

JAPAN BIOINDUSTRY

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LETTERS

JBA

Metropolitan Bio-network's Alliance Promotion

1. Background

Since fiscal 2002, as the secretariat of the Bioventure Cultivation Industrial Cluster Project, which is being undertaken as part of the Regional New Business Support and Collaboration Network Project implemented by the Kanto Bureau of the Ministry of Economy, Trade and Industry, the JBA has been conducting a project focused on providing support for bioventures. This project is aimed at deepening collaboration between the many cutting-edge research institutions, universities and companies involved in bioindustry in the broader Kanto region (the Tokyo metropolitan area and 10 prefectures in the Kanto-Koshin'etsu region + Shizuoka Prefecture), creating a forum for the discovery of business opportunities for venture companies in a wide range of biotechnology-related fields, such as drug discovery, bioinformatics, biochemicals and research support, and realizing bioventures that have a high level of international competitiveness.

The priority fields include medicine (drug discovery,

regenerative medicine, medical equipment), bioprocesses (the industrial use of micro-organisms), biotools (equipment, reagents, research materials), information (bioinformatics, related equipment) and services. The Metropolitan Bio-network (known as the Metropolitan Bio-genome Venture Network until August 2007) was created as the organization promoting the implementation of relevant projects and 390 companies are now members.

The main projects implemented by the Metropolitan Bio-network include the holding of bioventure forums (a forum for exchange among representatives of universities, research institutions and companies), biobusiness salons (a mini-lecture on a single theme followed by an interchange event), and workshops (individual workshops for resolving common problems), the dispatch of experts (experts providing advice relating to such matters as patents, law, management and alliances), support for exhibition booths at business fairs, the provision of information via the web, and "alliance promotion" aimed

TOPICS

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at encouraging business-matching.

“Alliance promotion” has been undertaken since fiscal 2003, with the aim of promoting alliances between pharmaceutical companies and bioventures in the field of drug discovery; in fiscal 2007, we held the 5th and 6th Alliance Promotion on December 7, 2007 and March 3, 2008, respectively, at the Shufu-kaikan in Tokyo.

2. Objectives

About 40% of our members are bioventures in the broader Kanto region that are involved in either research and development aimed at drug discovery and development or business relating to drug discovery and development, and form the largest sector among the members of the Metropolitan Bio-network. However, it takes a very long time and a huge amount of research and development funding before new pharmaceutical products are granted manufacturing approval and reach the market, so it is difficult for bioventures to achieve the development of new pharmaceutical products completely independently from start to finish. Accordingly, bioventures can enter into a partnership to implement joint research with pharmaceutical companies when the research and development has progressed to a certain level, or can transfer the outcomes of their research and development to a pharmaceutical company. In this sense, it can be said that bioventures in the field of drug discovery aim to develop their business while always keeping an eye on the degree of progress of a project and the possibility of an alliance with pharmaceutical companies.

Even the world’s leading pharmaceutical giants are increasingly outsourcing work as a matter of necessity, unable to find advantages in exhaustively promoting risky research themes in all advanced realms of science, which have become highly segmented. At many of the world’s foremost pharmaceutical companies, an increasing proportion of products use technology that has been introduced from outside the company, other than products developed by the company, and the role of bioventures in such outsourcing is becoming more and more important.

At Japanese pharmaceutical companies as well, there is a growing number of examples of the introduction of technology from overseas, particularly Europe and the USA, but if we look at the results to date, we can see that the number of examples of introduction from Japanese bioventures is low compared with the number of examples of introduction from foreign bioventures. The members of the Metropolitan Bio-network include quite a few bioventures involved in the field of drug discovery that are achieving excellent results in their research and development activities. However, as the mechanisms for efficiently providing such information to pharmaceutical companies are believed to be inadequate, this plan has been implemented in order to promote collaboration between bioventures and pharmaceutical companies in the field of drug discovery, and to provide an opportunity to accelerate the industrial application of excellent research and development outcomes emanating from such ventures.

3. The 5th Alliance Promotion

On December 7, 2007 from 13:00, the 5th Alliance Promotion was held at the Shufu-kaikan in Koji-machi, Chiyoda-ku, Tokyo, with the aim of promoting collaboration between pharmaceutical companies and bioventures in the fields of drug discovery and drug discovery support that are at the research and development stage prior to pre-clinical trials.

There were two keynote speeches on the day. The first speech was given by Professor Yasuhiko Masuho of the Department of Life Sciences, Faculty of Pharmaceutical Sciences at Tokyo University of Science, entitled “Why Antibody Drugs?”. This speech examined the characteristics of antibody drugs, the history of their research and development, and the prospects for the future, providing many concrete examples of research and development. The second speech was given by Dr. Nobuhisa Asano, Director of the Emerging Industries Research Department at the Daiwa Institute of Research, entitled “Future Prospects for R&D Styles in the Medical

Industry". This speech focused on trends in research and development in the medical industry, including antibody drug research, and the future prospects for this.

The keynote speeches were followed by 12 presentations from bioventures concerning technology seeds and business models. This time, rather than focusing solely on the wider Kanto region, the participation of bioventures from the whole of Japan had been sought, and there were presentations from bioventures from the Hokkaido, Chubu, Kinki, Chugoku, Kyushu and Okinawa regions. The companies that gave presentations were as follows:

Articell Systems Corporation *Gene Network Analysis of Cancer Cells Using P MASK Technology*

Stelic Institute & Co. *The "G Family" Targeted by Antifibrotic Therapy and the NASH Mouse Model*

GeneticLab Co., Ltd. *Super-Nucleic-Acid Technology: Applications in Nucleic-Acid Medicine*

Liposome Engineering Laboratory *The Development of New Proteoliposome Creation Technology and Its Applications in Diagnosis, Treatment and Prevention*

Transparent Inc. *The Development of Multi-well Plate Liver Cell Spheroid Arrays For Drug Discovery Screening*

Magnabeat Inc. *The Application of Thermo-responsive Magnetic Nanoparticles (Therma-Max) in the Field of Diagnostic Drugs*

Pharmaco-Cell Company Ltd. *BBB Kits as Drug Discovery Support Tools*

Nanoegg Research Laboratories, Inc. *Nanocube: The Potential for New Percutaneous Absorption Accelerators*

Beacle, Inc. *The Development of Bionanocapsules for Pinpoint Delivery*

Credia Japan Co., Ltd. *The Introduction of Biomembrane Permeation Introduction Technology (iTS) to the Drug Discovery and Life Science Research Markets*

Advanced Medical Biological Science Institute *We Provide GMP-Compliant Plasmoid DNA in Suitable Lots*

Neosilk Co., Ltd. *The Production of Recombinant Antigens and Useful Proteins Using Transgenic Silkworms*

Furthermore, there were introductions to participants from the pharmaceutical companies taking part, as well as an interchange event and poster presentations. During the poster presentations at the interchange event, those who had given presentations earlier answered questions and exchanged opinions in front of their posters, so participants were able to listen to more detailed explanations about the presentations that had interested them. In addition, bioventures seeking contact with representatives of pharmaceutical companies were able to chat with those representatives during the interchange event, through the mediation of the secretariat, and this facility was very favorable reception.

There were 154 participants in total, including 68 from bioventures, 34 from pharmaceutical companies and 31 from research and development support companies.



4. The 6th Alliance Promotion

With the aim of promoting collaboration between pharmaceutical companies and bioventures in the field of drug discovery that were at the stage of preparing for or implementing pre-clinical trials or clinical trials, the 6th Alliance Promotion was held at the Shufu-kaikan, the same venue as the previous event, during the afternoon of March 3, 2008.

First of all, Dr. Yasuhiro Fujiwara, Director of the Clinical Trial Division at the National Cancer Center Hospital, gave a keynote address entitled “The Current Situation of and Future Prospects for Doctor-led Clinical Trial”, which gave plenty of concrete examples and suggestions regarding the current status of and issues concerning doctor-led clinical trial, as well as the future prospects for this.

Next, 12 bioventures gave the following presentations. The presenting companies were bioventures from the wider Kanto region and the Chubu region.

ImmunoFrontier, Inc. *The Clinical Development of the CHP-NY-ESO-1 Cancer Protein Vaccine*

Institute of Gene and Brain Science *Challenges for Developing Drugs to Treat the Central Nervous System*

Cango corp. *The Radiosensitizer sulfoquinovosyl-diacylglycerol (SQDG)*

J-Pharma Co., Ltd. *Cancer-specific Essential Amino Acid Transporter Inhibitors*

Institute for Protein Science Co., Ltd. *Anaphylatoxin-inhibiting Peptides That Will Save the Lives of Patients With Severe Sepsis*

TMS Co., Ltd. *The Development of Pharmaceuticals With the SMTP Compound That Activates Tissue Proteolysis*

Cell Signals Inc. *The Development of the Basic Cytokine Midkine as a Drug for Treating Myocardial Infarction and Arteriosclerosis Obliterans*

Immunas Pharma, Inc. *New Treatments for Alzheimer's Disease: Antitoxin A β Oligomer Antibodies and GSK3 β Inhibitors*

CellGenTech, Inc. *Treatment Protein Replacement Therapy Using Transgenic Human Preadipocytes*

aRigen Pharmaceuticals, Inc. *The Japan Dream*

OncoTherapy Science Inc. *Epitope Therapy for Tumors*

DNAVEC Research, Inc. *Business Models and Alliances*

After the presentations by bioventures, there were introductions to participants from the pharmaceutical companies taking part, as well as an interchange event and poster presentations. There were 142 participants in total, including 42 from bioventures, 41 from pharmaceutical companies and 25 from research and development support companies.

5. Future Issues

This was the sixth alliance promotion and it is becoming firmly established as an activity of the Metropolitan Bio-network. The number of presenters and participants has increased and the meetings during the interchange event have become more lively. However, we cannot say that the event is truly fulfilling its role if it does not lead to the promotion of collaboration between pharmaceutical companies and bioventures in the drug discovery field. The development of business for drug discovery bioventures, which are a key presence among Japanese bioventures, is a key issue in the growth of Japanese bioventures as a whole, so as it is vital that this alliance promotion initiative functions effectively, we would like to consider plans to make it even more effective in the future.

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