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Hot News from Abroad No.24

Visiting ZIRC

Takao Sasado, Laboratory of Bioresource,
National Institute for Basic Biology

Ongoing Column No.37

Do you know "Creative Commons?"



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- ◆ JGR <http://www.shigen.nig.ac.jp/wgr/jgr/jgrUrlList.jsp>

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

- **BMB2008**
(Joint Meeting of the 31st Annual Meeting of the Molecular Biology Society of Japan & the 81st Annual Meeting of the Japanese Biochemical Society)
- "NBRP Symposium"
Date: December 9 (Tue), 16:45-19:15
Place: The 19th Site (Main Hall on the 1 Kobe International Conference Center)
- "NBRP Exhibition: Panel Exhibitions with Realia"
Date: December 9 (Tue) - 12 (Fri), 10:00 - 18:00
Place: Exhibition Site 2 (The 3rd Hall of Kobe)
- **The 2nd Workshop on Rat Resource Research**
Date: January 30 (Fri), 13:00-17:00, 2009
Place: International Conference Hall I, Clock Tower Centennial Hall, Kyoto Univ.
- **The 3rd International Biocuration Conference (IBC 2009)**
Date: April 16-19, 2009, in Berlin, Germany
Details are available at <http://projects.embl.org/Meeting2009>

Hot News from Abroad No.24

Visiting ZIRC

Takao SASADO, Researcher
Laboratory of Bioresource, National Institute for Basic Biology



Dr. Kiyoshi Naruse, Associate Professor, and director of the Laboratory of Bioresource at the National Institute for Basic Biology (NIBB) Japan, and I visited the Zebrafish International Resource Center (ZIRC) in Eugene Oregon, USA, in the beginning of July. The National BioResource Project (NBRP) Medaka was initiated last year with NIBB as the core institute, and we are currently moving towards developing more efficient systems for the collection, maintenance, and distribution of medaka bioresources. When we participated in the Zebrafish meeting organized by the University of Wisconsin, we had the opportunity to visit the ZIRC for consultation regarding our project administration. I have participated in this project since April of this year and am primarily responsible for the general maintenance and administration of living medaka and frozen sperm resources. From a resource administrator's point of view, I shall present several of my impressions of the ZIRC.

ZIRC Website :
<http://zebrafish.org/>



2. Faculty of ZIRC

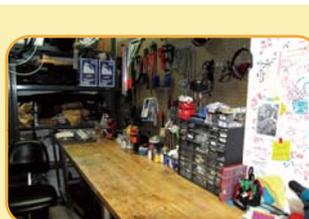


Photo 2: The working desk of a full-time technical staff member.

Staff members at the ZIRC include Dr. Zoltan Varga, the director, and approximately 20 full-time workers, with about a dozen student part-time staff who are mainly in charge of breeding. In addition to the full-time staff members who are involved in operation management and the breeding and shipping of fish, there are also other specialists who are responsible for the administration of the databases (mentioned in the next chapter), repairs and installations of the breeding system (Photo 2), and disease diagnosis (veterinarians). In this regard, we were overwhelmed by the capabilities of not only the facilities, but also of the human resources essential for the successful administration and realization of specific operations.

3. Database System for the Maintenance of Strains



The ZIRC has developed a sophisticated database system for maintaining strains of living fish. Two staff members, who previously worked for Oracle, a famous database software company, are exclusively in charge of developing and managing the system's software and hardware. In the breeding room, the workers carry a handy I/O device, which is capable of scanning barcodes and recording information regarding fish in each tank directly into the database on the main server via wireless LAN or, alternatively, can be used for reading the information about the fish on its display (Photo 3). In addition, the system is equipped with a printer that is able to print barcodes containing a wide range of information directly on to stickers which can then be applied to the tanks, greatly facilitating the I/O tasks of the staff. By using this system, multiple workers can smoothly share information (strains and numbers of fish and their locations, etc.) and, accordingly, an extremely efficient and labor-saving system for the maintenance and administration of numerous strains has been possible.

Photo 3: Terminal PC located in the breeding room. To the left of the PC is a printer for printing barcode stickers. The inset picture on the upper left shows the handy I/O device equipped with a small display and keyboard, which is capable of scanning the barcodes.



1. The Building and Grounds of the ZIRC



The ZIRC occupies its own building located near the main campus of the University of Oregon. It sits near a stream and is surrounded by green lawns and trees and appears to quietly blend in with the natural environment. The building is well-designed for effective operation as a Zebrafish resource center, and the main breeding room (Photo 1), quarantine room, fish tank washing room, experiment room, living room, and kitchen are all logically arranged in consideration of the circulation of workers and materials. The entire building has been designed to create a comfortable working environment; for example, the residential area is spacious, natural light streams in from the windows, and green groves can be seen just by looking outside. All in all the ZIRC seems to be a fantastic place to work and study.

Photo 1: Circulating breeding system in the main breeding room. The water for breeding is pooled in the backyard and recycled via a bio-filtration process.



4. Overview

ZFIN Website :
<http://zfin.org/>



The Zebrafish database contains a large amount of information and is used as a research resource by communities worldwide. It is managed daily by a team of 20 staff members at the Zebrafish Information Network (ZFIN), which is located approximately 10-min (walking) from the ZIRC. Users of Zebrafish resources can refer to information on the ZFIN database and order the resources of their choice through the mutually-linked ZIRC websites. ZIRC charges the users for distributing resources, and the revenue

covers part of the administration costs. Electricity and water expenses are covered by the University of Oregon and the State of Oregon. Labor costs are covered by funding from the National Institute of Health (NIH) and the revenue generated through distributing resources (covers approximately 25%). Full-time workers, including the director, renew their contracts every 5 years. It has been said that the financial support from the NIH and other institutions will most likely not be terminated for some time due to the fantastic achievement of the development and administration of the sizable ZIRC/ZFIN facility, as well as the benefits to the entire scientific community gained through the of distribution of resources to worldwide users.

As distributors of Medaka bioresources, our visit to the ZIRC was thought-provoking from various points of view. In the future, we would like to further enhance our own ideas regarding what we can and should do to develop resources and distribution systems that are both more user-friendly and valuable to the users. We appreciate Dr. Varga and all the staff of the ZIRC taking time out of their schedule to show us around their facilities.

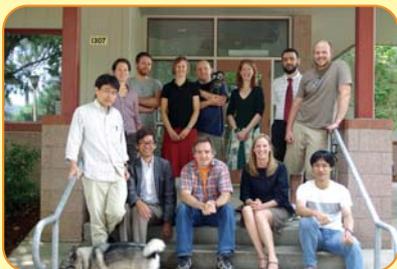


Photo : Sitting with staff members in front of the ZIRC (with 2 of their lovely dogs). (From left in the front row) The author, Dr. Naruse, and Dr. Zoltan (the director). At the far right is Dr. Yoshihito Taniguchi from the Graduate School of Medicine, Kyoto University.

"translated by ASL translation service, and validated by the author"



A Request to Researchers

We have a request to researchers who use our bioresources for their research.

Please include information of the bioresources in Materials & Methods or Acknowledgement when you publish your research journals. In addition, please contact the facility who provided those bioresources to you.

NBRP has opened a registration website for research journals. You can easily submit the information of your journal at the address provided below.

<http://rrc.nbrp.jp/>



Coming up in the next issue!
The special topic on resources in the next month's issue will be "Arabidopsis".

Editor's Note

More than 40 full-time staff members are employed in total for the administration of the ZIRC and ZFIN. It is understandable that Dr. Sasado has communicated his disappointment at the difference in the scale of resource centers between Japan and the US through this column. We hope that the medaka center in Japan acquires sufficient manpower for the realization of its goals and that becomes an international medaka center. The "voices" and "thoughts" of researchers' communities will someday come true (Y.Y.).

10 minutes

Information Technology - 37 -



Do you know "Creative Commons"?



This time, I will discuss copyrights. It seems to be a serious matter but I will introduce "Creative Commons" to soften this topic.

Currently, there are numerous attractive contents on the internet posted by people all over the world. These may include beautiful pictures, which we may like to post in our blogs, or sentences to quote, and may also include things that we may like to improve upon and rerelease. There are usually 2 scenarios: "I am not sure but I will use it" or "I am not sure therefore I won't use it". It is clear that the former may cause a legal issue. The latter may be disadvantageous for both the authors and the users if the authors intend to share the contents. In other words, this may hinder the enhancement of worldwide cultural developments.

Even if the authors and the users prefer to share the contents, the following problems may occur. The authors may not be sure of how to lax the copyrights and define sharing rules and the users may not be sure of how to interpret complex legal jargon.

Here comes "Creative Commons."



"Creative Commons is a nonprofit corporation dedicated to making it easier for people to share and build upon the work of others, consistent with the rules of copyright."

(Quoted from the website, <http://creativecommons.org/about/>.)

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Creative Commons is recently introduced in information magazines and attracts considerable attention. Please visit the website (<http://www.creativecommons.org/>) for further information and setting the sharing rules for your own content.

Supplement: Science Commons, which is specifically designed for the field of science and technology, is being developed; however, it is not yet at a large scale, as is the Creative Commons.

(Shingo SAKANIWA, Center for Genetic Resource Information)

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