10-year collaboration, known as T-CiRA.

With 10 projects and over 100 staff, T-CiRA aims to develop innovative therapies for use in areas such as cancer, heart failure, type 1 diabetes mellitus, neurodegenerative disorders, gastrointestinal



The park offers access to state-of-the-art research facilities.



Industry, government, and academia will come together to incubate and accelerate the translation of cutting-edge science into impactful health solutions for patients in Japan and around the world.



Abundant shared spaces provide greater opportunities to network, foster collaboration, and support work-life balance.

diseases and intractable muscle diseases.

Izumo says a hallmark of the programme is that academic researchers from Kyoto and Yokohama City universities and RIKEN research institute spend part of their time working at Shonan Health Innovation Park, alongside Takeda researchers.

All participants — the universities, academic researchers and Takeda — have seen the benefits of the co-location.

“Because everything is here — the infrastructure and committed staff — progress is faster,” Izumo says. “In a

university laboratory there are a lot of ideas, but academics also have other missions and their research facility isn’t set up for product development.”

The success of T-CiRA was the confidence boost Takeda management needed to broaden their approach. Takeda has now created a number of companies within Shonan Health Innovation Park, including Axcelead Drug Discovery Partners, SCOHIA PHARMA, Cardurion, SEEDSUPPLY, ChromaJean, and Chordia Therapeutics.

Noile-Immune Biotech, a spin-off from Yamaguchi

University and the National Cancer Center, has committed to moving its research to the Park. And K-Pharma, an offshoot of Keio University focusing on central nervous system disease, also plans to locate its laboratory in the Park. As well, Izumo is negotiating potential links between the Park and foreign research institutions.

“I would like to see the innovation park become a very unique research ecosystem that is Japan-based, but has an international outlook that’s recognized and appreciated by the global research community.”

For Fujimoto and Izumo, global recognition and an influx of new tenants will validate the innovation park concept. This will be an indicator that Takeda has taken the right step. But, as a surgeon and a physician, respectively, their main criteria for success will be “how we can bring innovative treatments to patients faster, and ultimately whether these treatments will help patients.” ■



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