

1. Preface

Yuichi OBATA

Director, BRC (April 2005 ~)

Kazuo MORIWAKI

Director, BRC (April 2001 ~ March 2005)



The Current BRC Director, Dr. Y. Obata



The Founding Director (Special Consultant), Dr. K. Moriwaki

The RIKEN BioResource Center (BRC) was established five years ago, 2001. During these years, under the leadership of Dr. Kazuo Moriwaki, the founding Director (currently, RIKEN Special Consultant), the RIKEN BRC has developed successfully and rapidly to meet to or even beyond expectation. Behind this success, there has been strong and continuous support from scientific community as well as from the Ministry of Education, Culture, Sports, Science and Technology (MEXT) of Japanese government and RIKEN, the founding institution. The RIKEN BRC has been operating under three principles, “Trust”, “Sustainability” and “Leadership”. The RIKEN BRC is committed to become the finest biological resource center in the world and to earn respect and admiration from the scientific community.

Biological experimental materials, often refereed as “Biological resources” or “Bioresources” are essential for development of Life Sciences and biotechnology. In 21st Century, we, human being, are facing serious problems of health, food and environment. To solve these problems, the importance of bioresources is increasing exponentially. Among many bioresources used in life science and biotechnology, the RIKEN BRC has chosen to focus on bioresources by the following criteria: (1) importance for Japanese society and science, (2) originality in bioresources, (3) created or derived by Japanese scientists, (4) presence of critical mass of users, and (5) merits in a large scale and intensive management. Specifically, the RIKEN BRC has collected, preserved and distributed (i) the mouse, the most important experimental animal, (ii) seeds, cell lines and genetic materials of experimental plants with the major emphasis on Arabidopsis, (iii) cultured cell lines of human and animal origin, (iv) genetic materials of human, animal and microorganisms, and (v) microorganisms such as bacteria, fungi and achaea. Information on the characteristic of these bioresources has been also collected and presented as a database. The RIKEN BRC also has very active programs for research and development; development of novel bioresources with leading edge to meet the social and scientific demands and technologies to ensure high quality of the bioresources. Starting 2004, the RIKEN BRC has been giving training courses of advanced technologies for the best use of bioresources.

The last five years can be regarded as first phase of the RIKEN BRC. The first phase was a period that was spent for realization of long time dreams and efforts of scientists in the past and of a national policy to establish a biological resource center in Japan. The RIKEN BRC has been expected to build an essential part of the infrastructure underpinning life sciences and biotechnology. The ultimate goals of the RIKEN BRC have been to contribute to the promotion of life sciences by providing the finest biological resources and becoming an institution comparable to the world renowned biological resource centers such as the Jackson Laboratory, American Type Culture Collection (ATCC) in the U.S. and Deutsche Sammlung von Mikroorganismen und Zellkulturen Gmb (DSMZ) in Germany. To achieve these goals, the RIKEN BRC had to establish the institutional structure and ensure a sustainable financial support. Since no institutes devoting to biological resource existed in Japan before the RIKEN BRC, there were many unexpected obstacles. However, with support and guidance from scientific community, the MEXT and RIKEN together with dedicated efforts by the Promotion Division of RIKEN Tsukuba Institute, the RIKEN BRC has succeeded to establish its solid foundation for its operation. Furthermore numbers of talented staff members with strong determination to contribute to the achievement of the goals of the Center have been recruited.

The National Bio-resource Project was initiated by the MEXT in 2002, on year after the establishment of the Center. Four Divisions were selected as national core facilities of respective bioresources in this project. The fact that the RIKEN BRC was recognized as a national core facility by the Government was truly beneficial for the Center and its employees by defining and establishing the roles and the position at national level.

Communication with scientists and comprehension of their needs are critical for success of the Center. The Center cannot exist if the aims of the Center are different or diverged from interests of the scientific community. Thus, suggestions and advices from the scientists of various fields are most essential and invaluable for the operation of the Center. For this purpose, the BioResource Center Advisory Council (BRAC) consisting of 10 prominent scientists from Japan and overseas has been established. The BRAC meeting is held every 2-3 years. The last meeting was held in April 2004 and the coming up meeting will be in April 2006. Six Resource Committees have been also established and each committees responsible for the respective resource; experimental animal, experimental plant, cell resource, genetic resource, microorganisms, and information. Members of each Resource Committee are not only from academic institutions but also from industries. The meetings of these Committees have been held at least once a year.

In addition to two committees, several specialists are individually appointed as BRC Executive Advisors whose roles are to give advices and suggestions whenever issues are coming up. By these systems involving many external scientists, the BRC has maintained transparency of its policy making and operation.

To earn "Trust" in our bioresources, the Center has been also assisted by three review committees involving external scientists and non-scientists including lawyers, representatives of local residents and municipal office of Tsukuba city. Three committees are Research Ethics Committee, Recombinant DNA Committee and Animal Experiments Committee, responsible for ethical issues regarding bioresources of human origin, safety measures in DNA recombinant experiments and animal welfare, respectively.

Importance of biological resources is well recognized not only by advanced countries in Europe and North America but also by developing countries in Asia, Africa and South America. To preserve biological resources that are regarded as intellectual properties, each country is implementing its own strategic plan.

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**RIKEN President
Dr. R. Noyori**

Noyori Initiative

1. Visibility of RIKEN
2. Maintaining RIKEN's Outstanding History of Achievement in Science and Technology
3. RIKEN that Motivates Researchers
4. RIKEN that is Useful to the World
5. RIKEN that contributes to Culture

A handwritten signature in cursive script, reading "R. Noyori".

In this internationally competitive atmosphere, Japan needs to secure her own biological resources as well as to take the initiative in international collaborative efforts. Japan has the responsibility to help Asian countries to build up their resources and is expected to play a leading role in establishment of Asian network of biological resources. The RIKEN BRC, as the Japanese core center for biological resource, has been engaging active collaborating programs with many institutions in Korea, China, Taiwan, Singapore, Thai, Vietnam and other countries in Asia. With some institutions, the Memorandum of Understanding (MOU) for collaboration has been concluded. Through training programs and staff exchange, we hope to accelerate active and effective collaboration with Asian institutions.

Variety and quantity of biological resources are ever increasing, and it has become impossible for one bioresource center or for one country to deal with. Thus, international collaboration among bioresource centers has become necessary. To establish international co-operation among biological resource centers, much effort has been made. For example, establishment of a Global Biological Resource Center Network (GBRCN) has been discussed in OECD (Organization for Economic Co-operation and Development). Federation of International Mouse Resources (FIMRe) has been also established by collaborative efforts of 17 mouse resource centers locating in 10 countries around the world. The RIKEN BRC has been actively participating in these international collaborations. The director of RIKEN BRC has been chosen as one of four Vice Chairpersons and a board member of FIMRe. For international collaborative efforts on other biological resources and for establishment of global network, the RIKEN BRC is prepared to participate.

The activities of the RIKEN BRC have been frequently reviewed and evaluated from different aspects and at different levels. The MEXT Evaluation Committee for Independent Administrative Institution of RIKEN Section and Council for Science and Technology Policy of the Cabinet Office for evaluation of government-funded research and development, both have evaluated once a year the policies, business plans and over-all achievements of the Center. The evaluation committee of the MEXT NBRP also has evaluated

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the achievements of four Divisions of the Center, namely Experimented Animal, Experimental Plant, Cell Engineering and Gene Engineering Division, which have been selected national core facilities for their respective resources. In almost all these evaluations, the RIKEN BRC and its Divisions have received the highest marks. The aims and activities of the BRC are completely different from those of ordinary researches. For example, it is not duty of the RIKEN BRC to publish flashy papers. Thus, the RIKEN BRC must be evaluated from different view points from those for ordinary researches. The fact that the RIKEN BRC received highest marks in various evaluations indicated that members of committees clearly understood and appreciated the importance of the RIKEN BRC and its activities. The RIKEN BRC would like to pay its respects to the members of evaluation committees and their great insights.

The presence of RIKEN BRC will become significant and meaningful in scientific community, only if the BRC sustains its activity for a certain period of time. To be able to continue our activity, we need to keep receiving high marks from every evaluations. Less than the highest marks can not be adequate or acceptable. All staff of the Center have determined to do their best to be successful in evaluations so that the Center can continue its operation for a long period like the Jackson Laboratory for 75 years and ATCC for 80 years.

RIKEN, the founding institution of the RIKEN BRC has been operated under the leadership of Dr. Ryoji Noyori, the president, since 2003. Dr. Noyori has been managing the whole RIKEN, 5 institutes, 8 centers and 3,000 employees by setting the goals and direction with “Noyori Initiatives” consisting 5 principles. Dr. Noyori also defined 4 major missions of RIKEN. Once of them is to develop and build – and make readily available – a strong and high-quality research infrastructure that can be of service to other research institutions and scientists around the world. This mission is something that can not be done by other academic sector. This is the exact mission of RIKEN BRC. To fulfill this mission, the RIKEN BRC and its employees shall make every effort with devoted support by RIKEN Tsukuba Institute under the guidance of its Director, Sin Ohkouchi.

Based on the accomplishments of first five years, the first phase, it is time for the RIKNE BRC to make



**Tsukuba Institute Director,
Mr. S. Ohkouchi**

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a road map for sustainable operation for next 10 and 20 years from now. The road map must be drawn for the next phase of the Center, and must proclaim the roles of the BRC in life science and ultimately in sustainable development of mankind. The three principles of the RIKEN BRC, “Trust”, “Sustainability” and “Leadership” must be maintained. With these principles, the plan must be strategic for rapidly developing and changing world and scientific environments by comprehending and predicting what society at large will need, how research in general will be progressing, and what resources will be produced and required. The policy on variety, quantity and quality of biological resources, researches and development, financial support, administrative structure, training and education, international relations and other aspects of the Center must be formed and implemented with advices and suggestions from the scientific community. On the occasion of publishing this annual report of the RIKEN BRC, we, all the employees of the Center reconfirm our determination to build the finest biological resource center in the world. The understanding and support from all concerned parties are most appreciated.

