

# 安全管理の取り組み

## Initiatives in the Area of Safety Management

理研BRCでは、事業とその推進を支える研究活動が各種法令、指針に基づき、安全かつ適切に行なわれるよう、努めております。

In both its activities and the research which supports that business, the RIKEN BRC strives to proceed safely and in an appropriate manner based on the relevant laws and guidelines.

### 1. 遺伝子組換え実験安全管理 Safety management for gene recombination experiments

#### (1) 遺伝子組換え生物等規制法

理研BRCで取り扱われる遺伝子組換え生物等は、法律により、拡散防止措置や廃棄物処理、運搬の手続きが求められています。

#### (2) 遺伝子組換え実験安全委員会

研究計画は、外部の専門家を含めた安全委員会において、法令への適合性について審査を受けます。

平成22年度末現在：21件 (P1・P1A・P1P・P2・P2A)

#### (3) 教育訓練の実施

実験従事者は、法令、規程、執るべき拡散防止措置及び安全取扱い等について教育訓練を受講します。

#### (4) 実験施設・設備の点検

実験室の拡散防止措置、表示等の確認及び機器の検査を定期的に行っています。



教育訓練の様子  
Scene from education and training class

#### (1) Act on the Conservation and Sustainable Use of Biological Diversity through Regulations on the Use of Living Modified Organisms

The law specifies measures to prevent the spread of the recombinant organisms, etc. dealt with by the RIKEN BRC, in addition to procedures for the treatment and transportation of waste products.

#### (2) Recombinant DNA Experiments Committee

Research plans are reviewed for conformity to the law by a safety committee including outside experts.

As of the end of fiscal 2010: Convened 21 times (P1・P1A・P1P・P2・P2A)

#### (3) Education and training

Personnel conducting experiments receive lectures on subjects including laws, regulations, measures which must be taken to prevent the spread of organisms, and safe handling.

#### (4) Inspection of experimental facilities and equipment

We conduct periodic checks of measures to prevent the spread of organisms, signage, etc. and inspections of equipment in laboratories.

### 2. 動物実験安全管理 Safety management for animal experiments

#### (1) 動物の愛護及び管理に関する法律・研究機関等における動物実験等の実施に関する基本指針

理研BRCで実施する動物実験は、動物愛護の観点、科学的な観点から動物実験等を適切に実施するためのガイドライン(基本指針)を遵守し、適切な管理を実施しています。

#### (2) 動物実験審査委員会

研究計画は、外部の専門家を含めた動物実験審査委員会において、特に3R(苦痛度軽減、代替法、使用動物数の低減)を重点とし、科学的、倫理的な側面から実験実施が妥当か否かの審査を受けます。

さらに審査体制、実験動物の管理、飼育施設、教育訓練状況等に関し、基本指針への適合性について自己点検・評価を毎年行います。

平成21年度自己点検・評価結果

実験報告 適正：13件、要改善：0件

飼育管理報告 適正：6件、要改善：0件

#### (3) 教育訓練の実施

動物実験従事者は、基本指針等及び動物の取扱い等についての教育訓練を毎年受講します。

#### (4) 飼育施設等の点検・確認

飼育・保管・実験に応じた設備等の適正維持のため、定期的に点検・確認を実施しています。



教育訓練の様子  
Scene from education and training class

#### (1) Act on Welfare and Management of Animals and Fundamental Guidelines for Proper Conduct of Animal Experiment and Related Activities in Academic Research Institutions

In engaging in animal experimentation at the RIKEN BRC, we respect the guidelines (Fundamental Guidelines) established to enable experiments to be conducted in the appropriate manner with consideration of both animal welfare and scientific research, and we endeavor to manage the experimentation in the best possible way.

#### (2) Animal Experiments Committee

Research plans are reviewed by an Animal Experiments Committee which includes outside experts in order to determine whether they are appropriate from both scientific and ethical perspectives. These reviews particularly stress the "3Rs": Reduction of suffering, replacement, and reduction of the number of animals used.

In addition, we also conduct a self-inspection and evaluation every year in order to check the conformity of the review system, the management of experimental animals, the animal rearing facilities, and the status of education and training, etc. to the Fundamental Guidelines.

Results of self-inspection/evaluation for fiscal 2010

Experiment reports: Appropriate: 13; Necessity for revision: 0

Animal management reports: Correct: 6; Necessity for revision: 0

#### (3) Education and training

Personnel conducting animal experiments receive lectures every year concerning matters including the Fundamental Guidelines and the appropriate handling of experimental animals.

#### (4) Inspection/check of animal rearing facilities

We conduct periodic inspections and checks to enable us to maintain appropriate facilities for animal rearing, storage, and experimentation.

### 3. 研究倫理 Research ethics

#### (1) 臨床研究指針、ゲノム指針、ES指針ほか

ヒト由来の試料の取扱いは、適用を受ける指針に基づき行われます。これら指針の根本にある考え方は、被験者(試料提供者)の尊厳、人権、個人情報を守るための機関の長、研究責任者等の責務、インフォームド・コンセント及び試料の管理等を適正に行うことにあります。

#### (2) 研究倫理委員会

研究計画の倫理的及び科学的妥当性について、医学、生物学、法律、生命倫理に関する専門家及び一般の立場のかたを含めた研究倫理委員会にて審査、承認を受け研究を実施しています。

平成22年度現在：18件

#### (3) 教育訓練の実施

研究者等は、指針及び規程等を踏まえた倫理講習を受講します。



研究倫理委員会の様子  
Meeting of Research Ethics Committee

#### (1) Ethical Guidelines for Clinical Research, Ethical Guidelines for Human Genome and Genetic Sequencing Research, ES Guidelines, etc.

Our treatment of experimental materials sourced from humans is conducted on the basis of the applicable guidelines. These guidelines are founded upon the concept that the Director of the Institute and the research staff have a duty to respect the dignity and human rights of the subject (the individual providing the experimental materials) and to protect their personal information, that informed consent has been obtained, and that the experimental materials are managed appropriately.

#### (2) Research Ethics Committee

A Research Ethics Committee composed of specialists in medicine, biology, law and bioethics, in addition to laypeople, reviews research plans from ethical and scientific perspectives, and approves them if found appropriate.

As of fiscal 2010: Convened 18 times

#### (3) Education and training

Researchers and other personnel receive lectures concerning ethics that deal with guidelines, regulations, and other relevant matters.

### 4. その他安全管理 Other safety management

#### (1) 安全管理が必要なもの

前述の1～3の実験には、化学薬品、高圧ガス、放射性

物質及び微生物などの取扱いを伴う場合が多く、各法令等に基づく規程等を定め、適正な取扱いを実施しています。また、研究廃棄物、実験排水等についても法令等を遵守し、適正な管理を行っています。

#### (2) 労働安全

労働者の安全確保、設備の健全性の確認等のため、定期的に研究室の巡視点検を行うとともに、安全のためのマニュアル(冊子)や安全衛生情報紙によりその時々のトピックス、事例などを踏まえ、労働安全確保のための啓発や周知活動を実施しています。



安全のためのマニュアル  
Safety manuals

#### (1) Substances, etc. for which safety management is required

The experiments associated with categories 1 to 3 above make frequent use of chemicals, high-pressure gas, radioactive substances, and microorganisms. We have established rules based on the relevant laws and regulations to ensure that these are handled in an appropriate manner. We are also careful to respect the stipulations of applicable laws with regard to waste products and wastewater produced by research, and to ensure their correct management.

#### (2) Work safety

We periodically conduct inspection tours of the laboratories in order to ensure the safety of personnel and check the soundness of equipment. In addition, we seek to educate and inform our personnel via safety manuals and the topics and examples covered in occasional safety pamphlets in order to ensure work safety.

### 5. 事業の透明性確保のための活動 Ensuring the transparency of our operations

理研BRCの事業活動の意義や筑波研究所の歴史を知っていただくことを目的に、研究室や高度封じ込め実験施設(現在は使用なし)の見学を受け入れています。また、地域住民の方々には、事業活動と安全管理に関する状況を毎年報告する地元説明会を開催し、活動の透明性を確保すべく努めております。

We conduct tours of our laboratories and our advanced containment facility (not presently in use) in order to inform the general public of the significance of the business activities of the RIKEN BRC and the history of the Tsukuba Institute. We are also striving to ensure the transparency of our activities by holding an annual explanatory meeting for local residents, at which we report on the status of our business activities and our safety management procedures.



研究室・P4実験室の見学の様子  
Laboratory visits