



Open innovation: The way forward

At the tenth Nature Café in Tokyo, panelists discussed how new models of open innovation have a place in effective public-private partnerships

In today's competitive environment, universities, industry and governments are increasingly turning towards Open Innovation, a means of tapping into a wider, extramural pool of knowledge and expertise, as a way of accelerating research and development. Open Innovation has become a hot issue worldwide as traditionally inward-looking organizations refocus efforts to explore outside opportunities to meet the challenges of today's research landscape.

The tenth Nature Café forum held on 27 June 2012 at the British Embassy in Tokyo gathered distinguished guest speakers from academia, industry and government to engage in a lively exchange of ideas relating to Open Innovation networks in Japan and beyond.

Building on diversity

Moderating the discussion was Gaspar Taroncher-Oldenburg, managing editor of SciBX: Science-Business eXchange and associate publisher in charge of the nature.com open innovation pavilion, who opened proceedings by inviting participants to consider Open Innovation in the context of the health and biopharmaceutical sciences. He set the scene by posing three questions — What is Open Innovation, Why at this crossroads, and How can individuals and organizations get involved in the movement.

The first speaker, Paul Chapman, general manager of the Pharmaceutical Research Division at Takeda, shared his experiences gained from working in both academia and private industry. "The key is to bring diverse talent and diverse thinking to the very difficult problem of how to turn scientific knowledge into medical treatments," he said. "Within Takeda, we're doing that partly through partnerships with other organizations and partly through building a global organization internally, and building a culture of openness and innovation within every one of our research sites."

Chapman explained how Takeda's state-of-the-art Shonan Research Center, built in 2011, was designed as a global research hub to facilitate innovation and develop internal entrepreneurship, not only amongst Takeda researchers from its different hubs in California, Singapore, and Cambridge, UK, but also with external research institutes, universities, and new venture companies.

Widening the scope

The move towards open innovation is not limited to the organization-, sector- or country-level. In recent years, 'crowdsourcing'

approaches have also been gaining momentum. Garima Kaul, group manager (Operations, Healthcare and Insurance) at WNS Global Pvt. Ltd. described how online network resources can be harnessed by organizations to tap into external knowledge and walked the audience through the process of getting involved in challenge-driven Open Innovation.

Kaul offered her perspective on problem-solving as part of a diverse, borderless, online community by relating her experiences working on pharmaceutical business research challenges while living in Japan. "I do not need a laboratory structure or a huge research centre. I just need a laptop and my mind," said Kaul while describing how she got involved and attained success through the nature.com open innovation pavilion, a collaboration between NPG and InnoCentive, the leading provider of challenge-driven Open Innovation solutions. Taroncher-Oldenburg noted that the average success rate of challenges in the life sciences currently hovers around 70%.

Focusing on the Japanese experience, Shu Narumiya, professor at the Department of Pharmacology at Kyoto University, provided insights into how strategic industry-academia alliances operating in an open innovation environment such as the Astellas Pharma-Kyoto University (AK) Fusion Laboratory project, which is now running in its fifth year, create value. In particular, Narumiya described how IP management has become an indispensable part of Open Innovation relationships, commenting, "Intellectual property management is a big issue for academia-industry alliances. The AK project has its own IP office in the Fusion Lab, where three IP managers handle all IP matters such as patent applications, publications and contracts on-site."

According to Tsuneaki Sakata, head of the Innovation Design Office at Shionogi and Co. Ltd., for pharma, Open Innovation strategies are a vital part of drug development in Japan. Sakata argued that to aim for world-class innovative basic research, personnel exchanges are important both at the research stage and the development stage across academia, government and industry. "There is only one goal," he asserted. "To utilize highly educated people and promote the exchange of innovative ideas between companies and research institutions." In order to realize this goal, he emphasized the importance of human resources to "find people who can act as a bridge and who have a discerning eye for technology", as well

as "having the vision and imagination to nurture future generations of innovators".

Forging alliances across all sectors

For an ensuing panel discussion, the four speakers were joined by Yasuhiro Itakura, director of the Life Sciences division at Japan's Ministry of Education, Culture, Sports, Science and Technology (MEXT), Kiyoshi Kurokawa, Chair of the Health and Global Policy Institute, and Hiroaki Kitano, president, The Systems Biology Institute, Tokyo.

Itakura stressed the importance of investing in human resources to drive open innovation in Japan. "In the coming years, the challenge for academia is to be a key player in responding to the needs of innovation," he commented. "Human resource development is an area we are focusing on promoting."

Questions from the audience ranged from examining the regulatory obstacles to open innovation in areas such as regenerative medicine and molecular diagnostics, to the value placed on safety by society. Itakura responded that MEXT is working to streamline regulations and further develop its five-year innovation strategy.

Other topics of discussion included the parallels between open innovation in the biopharmaceutical sciences and open source models in the IT industry. Kitano noted that although the underlying culture of sharing may be comparable, the timescales for development, delivery, and the amount of core funding involved may differ considerably. "The open source 'hacker' culture of IT doesn't apply directly to pharma, but there are parallels with the pre-competitive environment," he said.

On the fast-changing technological landscape and the concept of increased connectivity, Kurokawa commented, "Open innovation is a change from 'push' to 'pull' – in other words, from the institution to the individual. Japanese institutions have been traditionally made to fit this 'push' model. We will need to be ready for an ever-unpredictable world." ■



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