

BioResource now!

Our monthly newsletter features a variety of information, highlighting current domestic and international issues concerning bioresources.

Hot News from Abroad No.27

Korea National Research Resource Center (KNRRC)

Yeonhee Lee, Director-General

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Medical Checkup using Fecal Samples

Ongoing Column No.45

"Remember The Milk," a Task Management Tool



Coming up in the next issue!
The next month's issue will be "Japanese Monkeys."

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Other information on bioresources is available at

NBRP <http://www.nbrp.jp/>
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WGR <http://www.shigen.nig.ac.jp/wgr/>
JGR <http://www.shigen.nig.ac.jp/wgr/jgr/jgrUrlList.jsp>

Announcements (Details are available at <http://www.nbrp.jp/>)

The 5th Symposium of *Lotus japonicus* and *Glycine max*
"Frontiers of Functional Genetic Analysis and Applications for Practical Crops"

Date : December 2 (Wed) 13:00 - December 3(Thu) 12:10, 2009.
Place: Conference Room 202, Kazusa Akademia Hall, Kazusa ARC

NBRP Symposium and Exhibition at the 32nd Annual Meeting of the Molecular Biology Society of Japan

- NBRP Symposium: "Mutant Resources Provided by NBRP"
Date : December 9 (Wed) 11:45 - 13:00, 2009.
Place: 7th Conference Site (Conference Center 3F, Rooms 311•312)
- NBRP Panel Exhibitions with Realia: "Full Array of Bioresources"
Date : December 9 (Wed) 10:00 - December 12(Sat) 16:15, 2009.
Place: Poster and Exhibition Site (Exhibition Hall)

The 3rd Workshop on Rat Resource Research

Date : January 29 (Fri), 13:00-17:00, 2010
Place: International Conference Hall I, Clock Tower Centennial Hall, Kyoto Univ.

Hot News from Abroad No.27

The 1st ANRRC Site

Korea National Research Resource Center (KNRRC)

Yeonhee Lee Director-General



Organization of the KNRRC

Owing to increased public awareness on the potential value of research resources, there has been tremendous demand for a systemic approach toward using research resources. "The National Research Resource Center" project was launched in 1995 with the support of the Ministry of Science and Technology (now Ministry of Education, Science and Technology (MEST)) and the Korea Science and Engineering Foundation (KOSEF) (now the National Research Foundation in Korea (NRF)). The first 5 research resource centers (RRCs) were the Korea Marine Microalgae Culture Center, the Korean Cell Line Bank, the Peptide Library Support Facility, the Culture Collection for Microbiology Education, and the Korea Culture Center of Microorganism (KCCM). In 2009, the number of RRCs increased to 39 (33 resource centers, 5 core centers, and 1 headquarter called the KNRRC) (Fig.1). Under the KNRRC's central management, 33 resource centers were organized into 5 core centers according to the type of resources they handled. The core centers carry out the collection of various microorganisms, human-originated resources, plants, animals, and fusion-matters. Within such core centers, several RRCs function interactively to exchange ideas and know-how on running a resource center.

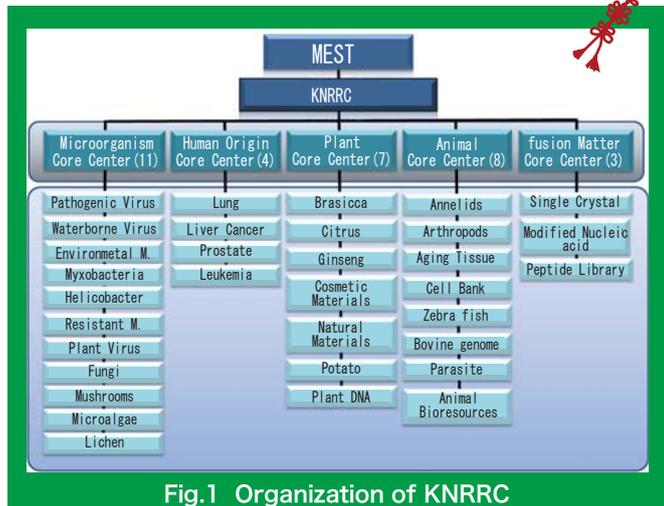


Fig.1 Organization of KNRRC

A majority of RRCs within the KNRRC deal with biological resources, including microorganisms (bacteria, fungi, mushrooms, microalgae, virus, etc.), human-originated resources (normal and cancer tissues, etc.), plant resources (potato, Chinese cabbage, tangerines, etc.), and animal resources (arthropods for medical purpose, annelids, etc.). In addition to these biological resources, some RRCs also have resources related to fusion matters, such as peptide libraries, modified nucleic acids, and single crystal collections. Table 1 contains a list of RRCs and their websites

Please refer to the following website for Tables 1* and 2* (they have not been included here because of space constraints).
http://www.shigen.nig.ac.jp/shigen/news/n_letter/2009/newsletter_v5_n11En.html



Functions of the KNRRC

The main functions of RRCs are the collection and supply of research resources using reliable information. RRCs have been successfully maintaining research resources under proper quality assurance programs, providing services for experiments or technical consultation, and networking among resource centers to facilitate the exchange of resources and related information. RRCs have in store an array of collected resources (10,061,739 individual items to be precise). As shown in Table 2, these collected resources are categorized into 5 major divisions and 48 subgroups. In 2008, 244,252 items were distributed primarily to universities (66.1%), research institutes (19.7%), and industries (9.7%).

The main function of core centers is to support RRCs by establishing a network among them and laying down uniform protocols for resource management.



The main function of the KNRRC is to develop a total management system for RRCs. The Resource Center Record Management System (RCRMS) records data on collection, distribution, services, and publicity activities, etc., from each resource center. The Resource Center Information System (RCIS) is being built as the primary database system and will begin operations in early December 2009.

This system will allow for the searching of the database, and the depositing and ordering of resources, all carried out online. The KNRRC focuses on providing a standardized management system. The Korean guidelines for resource management are being formulated according to international guidelines such as the OECD Best Practice (2007), the Common Access to Biological Resources and Information (CABRI, 1999-2009), and the International Society for Biological and Environmental Repositories (ISBER).

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A Korean version of the Best Practice for repositories by ISBER was published in 2008. It is available on the ISBER website. The KNRRRC develops education programs, hosts seminars, runs websites for the headquarter and RRCs, and regularly publishes newsletters. The KNRRRC is also developing self-assessment tools for the evaluation and maintenance of qualified resources.

In September 2009, the KNRRRC hosted the 1st ANRRRC and Asian Chapter Meeting of ISBER, as the representative of the Asian Chapter of ISBER. Around 250 people from 12 Asian countries participated in this meeting, where they exchanged knowledge and information (picture on the lower left). The Institute of Microbiology, the Chinese Academy of Science-Biological Resource Center (IMCAS-BRC), China; the RIKEN BRC, Japan; and the KNRRRC, Korea, signed MOUs* (picture on the lower right).

The KNRRRC will continue to play the central role for the RRCs and core centers to further develop them into state-of-art resource centers and expand international collaboration. ■



Picture: The 1st ANRRRC and Asian Chapter Meeting of ISBER

MOU*...Memorandum of Understanding, a document describing an agreement among parties such as governmental agencies.



"Original article is written in English."



Erudite Lecture Series by Dr. Benno: No. 11

Medical Checkup using Fecal Samples



Genetic analysis technology has facilitated the identification of previously unknown bacteria, thereby revealing the full spectrum of enteric bacteria. Bacterial species and their numbers can now be identified accurately by systematically classifying patterns of the measured DNA nucleotide sequences. DNA sequencing has revealed that the composition of enteric bacteria differs among individuals, and the enteric bacterial composition of an individual is as unique as the face and fingerprint.

In the future, it will be possible to develop a database comprising the enteric bacterial profiles of all individuals. This will help elucidate the association between enteric bacterial profiles of individuals and their susceptibility to diseases. In other words, DNA sequence analysis of enteric bacteria will help determine the patterns that can be used to predict the susceptibility of an individual to a certain disease, such as colon cancer, or to assess the healthiness of an individual. Periodic examination of fecal samples and the enteric environment will help predict the type of diseases one is likely to develop and monitor the progression of these diseases. In addition, by accumulating an individual's annual data regarding enteric bacteria, it will be possible to assess the changes in the enteric environment over time, association between the changes in the environment and lifestyle characteristics such as dietary habits, stresses, and exercises at different times, and relationship between the environment and diseases.

For instance, we will be able to predict the likelihood of an individual developing colon cancer by creating an enteric bacterial profile and comparing it with that of other individuals on databases of enteric bacteria. This will make it possible for doctors to suggest methods for changing their patients' enteric environment and improving their lifestyles. To this end, periodic enteric examinations could be performed as part of the practical preventive medicine.

In order to set up the database of enteric bacteria, we have recently commenced the collection of fecal samples from 700 residents of different ages from a certain area of Aomori Prefecture as part of a collaborative research project with Hirosaki University. This project aims to elucidate the relationships among lifestyle characteristics such as dietary habits and exercise, incidence of diseases, and profiles of enteric bacteria. We hope that our findings will help prevent the spread of lifestyle diseases. I suppose that this article will make the readers realize the importance of this "erudite lecture series regarding feces" for our healthy lifestyles. Let us strive to be an expert of examining "feces" and look for an answer to what healthiness actually is.



10 minutes
Information Technology - 45 -
"Remember The Milk,"
a Task Management Tool



How do you normally manage your tasks? This time we introduce a task management tool named "Remember The Milk" (<http://www.rememberthemilk.com/>). This tool enables you to manage your tasks through the internet (via PCs or cell phones) and also share them with others. It supports 31 languages, including English and Japanese.

Let us use the Remember The Milk website



① Let us sign up for an account

You are required to sign up for an account (free) to use the Remember The Milk tool. Please visit the website (<http://www.rememberthemilk.com/signup/>), create an account, and log in.

② Let us create a task

Although there are several ways to create a task, we will explain how to create a task on the website and via emails.

Creating tasks on the website :

- (1) Select "Tasks" from the menu at the top of the webpage (① in the figure below).
- (2) Click on a tab (②) to select the kind of task (referred to as "list"), type your task (③) and press the enter key. You have just added a task.
- (3) In order to set the details of your task, select the task and type the details on the detailed settings form displayed on the right side of the webpage (④). For example, the due date for a particular task can be set as "tomorrow," "Sunday," "next Monday," or "12/1."



Figure: Creating a task and setting the details

Creating tasks via email :

Send an email to the email address assigned to you with the task as the subject of the email. Click the "Settings" link on the top right menu and check the "Inbox Email Address" under the "info" tab to confirm your email address. This is how you can add a task to your list.



This tool is very convenient because you can manage your tasks through your cell phone even when you don't have your computer with you. In addition, if you set reminders for your tasks, you will be automatically notified via emails and you do not need to check your tasks on the website frequently. The reminders can be configured to be sent either several days or several hours before the due date of the task.

Moreover, this tool is equipped with a share function, which enables the sharing of a task list among members of a group, such as a group of people in a lab. Thus, "Remember The Milk" enables us to manage tasks specific to individuals or a group, anytime and anyplace. Please utilize this tool to manage your tasks.

(Yuka Takahashi)

Editor's Note We thank Dr Lee for her article in this month's newsletter, introducing the Korea National Research Resource Center (KNRRRC). She visited several resource centers in Japan during the last year and participated in the Annual Meeting of the Molecular Biology Society of Japan. Dr. Lee was also involved in the administration of the conference on bioresources, which was organized in Seoul last September. This was the first time that the conference had been organized in Asia. This event highlighted the efforts put in by Korea to promote bioresource projects at the national level. About 20 Japanese researchers affiliated with various bioresource projects participated in the conference. Information networks should be further strengthened by promoting interactions among fast-growing Asian countries. We plan to introduce similar topics in future issues of this newsletter. (Y.Y.)

Contact Address:
1111 Yata, Mishima-shi, Shizuoka 411-8540, Japan
Center for Genetic Resource Information, National Institute of Genetics
Tel: 055-981-6885 (Yamazaki)
E-mail: brnews@chanko.lab.nig.ac.jp

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