

# JAPAN BIOINDUSTRY

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LETTERS

JBA

## BioJapan 2007 in Yokohama – "Win-Win" achieved by Open Innovation

### I. Overview

The BioJapan 2007 World Business Forum convened on September 19 for a three-day session at the Pacifico Yokohama convention plaza. His Imperial Highness Prince Hitachi, the honorary chairman, presided over the grand affair, which was first held in 1986 and has become Japan's longest-running international biotechnology convention. This is the fourth BioJapan to be held since it became an annual event.

This year's event was organized by Nikkei BP and the BioJapan 2007 Organizing Committee, which is comprised of seven bioindustry-related organizations: Japan Bioindustry Association (JBA), the Japan Health Sciences Foundation (JHSF), the Society for Techno-innovation of Agriculture, Forestry and Fisheries (STAFF), the Japan Biological Informatics Consortium (JBiC), the Japan Association of Bioindustries Executives (JABEX), the Japan Pharmaceutical Manufacturers Association (JPMA), and the NPO Kinki Bio-industry Development Organization (KBDO). The City of Yokohama and the Kanagawa Prefectural Government also provided comprehensive support.

In addition to the above, assistance was also provided by 64 other organizations (compared to a total of 50 organizations in 2006), including the Diet Members' Promotion Alliance for Life Sciences, the Prime Minister's Cabinet Office, the Ministry of Foreign Affairs (MOFA), the Ministry of Education, Culture, Sports, Science and Technology (MEXT), the Ministry of Health, Labour and Welfare (MHLW), the Ministry of Agriculture, Forestry and

Fisheries (MAFF), the Ministry of Economy, Trade and Industry (METI), the Ministry of the Environment (MOE), the Japan External Trade Organization (JETRO), the New Energy and Industrial Technology Development Organization (NEDO), and a number of embassies and other organizations.

As a result of the efforts of all the organizations listed above, BioJapan 2007 was a great success and was attended by numerous representatives of corporations, government organizations, universities, industrial clusters, and other entities from Japan and 18 other nations and regions around the world; last year's event attracted representatives from 15 nations and regions. A total of 403 exhibitors participated this year (a 10% increase over the previous year) and the number of visitors totaled 16,330.

### II. Opening Ceremony

The first day's opening ceremony was convened at 9:30 a.m. by JBA Chairman Dr. Hiroshi Harada, who spoke on the special theme of the event – "Open Innovation" – a concept that is based on 1) the active introduction of third-party "seeds" and technology and 2) the public disclosure and capitalization of technology that cannot be independently delivered to the market by the company that originally developed it. According to Dr. Harada, open innovation contributes to the creation of significant social value because it involves not only the original technology developers but also other entities that cooperate to make the technology commercially available.

### TOPICS

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Dr. Harada was followed by Ms. Kanae Yamamoto, Parliamentary Secretary for Economy, Trade and Industry, who made these confident statements concerning the future:

“During the past year, a high level of innovative activity was observed in the field of medicine. In January of this year, public- and private-sector representatives engaged in discussions related to biotechnology in the medical field. As a result of those talks, three ministries worked together to develop a ‘Five-year Strategy for the Creation of Innovative Pharmaceuticals and Medical Devices,’ which includes measures for the rapid commercialization of biotechnology research results.”

The next person to take the podium was Mr. Koji Omi, Chairman of the Diet Members’ Promotion Alliance for Life Sciences. His remarks are as follows:

“Based on the 2006 Life Science Summit’s resolution to reform clinical trial frameworks, the Diet Members’ Promotion Alliance for Life Sciences established the ‘Special Committee on Clinical Trial Reforms,’ which subsequently engaged in vigorous discussions on the subject. At the same time, the Council for Science and Technology Policy (CSTP), JABEX, and the Japan Science and Technology Agency (JST) also completed work on reform proposals. Consequently, government-related organizations are making concrete efforts toward reforms. In particular, it should be pointed out that the Pharmaceuticals and Medical Devices Agency (PMDA) doubled the number of its auditors as a result.”

The final opening speech was delivered by Mayor of Yokohama Hiroshi Nakada. The message of the host city mayor expressed his future expectations of bioindustries.

“It is my wish that Yokohama-based RIKEN, biotechnology company research institutes, and Yokohama City University and other science and technology universities utilize their own ‘seeds’ to create new industries and, as a result, revitalize the economy and create new jobs. I would also like to see these organizations develop systems for managing everything from cutting-edge medical treatment to disease prevention in order to ensure a safe and healthy living environment for the city’s residents.”

### III. Keynote Speeches

The opening ceremony was followed by keynote speeches given by Alnylam Pharmaceutical, Inc. president and CEO Dr. John Maraganore, Novozymes A/S president and CEO Dr. Steen Riisgaard, and special advisor to the Cabinet and National Graduate Institute for Policy Studies professor Dr. Kiyoshi Kurokawa.

Maraganore’s company, Alnylam Pharmaceutical, Inc., was established in Boston, Massachusetts, in 2002 as a biopharmaceutical company that specializes in the development of RNAi therapeutics. He spoke about the company’s history of rapid growth, which he attributed to its partnerships with

numerous pharmaceutical companies. According to Maraganore, based on past case studies, the development of biotechnological products requires US \$1-2 billion and 10 to 20 years. He also stated that vertical integration – from production to clinical development to market delivery – is necessary for a biotech business to succeed. He also highlighted the following three requirements for (the success of biotech business built on the advanced technology: 1) highly-skilled human resources, 2) the aggressive publishing of research results for the purpose of feedback and disclosure, and 3) a system for protecting intellectual property. (Presiding: JPMA president Dr. Hatsuo Aoki)

At the beginning of Dr. Riisgaard’s speech, the Novozymes A/S president and CEO provided an overview of the basics of biofuels and bioethanol. He explained that first-generation bioethanol is made from sugars and starches, while second-generation bioethanol is made from cellulose, waste materials, and other materials. Dr. Riisgaard said he fully expects enzymes required for the eventual commercialization of second-generation bioethanol to be developed within the next three to four years. In the United States, solid economic support from the government made possible in 2007 a 35% increase in bioethanol production over the previous year. Moreover, numerous bioethanol plants are currently under construction; as a result of their completion, production capacity in 2008 is expected to increase 200% over the previous year. Dr. Riisgaard stated that bioethanol achieves a budget surplus if the price of crude oil was around US\$60 per barrel, and that a need exists for the construction of bio-refineries that can enzymatically produce plastics, textiles, and chemical building blocks (lactic acid, fumaric acid, maleic acid, glycerol, etc.) from various carbon sources. He finished his speech by stating that Novozymes will contribute to the creation of a “bio-based society.” (Presiding: JBA President Dr. Ichiro Kitasato)

Special cabinet advisor Dr. Kiyoshi Kurokawa in his speech specified four problems that people must solve in the 21st century: 1) the increasing world population (expected to reach 9 billion by 2050), 2) the destruction of the environment, 3) North-South disparities (poverty and the resulting violence), and 4) the security of the human race. Dr. Kurokawa next introduced an article in Science entitled “Innovation Mantra” that described how the term “innovation” had become such a commonly-used term on an international scale, and warned that innovation should not be considered as a cure-all. According to Dr. Kurokawa, the focus should be shifted from supply-side innovation to demand-side innovation. In other words, simply creating good products is not enough; innovation should instead be driven by market needs. (Presiding: JBIC chairman Dr. Tadashi Hirata)

### IV. Seminars

BioJapan 2007 featured a total of 58 seminars – an increase

of 10 sessions over BioJapan 2005, which was also held in Yokohama. Twenty-six of the 58 seminars were conducted by BioJapan organizers, while the other 32 seminars/luncheon seminars were conducted by sponsors including corporations, domestic and foreign public agencies, and other organizations. Adding to the international flavor of the event were speeches given by approximately 60 representatives from the U.S., Canada, China, France, Australia, the United Kingdom, Germany, Taiwan, and other nations. A total of 5,527 people attended these seminars during the three-day event.

Seminars conducted by BioJapan organizers addressed a broad range of recent bioindustrial trends, from bio-ITC (Information and Communication Technology) synergies and other R&D trends to risk communication and other social-response matters. Additionally, a special "Pharma Summit" was conducted by leading pharmaceutical companies and the Health Policy Bureau of the Ministry of Health, Labour and Welfare; the session was characterized by vigorous debate concerning the international competitive strength of Japan's pharmaceutical industry. Regular sessions boosted the popularity of such topics as "partnerships between pharmaceutical and biotechnology companies," "RNAi," "regenerative medicine," "antibody drugs," "bio-functional foods," "biofuels," and "nanotechnology-based DDS."

Other seminars and luncheon seminars were conducted according to plans developed by overseas bio-clusters, pharmaceutical companies, NEDO, RIKEN, and other organizations. One of the most notable seminars was conducted by the Organization for Economic Cooperation and Development (OECD); this seminar introduced the OECD's innovation strategy for bioindustries. The fact that it is extremely rare for the OECD to conduct a seminar in a third-party event is a testament to the significance of the BioJapan event. Furthermore, the French Embassy conducted a special biotechnology seminar that lasted a full day.

## V. Exhibitions

This year's exhibitions were held in the Pacifico Yokohama convention plaza's B Hall. There were a total of 299 exhibit booths that featured exhibits from 19 nations and regions, including Japan. Of these, foreign exhibits accounted for 105 booths. The number of joint booths increased over the previous year; in particular, the number of foreign-sponsored booths increased significantly. The "workshop theater" that was so popular last year was held in one corner of the exhibition hall this year; attendees were treated to presentations given by representatives from domestic clusters and overseas organizations.

The signing ceremony of memorandum of understanding between the Kurume Research Park and the Shenyang Green Valley Bio-tech Industry Company, in addition to advanced biotechnology presentations by representatives from Russia and CIS nations, and presentations by Ping Tung Agriculture

Biotechnology Park and other organizations received particularly high marks. Additionally, presentations given by representatives from domestic bioclusters and corporations and research institutes in Hokkaido, Kobe, Shiga, Toyama, and other regions also received high marks from attendees. Finally, organizer-sponsored seminars on the topical subjects of intelligent image information and proteomes were also very well attended.

While booths sponsored by domestic clusters and overseas organizations stood out particularly, the number of booths sponsored by major domestic corporations was lower than in previous years. BioJapan organizers hope to make the event even more successful next year by securing more exhibits by major domestic corporations. Attendees have also mentioned that, with each year, participants and exhibitors have become more familiar with each other and as a result this creates more business opportunities.

As was the case last year, this year's JBA booth was also created jointly with JABEX. The purpose of this BioJapan organizers' booth was to serve as a PR channel for JBA's activities. The booth was particularly popular because it featured JBA's "Bioscience & Industry (B&I)" publication, JBA translation of OECD guidelines for licensing of genetic inventions, and other materials related to Cartagena Protocol on Biosafety (liability and redress), green biotechnology, and other topics.

Next to the JBA organizer booth was the non-profit Council for Protection of Individual Genetic Information booth, which was also created jointly with JBA. This booth offered pamphlets related to individual genetic information protection guidelines, genetic information booklets published by JBA, and other materials. The objective of this booth was to educate attendees about the two organizations' efforts concerning individual genetic information handling and guideline normalization/education.

Immediately after the first day's opening ceremony, Ms. Kanae Yamamoto, Parliamentary Secretary for Economy, Trade and Industry, toured the exhibitions. At the conclusion of her visit, Ms. Yamamoto stated that more emphasis should be placed on the importance of biotechnology in the fields of medicine, foods, and the environment.

Organizers agreed that greater efforts should be made next year to lure more major corporate and foreign exhibitors to ensure that the event remains both dynamic and relevant.

## VI. Business Partnering

The "business partnering" feature of BioJapan enables companies to forge partnerships with other companies by conducting public presentations or by meeting with them one-on-one. This year's participants were able to advertise their competencies and set up appointments with prospective partners online. Major upgrades were made to the system this year that made it easier to use and enabled thousands of

companies to share information and communicate for the first time with unfamiliar companies. The convention hall's business partnering area was busy throughout the duration of the event as a result of companies' ability to make advance meeting arrangements online.

Similar to last year, the JETRO BIOLINK FORUM, organized by JETRO and the BioJapan 2007 Organizing Committee, took place at the same time and venue. Consequently, there was a significant amount of activity generated by people attending business partnering meetings at both events. As a testament to the effectiveness of BioJapan as a forum for facilitating B-to-B opportunities, the exhibition hall's business partnering spaces were constantly occupied throughout the duration of the event. Event organizers also planned seminars designed to educate participants on how to effectively approach business partnership meetings; these seminars were enthusiastically attended by persons in charge from a number of companies.

Although BioJapan has served as a forum for business partnering in the field of biotechnology, the number of participants still pales in comparison to similar events held in other nations. The special theme of this year's event – "Open Innovation" – is based specifically on B-to-B opportunities. Next year's event will take aggressive measures to facilitate multidimensional business alliances and other partnerships.

## VII. Welcome Reception

A Welcome Reception was held at the Pan Pacific Yokohama Bay Hotel Tokyu's Queen's Grand Ballroom on the first day of the event at 6:00 p.m. It was a huge event attended by more than 400 representatives from domestic and overseas corporations, research institutes, local and national government agencies, public organizations, and biotechnology clusters. In contrast to the previous year, this year's reception began with opening comments by an emcee after which guests, keynote speakers, representatives from overseas bio-related organizations (BIO, Swiss Biotech Association, Bioindustry Association of Korea, Shanghai Biopharmaceuticals Industry Association, OECD) and BioJapan 2007 Organizing Committee members broke open a ceremonial sake barrel. Next, Mr. Katsuhiko Utada, the Chairman of Japan Association of Bioindustries Executives, led a ceremonial toast. After congratulatory speeches by Mr.

Kenji Ogiwara (Parliamentary Secretary for Economy, Trade and Industry) and Mayor of Yokohama Mr. Hiroshi Nakada, attendees engaged in conversation until after 7:30 p.m.

## VIII. Conclusion

For the second time in three years, BioJapan was held in Yokohama and concluded successfully after a three-day period. Thanks to the efforts of both the organizers and JETRO's overseas promotion activities, the number of participating nations in this year's BioJapan increased. Moreover, the number of business partnering meetings, and the thousands of companies that utilized the business matching system, indicate that BioJapan is increasingly considered as a forum for business networking in the field of biotechnology.

Still, BioJapan has yet to establish itself as a truly "international" event as many of those involved still rely heavily on the Japanese language to communicate; furthermore, the event cannot claim year-on-year increases in attendance. There is still much room for improvement on the part of the organizers. This may be due to a persistent lack of awareness with respect to "open innovation" based on the aggressive establishment of business alliances. By contrast, Alnylam Pharmaceutical (keynote speaker John Maraganore) has grown to the point where it is able to collect more than JPY 100 billion per licensing contract within a few years after establishment based on its open innovation policies. In view of this, it is evident that BioJapan organizers must take extra measures to enhance the effectiveness of the event as a B-to-B forum and to win the understanding of all parties involved in the field of biotechnology.

The organizers of BioJapan 2007 would like to express their sincere appreciation to all of the exhibitors, attendees, supporting groups, local agencies, event staff, and all others involved for their enthusiastic cooperation and support of this year's event.

BioJapan 2008 is scheduled to take place at the same venue – the Pacifico Yokohama convention plaza – between October 15 and 17. Organizers expect an even larger turnout in 2008.