

March 2005



BioResource now! No.3 is here

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Hot news from abroad No.3

- written by Prof. Naomi Nakagata of Kumamoto Univ. -

Staying at The Jackson Laboratory

I have visited The Jackson Laboratory several times before but last year, I was there for 5 months as a visiting investigator. Although it's a route that I have taken many times, the journey from Kumamoto – Narita – New York – Boston – Bar Harbor is still a long one.

Photo 1



As many of you might have already known, The Jackson Laboratory was founded by Dr. Clarence C. Little (geneticist) in 1929. In 1980, Dr. George Snell was awarded a Nobel Prize for his research in genetics of mice and researchers from all over the world come here to learn about mice genetics. At present, there are 6 Japanese researchers including postdoctoral researchers. The Jackson Laboratory's mission is to improve the quality of human life by providing tools and services for biomedical and scientific education. They are at the forefront of mice genetics and are conducting studies related to cancer, diabetes, AIDS, heart diseases, reproductive medicine, regenerative medicine and aging. They are especially well known for cancer researches and are one of the National Cancer Institute designated Cancer Centers.

The Jackson Laboratory is located in a town with a population of 4,000 called Bar Harbor on an island called Mount Desert Island in Maine. It is about 3 miles away from the center of Bar Harbor town and is situated in a quiet area. It is surrounded by the Acadia National Park and the surrounding area includes a jagged coastline formed by a fiord and many lakes. There are beaver lodges in the lakes and many wild animals such as deer, bears and condors can be found. At sea, lobster fishing is thriving and in summer, one can enjoy whale watching. At peak season, many cruise ships sail in from Boston.

There aren't any tall buildings in The Jackson Laboratory. Most buildings are a storey or two storeys tall because of the abundance of land. (Photo 1)

Photo 2 is taken from a nearby hillside during a hike. The buildings that can be seen at the top of the lake are all buildings of The Jackson Laboratory. New buildings are being built recently as the area is being expanded little by little. The sea can also be seen at the top right of photo 2. The view of the sea with a rainbow which can often be seen after the rain and a boat slowly sailing by is really beautiful. (Photo 3)

Photo 2



Photo 3



[Download the PDF version of this newsletter at http://www.shigen.nig.ac.jp/shigen/news/news.jsp](http://www.shigen.nig.ac.jp/shigen/news/news.jsp)



News from the Resource Center No. 3

The Information Center will be releasing a "New Resources Information Site" in April. We have also released this newsletter in English.

coming soon!



New Resources Information Site

<http://shigen.lab.nig.ac.jp/shigen/newresources/>

We will be posting updates on information from resource centers in Japan to keep you abreast of new resources. Please visit us.



Resource Feature (Mouse/Rat) No. 2

Info on mouse and rat bioresource

Mice and rats are used in many fields from fundamental science, agriculture, pharmaceutical, medicine and dentistry researches to applied researches such as medicine development. The mouse and rat are among the existing experimental bioresource that have a great number of users. Thus, in Japan alone there are many public institutions and vendors that provide their resources. Information concerning mouse and rat bioresource is available at the websites stated below. A collective search can be carried out at JMSR for resource information at local public institutions (RIKEN BRC, Kumamoto Univ. CARD, KYOTO RAT and NIG). IMSR is an international searchable online database with JAX, MMRRRC (UC Davis, Harla, Taconic, Univ. North Carolina), ORNL, CARD, RIKEN as members.



◆ Common Search Sites

IMSR (International Mouse Strain Resource)
<http://www.informatics.jax.org/imsr/>

JMSR (Japan Mouse Strain Resource)
<http://shigen.lab.nig.ac.jp/mouse/jmsr/>

◆ Sites of Leading Public Mouse/Rat Resource Centers in Japan

RIKEN BRC : <http://www.brc.riken.jp/lab/animal/>

Kumamoto Univ. CARD R-BASE :

<http://cardb.cc.kumamoto-u.ac.jp/transgenic/>

KYOTO Rat : <http://www.anim.med.kyoto-u.ac.jp/nbr/>

NIG Mouse : <http://shigen.lab.nig.ac.jp/mouse/strain/>

◆ Databases of Animal Models for Human Disease
<http://shigen.lab.nig.ac.jp/animal/disease.html>

◆ WGR (Worldwide Genetic Resources)
<http://shigen.lab.nig.ac.jp/wgr/>

The agreement on academic exchange with The Jackson Laboratory was brought to a conclusion during this trip and this is considered to be the most important accomplishment. The signing ceremony was held on 26th Oct. 2004 at The Jackson Lab. with the director, Richard P. Woychik as their representative and I as the representative of Kumamoto University. (Photo 4)

My second accomplishment would be my success in giving technical instructions to the 16 participants on mice embryo ultra-rapid freezing using the vitrification method at the Cryopreservation of Mouse Germplasm Workshop conducted at The Jackson Lab. from 10th to 15th Oct. 2004 (Photo 5). I have also compiled an English CD about reproductive technology and distributed the copies to the participants and Jackson Lab. staff.

On the other hand, the information I received from The Jackson Lab. will be invaluable when administering the mouse repository. At The Jackson Lab., the cryopreservation of mice embryos department was replaced by the Reproductive Technologies Resource (RTR) department for further development. The RTR department has a total of 45 members and in addition to managing the mouse repository, they also provide other related services as stated below.

Photo 4



Photo 5



New Services at Jackson

<http://jaxmice.jax.org/services/cryopreservation.html>

- Speed Cryo:** This service accommodates large amounts of genetically modified lines of mice to shorten the waiting period for cryopreservation will usually take months. It is now available for strains on C57BL/6 and requires 2 - 3 carrier male mice to be provided. This service utilizes in vitro fertilization to create embryos using super ovulated donor females supplied by The Jackson Lab and cryopreserve embryos at 2-cell stage for 5 years.
- Strain Rescue:** This service employs reproductive techniques to help with the breeding problems of various mouse strains.
- Speed Expansion:** This service utilizes in vitro fertilization and embryo transfer to rapidly expand colonies.
- CryoRecovery:** This service helps to recover cryopreserved embryos for users without neither the technology nor the facility.
- Rederivation:** Hysterectomy rederivation and embryo transfer are provided to remove pathogens from mouse strains.

Furthermore, the staff of Kumamoto University visited The Jackson Laboratory during the period of my stay. They attended the seminar and were able to exchange opinions about the reproductive technology while learning the ways of Jackson Laboratory which I think is an invaluable experience.

(Author: Naomi Nakagata, Ph.D, Division of Reproductive Engineering, Center for Animal Resources and Development, Kumamoto University.



* Photos 1 to 5 were provided by Mr. Nakagata.

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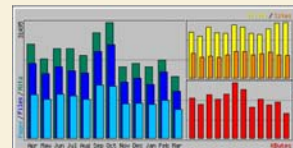


"Access Log File Analysis Tool (1)"

In the previous issue, "The Contents of an Access Log", I focused on the data file of an access log. In this issue, I will introduce a tool called "Webalizer" which is used to analyze the access logs and display the results graphically.

Webalizer is an open source and the program is available from the URL below.

<http://www.mrunix.net/webalizer/>



◆ Total access in the last 12 months & no. of user analysis graph



◆ Search ranking sorted by URL



◆ Search ranking sorted by IP address



◆ Analysis graph sorted by country

The pictures above show examples of outputs from the Webalizer. All kinds of information such as the number and details of webpage access sorted by month, most frequently accessed page, user information, users sorted by countries, etc can be obtained. By referring to the result of these analyses continuously, we can take the appropriate action to provide users with valuable information.

I intend to discuss each graph in further details in the next issue.

Genetic Informatics Laboratory,
Center for Genetic Resource Information
Takehiro YAMAKAWA

Editor's notes : This issue features an article contributed by Prof. Nakagata, "Staying at The Jackson Laboratory". Prof. Nakagata is the leading expert on cryopreservation of embryos and gametes in mice and the Nakagata's freezing method is used by international laboratories. Further information about this method can be obtained from the website below.

<http://www.pref.kumamoto.jp/promotion/public/mr-nakagata.pdf>

Thank you Prof. Nakagata

translated by Sharoh Yip

Contact: Yata 1111, Mishima, Shizuoka 411-8540, JAPAN

Center for Genetic Resources Information, National Institute of Genetics

TEL 055-981-6885 (Yamazaki)

E-mail BRnews@chanko.lab.nig.ac.jp

