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## Bioresource Information Division

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#### Summary

#### 1. Achievements during the last three years (FY 2006 to FY 2008)—banking, research and development, international collaboration, public relations, training and education, and others

##### ● Evaluation

Achievements generally exceed expectations.

##### Specific Comments:

- The databases contain a variety of data and are essential tools for disseminating bioresources.
  - The user-friendliness (improvement in the ordering system by development of the order support system, the online order form preparation system, etc.) of the databases is particularly noteworthy.
  - Particular emphasis has been placed on developing web catalogues for new bioresources, advertising its activities to the public, international exchange and human resources development.
  - The achievements have been made despite its limited staff.
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- **Advice and suggestions**
    - The development of SABRE and the pathway display and other efforts to improve the usefulness are highly appreciated. Further improvement is expected.
    - Daily updating of information on bioresources should be considered.
    - The management of the operating manual should be improved.
    - What has been included in the databases should be increased more and more. The system should be re-designed to facilitate maintenance and management.
    - It is important to provide a petabyte hard disk to store data.
    - RIKEN BRC should develop more proposals to encourage universities and other institutions to use BRC more often.

- Without information, bioresources cannot be used. As resources increase, the number of staff engaged in handling information should also be increased.
- SEs and temporary staff who have received on-the-job training could leave RIKEN BRC before contributing to it. It is necessary to take measures to retain trained staff.
- It is not worth training staff who will soon leave companies. Outsourcing of activities should be reconsidered. It would be easier for RIKEN BRC to employ those who have already been trained.
- Students who have attended lectures by the Division Head given at the University of Tsukuba are now joining RIKEN BRC as a part-time staff. Steady efforts should be made to train young people so that more of them become interested in bioresources.

## **2. Responses to issues raised in the Resource Committee meetings of the past three years (FY 2005 to FY 2007)**

### **● Evaluation**

There has been a serious effort to respond to the comments, and BRC's operations have expanded as a result.

#### **Specific Comments:**

- The BRC database activity has been significantly expanded.

### **● Advice and suggestions**

- Further enhancement is expected in developing systems unique to RIKEN BRC, such as SABRE.
- To enhance the brand image of RIKEN BRC, it is necessary to develop a unique utilization of bioresource information.
- Utmost attention should be paid to security issues in order to prevent information leaks.
- Only those who know the database contents can make searches with the existing system. The web catalogue should be improved.
- A new algorithm should be used for the search system.
- Designing of the next system should be discussed (downsizing, use of applications, etc.). A preliminary design should be developed.
- External advice on the system should be sought. If the system is found to have crashed, a different method should be used.
- In order to improve the database itself, refactoring may be outsourced. This would require additional cost but should be discussed, if necessary.
- Employing SEs from external agencies may appear to reduce personnel costs, but actually

does not. We understand that one to two million per month is spent. It should be clearly emphasized that it is cheaper to hire SEs directly than through an agency.

- In maintaining and updating the database, as the volume of information increases, personnel costs rather than hardware costs will increase. This issue should be addressed (increase and improvement in staff).

### **3. Are there any bioresources that are needed urgently within the next two to three years**

#### **● Advice and suggestions**

- The sustainability of database operations is very important. As resources are expected to increase, RIKEN BRC should strive to ensure more stable operation.
- Database distribution and partitioning are imminent issues. Outsourcing of list development should be considered. There are no time and staff to update the database; this is a serious issue that must be addressed by the entire RIKEN BRC.
- Is it possible to use a data center to manage database operation?
- Database system could fail at any time. RIKEN BRC should take action to prevent any failure in facilities, air conditioning and PCs.
- The “Database of the mouse mainly used as a model for human disease” and the human (clinical) image/disease database should be closely linked with each other, although it would not be possible for RIKEN BRC alone to achieve this.
- A wider range of issues, including processing of data generated using a new-type sequencer, should be considered.
- The proposals should be done in the next one year. A two- to three-year medium-term plan should be presented.

### **4. Others**

#### **● Advice and suggestions**

- More researchers should be informed of the usefulness of bioresource information.
- BRC is as competent as other world-class resource institutions. Top priority should be placed on disseminating resource information. More advertising effort may be needed?
- Nothing is more important than information on bioresources. Anything that makes the database unstable should be immediately addressed. RIKEN should recognize the critical situation and allocate staff and budget to the Bioresource Information Division.
- When requesting budget, budget not on a fiscal-year basis but for several years should be taken into consideration.
- Because RIKEN BRC manages data that are needed globally, such as mouse strains, budget acquisition on worldwide scale should be considered.

- Comparisons with overseas centers that have a worldwide influence should be made.
- There are no manuals for advanced or higher level jobs. It is difficult to manualize them. Assignments should be allocated in a balanced manner to avoid placing excessive work on any one person.
- Instead of depending on the original system using PCs, the use of an external source should be considered.
- There are three steps: RIKEN integrated database, MEXT integrated database and integrated database among government agencies. Taking into account the relationships with each of them, these databases should be used effectively so as to develop the achievements of Bioresource Information Division.
- Different approaches should be taken for different stakeholders. Among the three main plans in the second med-term objectives, specific and detailed measures should be taken for “wide dissemination of information to the public = recognition of the importance” and “strong brand image.”