Authority: Approved by the President and Dean of Research

- Industrial Safety and Health Act
- Foreign Exchange and Foreign Trade Control Law
- Act on the Conservation and Sustainable Use of Biological Diversity through Rules on the Use of Living Modified Organisms
- Act on Domestic Animal Infectious Diseases Control
- Rabies Prevention Act
- Act Concerning the Prevention of Infectious Diseases and Medical Care for Patients with Infectious Diseases
- Plant Protection Act
- Invasive Species Act
- Act on the Protection of Fishery Resources
- Poisonous and Deleterious Substances Control Act
- Fire Service Act
- High Pressure Gas Safety Act
- Air Pollution Control Act
- Offensive Odor Control Law
- Act on the Prohibition of Chemical Weapons and the Regulation of Specific Chemicals
- Agricultural Chemicals Control Act
- Explosives Control Act
- Act on the Evaluation of Chemical Substances and Regulation of Their Manufacture, etc.
- Narcotics and Psychotropics Control Act
- Act on Prevention of Radiation Disease Due to Radioisotopes, etc.
- Act on the Regulation of Nuclear Source Material, Nuclear Fuel Material and Reactors
- Waste Disposal and Public Cleansing Act

- Act on Welfare and Management of Animals

# Chapter 13. Safety, Health & Environmental Protection

## 13.1 Policy

Through an array of orientation programs including safety matters, research- and job-specific safety and education and training courses, and health and wellness programs, OIST Graduate University ("the University") promotes the safety and health of its students, employees, and others within the University Community. The University also strives to carry out the activities that comprise and support its education and research mission in a manner that will preserve and protect the distinctive natural environment in which the campus is located. This includes conscientious recycling and appropriate handling and disposal of hazardous waste and other waste materials, as well as utilization of energy efficient practices and modalities. Additionally, because Okinawa is located in a unique geological region subject to earthquakes, tsunamis, typhoons, and other natural disasters (and associated fires), the University has in place rigorous Disaster and Emergency Preparedness protocols and training for students and employees.

It is University policy to meet or exceed all legal and regulatory requirements regarding Safety, Health & Environmental Protection ("SHEP") and may impose additional requirements as appropriate. Each member of the University community is expected to comply with the University's policies, rules, and procedures regarding safety (including disaster preparedness), health, and environmental protection in addition to complying with all relevant Japanese legal requirements. The dedication and active commitment of every individual regarding SHEP is critical to the success of the University's safety, health, environmental protection, and disaster preparedness programs.

### 13.1.1 General Safety Policy

General workplace safety training is important for everyone at the University, even those who believe that they have a non-hazardous desk job. Safety training is one of the most basic and important functions of the University. Safety training provides insight into potential hazards in the workplace, how to spot them, and what to do once a hazard is recognized. Several forms of

training are available, such as group instruction, WEB-based training, or one-on-one sessions. The University requires that all those who operate in the University take safety training, including the health and safety orientation program. Orientation programs including workplace safety matters [link: 13.3.1], and such orientations must be refreshed as necessary.

13.1.1.1 Job-Specific Safety Policy. Numerous hazards are job-specific. Operation of machine tools, electrical work, construction, plumbing, and just about any effort involving machinery will expose those doing that work to dangers. Work involving these dangers is subject to stringent occupational safety regulation and training, and those who are engaged in those occupations (or those otherwise carrying-out such activities) at the University must take the relevant safety training [link: 13.3.2].

13.1.1.2 Occupational Health and Safety Policy. Different experiments pose different potential risks. Individuals involved in conducting experiments must familiarize themselves with all potential risks before starting the experiment so that they can anticipate possible incidents, ensure to follow safe experimental procedures and take safety measures to prevent incidents. Additionally, Faculty members and Lead Investigators must instruct research personnel about appropriate safety measures, and research personnel must follow their instructions and advice. If an accident occurs, OIST personnel must implement appropriate first-aid responses, giving priority to rescuing activities and attending to injured people, and to preventing the spread of damage.

### 13.1.2 Health & Wellness Policy

The University offers training, programs and medical services to promote the physical and mental health and well being of employees and students and to support a healthy and productive work environment. Employees and students are expected to engage in the University's Health & Wellness

programs, to be conscious of their health, to undergo periodic general and specific medical examinations[link: 41.3.1], to pay attention to diet and nutrition, to exercise daily, to get enough sleep each night, and to take time for relaxation and recreation.

### 13.1.3 Environmental Protection Policy

The University is committed to the continuous development of technologies related to renewable energy, to research in the environmental and associated sciences, and to minimization of energy consumption in its activities. All employees and students are expected to behave in conformance with the University's policy of reducing environmental impact, reducing waste, managing and handling of hazardous waste, and maximizing energy efficiency.

### 13.1.4 Disaster Preparedness & Emergency Response Policy

In order to minimize the adverse impact of the unpredictable natural and other disasters that may strike, the University has developed and deployed preparedness and emergency response plans. It has also established evacuation areas, evacuation routes, and emergency contacts. University employees and students are expected to familiarize themselves with these preparations, plans and precautions. All members of the University community are expected to also have personal plans for dealing with disasters and emergencies away from the University. For details, see "OIST Graduate University Emergency, Safety and Health Procedures and Guidelines" [link: https://groups.oist.jp/sites/default/files/imce/u745/ESH_procedures_and_guidelines_e_Lab1.pdf]

## 13.2 General considerations

### 13.2.1 Industrial Safety & Health Act and Other Significant Laws

With regard to occupational safety and health, the University's activities are subject to Japan's Industrial Safety and Health Act [link: http://law.e-gov.go.jp/htmldata/S47/S47HO057.html]. In addition, the University has its own Safety and Health Management Rules [link: https://groups.oist.jp/sites/default/files/imce/u318/docs/safety-

and-health-management-rules.pdf] and a University Safety and Health Committee [link: https://groups.oist.jp/sites/default/files/imce/u300/Rules%20for%20Safety%20and%20Health%20Committee_dor_0.pdf]. **Also, a**dditional laws applicable to the University's various research and academic activities are set out where relevant elsewhere in this Chapter.

### 13.2.2 Export and Import Compliance

Japan, like most nations, imposes controls, requirements, and duties on the export and import of virtually all goods, including materials and equipment used in basic research of the type conducted at the University. Of grave concern are items, devices, substances, information, and materiel that could be diverted to a military use. Intellectual property such as software, production know-how, and even use manuals are also regulated and controlled by import/export laws.

Generally, licenses are required for the export of controlled goods. The government also controls, and may require licenses for, the importing of a variety of items, devices, substances, information, and materiel, including living organisms. Genetically modified organisms are a particular concern in Japan.

Goods approved for importation may also be subject to fees/taxes (sometimes referred to as "duties"), although items used in university-based research may be eligible for an exemption from duties. Great care must be exercised and advice from the person in charge at the Occupational Health and Safety Section sought to assure export/import control compliance; refer to the OIST Rules for Security Export Control [link: https://groups.oist.jp/sites/default/files/imce/u318/docs/rules-for-security-export-control.pdf], the University's Security Trade Control WEB site [link: http://law.e-gov.go.jp/htmldata/S47/S47HO057.html, Security Export Control WEB site (METI)[link: http://www.meti.go.jp/policy/anpo/index.html], and the Foreign Exchange and Foreign Trade Control Law [link: http://www.japaneselawtranslation.go.jp/law/detail/?id=21&vm=04&re=01 ] for pertinent details.

### 13.2.3 Transporting Biological Agents, Chemical Materials, and Other Regulated Material

Transportation of many research materials, devices, and substances is subject to strict regulations, under the provisions of the Postal Act, Terms and Conditions of Domestic Postal Services, Universal Postal Convention, and IATA Dangerous Goods Rules, among others. Additionally, containers and packaging for transport within Japan and overseas must comply with specific requirements.

Relevant laws affecting import/export of biological agents and chemical materials include:

- Act on the Conservation and Sustainable Use of Biological Diversity through Rules on the Use of Living Modified Organisms
  [link:
  http://www.japaneselawtranslation.go.jp/law/detail/?ft=1&re=01&dn=1&x=71&y=19&co=01&ia=03&ky=%E3%82%AB%E3%83%AB%E3%82%BF%E3%83%98%E3%83%8A&page=1

- Act on Domestic Animal Infectious Diseases Control [link: http://www.japaneselawtranslation.go.jp/law/detail/?re=01&dn=1&x=0&y=0&co=1&ia=03&yo=&gn=&sy=&ht=&no=&bu=&ta=&ky=%E5%AE%B6%E7%95%9C%E4%BC%9D%E6%9F%93&page=1 ]
- Rabies Prevention Act [link: http://law.e-gov.go.jp/cgi-bin/idxselect.cgi?IDX_OPT=1&H_NAME=%8b%b6%8c%a2%95%61&H_NAME_YOMI=%82%a0&H_NO_GENGO=H&H_NO_YEAR=&H_NO_TYPE=2&H_NO_NO=&H_FILE_NAME=S25HO247&H_RYAKU=1&H_CTG=1&H_YOMI_GUN=1&H_CTG_GUN=1]
- Act Concerning the Prevention of Infectious Diseases and Medical Care for Patients with Infectious Diseases [link: https://groups.oist.jp/sites/default/files/imce/u745/Act%20on%20Prevention%20of%20Infectious%20Diseases.pdf]
- Plant Protection Act [link: http://www.japaneselawtranslation.go.jp/law/detail/?re=01&dn=1&x=0&y=0&co=1&ia=03&yo=&gn=&sy=&ht=&no=&bu=&ta=&ky=%E6%A4%8D%E7%89%A9%E9%98%B2%E7%96%AB%E6%B3%95&page=3]
- Invasive Alien Species Act [link: https://www.env.go.jp/en/nature/as/040427.pdf]
- Act on the Protection of Fishery Resources [link: http://www.japaneselawtranslation.go.jp/law/detail/?re=01&dn=1&x=0&y=0&co=1&ia=03&yo=&gn=&sy=&ht=&no=&bu=&ta=&ky=%E6%B0%B4%E7%94%A3%E8%B3%87%E6%BA%90%E4%BF%9D%E8%AD%B7%E6%B3%95&page=7]
- Import and export of chemical materials is regulated by the ”Act on the Evaluation of Chemical Substances and Regulation of Their Manufacture, etc. (Chemicals Evaluation Act)” [link: http://www.japaneselawtranslation.go.jp/law/detail/?re=01&dn=1&x=0&y=0&co=1&ia=03&yo=&gn=&sy=&ht=&no=&bu=&ta=&ky=%E5%8C%96%E5%AD%A6%E7%89%A9%E8%B3%AA%E3%81%AE%E5%AF%A9%E6%9F%BB%E5%8F%8A%E3%81%B3%E8%A3%BD%E9%80%A0%E7%AD%89&page=1

### 13.2.4 Safety-Related Signage

”Safety Signs” warning of hazards and the need for caution are posted at various locations around the campus. Some are temporary warnings, such as used during construction or roadwork. Those placed on laboratory doors are generally permanent and must be taken seriously. Employees, students, and visitors are expected to notice, read, and obey all safety signs. Safety signs are fabricated and maintained in accordance with University Safety Signs Guidance [link: https://groups.oist.jp/sites/default/files/imce/u745/OSH/Safety-Sign-Guidelines.pdf].

### 13.2.5 Incident and Accident Response & Reporting

Everyone in the University has a responsibility to respond to and report health or safety incidents and accidents in accordance with the “OIST Graduate University Emergency, Safety, Health Procedures & Guidelines” [link: https://groups.oist.jp/sites/default/files/imce/u745/ESH_procedures_and_guidelines_j_Lab1.pdf] and other relevant rules. Refer to the procedures in 13.5 [link: 13.5] for specific response and reporting procedures. Also, see, the Occupational Health and Safety WEB site [link: https://groups.oist.jp/rs/] for further information.

## 13.3 Rules

### 13.3.1 Training

Training on health and safety and environmental protection is provided in classroom-based, online and hands-on forms. At the University, all personnel who operate in the University, regardless of their affiliation or how long they have been or will be operating at the University, must select and take any trainings that are required for the type of activity they plan to engage in, before engaging in it or before submitting the required application. In principle, trainings remain valid for a five year period. However, the Update Session on Health and Safety must be taken every year. All required trainings must be taken again before their period of validity expires. In addition to taking the required trainings, supervisors such as faculty members and section leaders must also inform faculty and staff working under them and any invited researchers and students they are hosting about all required trainings, and ensure that they complete these trainings.

#### 13.3.1.1 Health and Safety Orientation Program

The Health and Safety Orientation Program (OP) is one training related to health and safety and environmental protection, and it is therefore an important training and one which newcomers receive first. The OP outlines all the basic health and safety matters that those operating at

OIST ought to know. There are two kinds of OP, which are General OP and Special OP. General OP enables trainees to develop an overall understanding of emergency procedures, applicable statutory and regulatory requirements as well as University rules. All University students and employees, including clerical workers (and contract workers) not directly engaged in research or experiments, must take the General OP (GOP). Personnel belonging to wet lab is required to also take the Special OP (SOP) in addition to the GOP. Both GOP and SOP are updated in response to revision of the statutory laws and instrument, and OIST rules. Employees and students must take "refresher" courses of the orientation programs immediately after receiving update notification

#### 13.3.1.2 Update Session

The Update Session is held once a year and provides updates on the Industrial Safety and Health Act and other laws, regulations and guidelines concerning safety and health, updates on the University Rules, as well as important information concerning health and safety. The Update Session is an essential training for sharing revisions to laws and regulations as well as the latest matters concerning safety and health, and it must be attended by all personnel who operate in the University. The Update Session is also available in an online format.

#### 13.3.1.3 Responsible Conduct of Research

The Guidelines for Responding to Misconduct in Research (Decision by the Minister of Education, Culture, Sports, Science and Technology, August 26, 2014) require that all personnel who are broadly involved in research activities in research institutes such as universities undergo research ethics education. All personnel who conduct or are involved in research, regardless of whether they are a faculty member, employee, student or visiting researcher, must take the Responsible Conduct of Research course. Administrative employees who are not directly involved in research activities are also strongly recommended to take this course.

#### 13.3.1.4 Required Trainings for Personnel who Operate in the University

To perform certain types of work, personnel are required to take certain trainings so that they can comply with the laws, regulations and guidelines, and so that they are familiar with the necessary safety precautions. Those who operate in the University must take the required trainings before engaging in certain activities or before starting the relevant application procedures. The training course that must be taken by those who operate at the University is set in the table. [Link: ] It is recommended that personnel who operate in the University take a range of non-mandatory courses in addition to the mandatory ones. Some courses consist of more than one module, including mandatory and reference modules. It is recommended to proactively take reference modules in addition to mandatory ones.

Personnel who perform collection or cleanup of waste, and frequently access experimental areas must complete the Advanced Safety Program in addition to OP in advance of engaging in that work. Also Waste and Security Export Control training must be taken by all personnel who operate in the University in a prompt manner after being assigned to the workplace.

### 13.3.2 Hazardous Work and handling of Harmful Agents

The following general rules must always be observed when performing hazardous work and handling harmful agents:

(1) When handling an apparatus or equipment that involves high temperatures, high pressure, high voltage or high speed or that is heavy weight, use appropriate protective measures and equipment and work attentively.

(2) Before using an apparatus or equipment that is new to the operator, the operator must carefully read operation manuals, do any other appropriate preparation work and ask for guidance from a person who has experience in using the apparatus or equipment.

(3) Before operating an apparatus, device, or equipment that requires a particular skill, the potential user must be familiar with basic operations of the apparatus or equipment.

(4) After use, the apparatus, device, or equipment - and the surrounding areas - must be cleaned up; if any defect is found, it must be promptly

repaired (or the next user notified of the problem).

(5) The following personal protective equipment must be provided and used as necessary:

・Protective equipment for eyes and face (such as glasses with face shield)

・Protective equipment for body, hands and feet (such as protective clothes, gloves and safety shoes)

・Protective equipment for respiration (such as dust respirator, gas mask and air respirator)

(6) Maintain personal protective equipment so as to be used in the best condition anytime and clearly indicate the place where they are stored.

(7) Be familiar with how to wear personal protective equipment so that they can be worn quickly and appropriately when necessary.
After use, personal protective equipment must be sterilized appropriately and stored in an appropriate place.

### 13.3.3 Machinery, Equipment, Instruments & Devices

In performing their duties for the University, workers may make use of a variety of machines, equipment, devices, tools and instruments, large and small, simple and complex, from hammers and welding torches to cranes and lasers (collectively referred to as “equipment”). All workers must read the related manuals thoroughly to understand and know the measures how to avoid or mitigate hazards.

#### 13.3.3.1 Equipment that Require Approval or Notification

Power press machine, fuel tank, acetylene welding equipment, fume food, radiation equipment, high-frequency devices are required to be authorized by or notified to the regulatory agencies before installation or use by law. Before purchasing or using those equipment, one must consult with the Occupational Health and Safety Section and complete the necessary procedures.

#### 13.3.3.2 Unattended Operation of Equipment

Although refrigerators, freezers and incubators operating in an intermediate temperature range may be left unattended, the general rule is that no equipment may be left unattended while operating (including overnight operation). However, in the case of low risk machines that are provided with safety devices, unattended operation may be conduced if all pertinent ancillary safety precautions are in effect. When performing unattended operation, the following notices must be posted:

- On the equipment, indicate that unattended operation or overnight operation is scheduled;
- On the equipment, post a description of the current operation and provide emergency response and contact person information.

13.3.3.3 Equipment Requiring Periodic Inspection
Some of the equipment, such as fume food and biological safety cabinets, used in experiments or research and in facility operations, require periodic inspection by law. Minimally, inspections and re-inspection must be done upon installation, relocation and disposal.

13.3.3.4 Use of Laser
Refer to “Laser Safety Management Rules [link: https://groups.oist.jp/sites/default/files/imce/u318/docs/Laser_Safety_Management_Rules.pdf ]” and “Laser Safety Standards [link: https://groups.oist.jp/sites/default/files/imce/u745/Laser_Safety_Standards.pdf]” for use of laser.

13.3.3.5 Mechanical Workshop In order to obtain permission to enter the Mechanical Workshop and to use the equipment, a user must apply to the Mechanical Engineering & Microfabrication Support Section and successfully complete the training concerning safe use of the equipment beforehand. When using the equipment, a user must pay attention to safe operation, following the rules set by the Mechanical Engineering & Microfabrication Support Section.
13.3.3.6 Use of X-ray Instruments
The necessary requirements to ensure the safe and appropriate use of X-ray instruments are stipulated in “X-ray Instruments Management Rules” [link:

https://groups.oist.jp/sites/default/files/imce/u318/docs/X-ray-Instrument-Management-Rules.pdf].

### 13.3.4 Rules for Working with Electrical Hazards

Electricity, especially high-voltage electricity, can be extremely dangerous to work with or around. It poses a serious risk to human life, as well as to property, if not properly, appropriately, and carefully managed and handled. All persons working with electricity must make efforts to prevent electrical disaster and conduct the electrical work under the supervision of the Electrical Chief Engineer whenever such work is needed. When conducting electrical work on campus, the procedures for electrical work [ link : Procedures for Electrical Work ] must be observed.

### 13.3.5 High Pressure and Liquefied Gas

In the case of handling high pressure or liquefied gas, the person must comply with the requirements of the "High Pressure Gas Safety Act" [link: http://www.japaneselawtranslation.go.jp/law/detail/?id=1974&vm=04&re=01], which regulates the use of compressed gases and stipulates in detail how to use these gases. Liquefied gases that can become 0.2 MPa are also regulated as high pressure gases such as petroleum gas, compressed acetylene gas, liquefied hydrogen cyanide, liquefied ethylene oxide and liquefied bromomethyl. Those using such regulated high pressure/liquefied gas must undergo training concerning high pressure gas and must use the high pressure gases in safe manner, undertaking all necessary safety measures in compliance with the High Pressure Gas Safety Law.

### 13.3.6 Experiment/Research required *Institutional Review*

In order to use recombinant DNA [link: 13.3.7], pathogens and toxins [link: 13.3.8], experiment animals [link: 13.3.9], radiation [link: 13.3.10], human subjects [link: 13.3.11], and laser [link: ], the experimenter must submit an experiment/research protocol before commencing an experiment and obtain approval from the Dean of Research after being reviewed by the relevant Institutional Review Committee.

The Institutional Review Committees for the University are:

- Biosafety Committee
- Animal Experiment Committee
- Radiation Safety Committee
- Human Subjects Research Committee
- Laser Safety Advisory Committee

### 13.3.7 Recombinant DNA Experiments

Operation of Recombinant DNA Experiments must comply with following Rules and Acts, and other statutory provisions and guidelines. In addition, appropriate training programs and procedures required must be completed in advance of the start of experiments. When procuring living modified organisms (LMOs) or providing LMOs to other institutions, necessary procedures must be completed in compliance with relevant statutory and regulatory provisions concerning import/export as well as the rules of a carrier of international shipment.

- OIST Graduate University Recombinant DNA Experiment Rules" [link: https://groups.oist.jp/sites/default/files/imce/u745/Biosafety/Recombinant-DNA-Experiment-Rules.pdf]
- OIST Graduate University Biosafety Management Rules [link: https://groups.oist.jp/sites/default/files/imce/u745/Biosafety/Biosafety-Rules.pdf]
- OIST Graduate University Biosafety Committee Rules [link: https://groups.oist.jp/sites/default/files/imce/u745/Biosafety/Biosafety-Committee-Rules.pdf]
- OIST Biosafety Manual [link: https://groups.oist.jp/sites/default/files/imce/u697/docs/biosafetymanual_ver100_en.pdf]
- Act on the Conservation and Sustainable Use of Biological Diversity through Rules on the Use of Living Modified Organisms [link: http://www.japaneselawtranslation.go.jp/law/detail/?re=01&dn=1&x=0&y=0&co=1&ia=03&yo=&gn=&sy=&ht=&no=&bu=&ta=&ky=

%E9%81%BA%E4%BC%9D%E5%AD%90%E7%B5%84%E6%8F%9B%E3%81%88%E7%94%9F%E7%89%A9%E7%AD%89%E3%81%AE%E4%BD%BF%E7%94%A8%E7%AD%89%E3%81%AE%E8%A6%8F%E5%88%B6&page=1 ]

- Recombinant DNA WEB site (Occupational Health and Safety) [link: https://groups.oist.jp/rs/recombinant-dna]
- Japan Biosafety Clearing-House (J-BCH) [link: http://www.biodic.go.jp/bch/english/e_index.html]

### 13.3.8 Pathogens and Toxins

Operation of Experiments handling Pathogens and Toxins must comply with following Rules and Acts, and other statutory provisions and guidelines. In addition, required training programs and procedures must be completed in advance of the start of experiments. When procuring pathogens and toxins or providing them to other institutions, necessary procedures must be completed in compliance with relevant statutory and regulatory provisions concerning import/export as well as the rules of a carrier of international shipment. It should note that many varieties of biological agents are subject to the scope of the biosafety committee review at OIST.

- OIST Graduate University Biosafety Management Rules [link: https://groups.oist.jp/sites/default/files/imce/u745/Biosafety/Biosafety-Rules.pdf]
- OIST Graduate University Biosafety Committee Rules [link: https://groups.oist.jp/sites/default/files/imce/u745/Biosafety/Biosafety-Committee-Rules.pdf]
- OIST Biosafety Manual [link: https://groups.oist.jp/sites/default/files/imce/u318/docs/biosafetymanual_ver100_j.pdf]
- National Institute of Infectious Diseases Safety Management Regulations for Pathogens and Toxins [link: http://www0.nih.go.jp/niid/Biosafety/kanrikitei3/Kanrikitei3_1006.pdf]
- Act Concerning the Prevention of Infectious diseases and Medical Care for Patients with Infectious Diseases [link: http://www.japaneselawtranslation.go.jp/law/detail/?id=1345&vm=&re=01http://www.japaneselawtranslation.go.jp/law/detail/?id=1345&vm=&re=

01]

- Pathogens and Toxins WEB site (Occupational Health and Safety) [link: https://groups.oist.jp/rs/pathogens-and-toxins]

### 13.3.9 Animal Experiments

Operation of Animal Experiments must comply with following the Rules and Acts, and other statutory provisions and guidelines. In addition, appropriate training programs and procedures required must be completed in advance of the start of experiments. When procuring laboratory animals or providing them to other institutions, necessary procedures must be completed in compliance with relevant statutory and regulatory provisions concerning import/export as well as the rules of a carrier of international shipment.

- OIST Graduate University Animal Experiment Regulations [link: https://groups.oist.jp/sites/default/files/imce/u1465/Animal%20Experiment%20Regulations.pdf]
- OIST Graduate University Detailed Stipulations for Animal Care and use Committee [link: https://groups.oist.jp/sites/default/files/imce/u1465/Detailed%20Stipulations%20for%20Animal%20Care%20and%20Use%20Commi.pdf]
- OIST Graduate University Detailed Stipulations for the Vivarium Operation Committee [link: https://groups.oist.jp/sites/default/files/imce/u1465/Detailed%20Stipulations%20for%20the%20Vivarium%20Operation%20Committee.pdf]
- SOP [link: https://groups.oist.jp/ja/ars/laws-regulations-and-sop]
- Act on Welfare and Management of Animals [link: http://www.japaneselawtranslation.go.jp/law/detail/?id=61&vm=04&re=01 ]
- Standards Relating to the Care and Management of Laboratory Animals and Relief of Pain (MOE) [link: http://www.japaneselawtranslation.go.jp/law/detail/?re=01&dn=1&x=0&y=0&co=1&ia=03&yo=&gn=&sy=&ht=&no=&bu=&ta=&ky=%E5%AE%B6%E7%95%9C%E4%BC%9D%E6%9F%93&page=1] (To

be translated into English)

- Fundamental Guidelines for Proper Conduct of Animal Experiment and Related Activities in Academic Research Institutions (MEXT) [link: http://www.mext.go.jp/b_menu/hakusho/nc/06060904.htm ]
- Guidelines for Proper Conduct of Animal Experiments (Science Council of Japan)" [link: http://www.scj.go.jp/ja/info/kohyo/pdf/kohyo-20-k16-2e.pdf]
- Act on Domestic Animal Infectious Diseases Control [link: http://www.japaneselawtranslation.go.jp/law/detail/?re=01&dn=1&x=0&y=0&co=1&ia=03&yo=&gn=&sy=&ht=&no=&bu=&ta=&ky=%E5%AE%B6%E7%95%9C%E4%BC%9D%E6%9F%93&page=1]

  Act on the Conservation and Sustainable Use of Biological Diversity through Rules on the Use of Living Modified Organisms [link http://www.japaneselawtranslation.go.jp/law/detail/?ft=1&re=01&dn=1&x=48&y=16&co=01&ia=03&ky=%E9%81%BA%E4%BC%9D%E5%AD%90%E7%B5%84%E6%8F%9B%E3%81%88%E7%94%9F%E7%89%A9%E7%AD%89%E3%81%AE%E4%BD%BF%E7%94%A8%E7%AD%89%E3%81%AE%E8%A6%8F%E5%88%B6%E3%81%AB%E3%82%88%E3%82%8B%E7%94%9F%E7%89%A9%E3%81%AE%E5%A4%9A%E6%A7%98%E6%80%A7%E3%81%AE%E7%A2%BA%E4%BF%9D%E3%81%AB%E9%96%A2%E3%81%99%E3%82%8B%E6%B3%95%E5%BE%8B&page=1]
- Control on animal import [link: http://www.mhlw.go.jp/english/topics/importanimal/]
- Animal Resources Section WEB site [link: https://groups.oist.jp/ja/ars]

### 13.3.10 Experiments Involving the Use of Radiation

Experiment that uses radiation must comply with the following Rules and Acts, and other statutory provisions and guidelines. In addition, required training programs and procedures must be completed in advance of the start of experiments. Only the Radiation Protection Supervisor can handle the procurement procedures of Radioisotopes. Installation of radiation equipment may require obtaining a permit or submission of notification to the regulatory authority in advance of the installation, in accordance with the provision of the "Act concerning Prevention of Radiation Hazards due to Radioisotopes, etc."

- OIST Graduate University Rules for Prevention of Radiation Hazards

[link: https://groups.oist.jp/sites/default/files/imce/u318/docs/Rules-for-Prevention-of-Radiation-Hazards.pdf]

- OIST Graduate University Instructions on Prevention of Radiation Hazards [link: https://groups.oist.jp/sites/default/files/imce/u318/docs/Instructions-for-Prevention-of-Radiation-Hazards.pdf]
- OIST Graduate University Rules for Radiation Safety Committee [link: https://groups.oist.jp/sites/default/files/imce/u318/docs/Rules-for-Radiation-Safety-Committee.pdf]
- OIST Graduate University Instructions for Joint Use of RI Facility [link: https://groups.oist.jp/sites/default/files/imce/u318/docs/Instructions-for-Joint-Use-of-RI-Facility.pdf]
- Manual for the handling of Radioisotopes [link: https://groups.oist.jp/sites/default/files/imce/u318/docs/ri_manual_j.pdf]
- Act Concerning Prevention of Radiation Hazards due to Radioisotopes, etc. [link: http://law.e-gov.go.jp/htmldata/S32/S32HO167.html]
- RI WEB site (Occupational Health and Safety)[link: https://groups.oist.jp/rs/radioisotopes]

### 13.3.11 Human Subjects Research

Implementation of Human Subjects Research studies must comply with the following Rules and Guidelines. In addition, appropriate training programs and procedures required must be completed in advance of the start of the research studies. In the case of handling Human Specimens, infection prevention measures against blood-borne pathogens must be taken. When procuring Human Specimens or providing them to other institutions, necessary procedures must be completed in compliance with relevant statutory and regulatory provisions concerning import/export as well as the rules of a carrier of international shipment.

- OIST Graduate University Human Subject Research Rules [link: _ https://groups.oist.jp/sites/default/files/imce/u300/human%20subjects%20research%20rules%201.02_dor.pdf]
- OIST Graduate University Detailed Information on Human Subjects Research [link: https://groups.oist.jp/sites/default/files/imce/u300/detailed%20information%20on%20human%20subjects%20research%201.01.pdf]
- OIST Graduate University Human Subjects Research Committee Rules [Link: https://groups.oist.jp/sites/default/files/imce/u300/rules%20for%20hum

an%20subjects%20research%20review%20committee%201.02_dor.pdf ]

- OIST Graduate University Human Subject Research Manual [link: ]
- Ethical Guidelines for Medical and Health Research Involving Human Subjects [link: http://www.lifescience.mext.go.jp/files/pdf/n1500_01.pdf]
- Declaration of Helsinki (WMA) [link: http://www.wma.net/en/30publications/10policies/b3/]
- The Belmont Report (The National Commission for the Protection of Human Subjects of Biomedical and Behavioral Research) [link: http://www.hhs.gov/ohrp/humansubjects/guidance/belmont.html]
- Human Subjects Research WEB site (Occupational Health and Safety) [link: https://groups.oist.jp/rs/human-subjects-research]
- Health and Labour Sciences Researches WEB site (MHLW)[link: http://www.mhlw.go.jp/stf/seisakunitsuite/bunya/hokabunya/kenkyujigyou/i-kenkyu/]

### 13.3.12 Chemical Materials

(Rules applicable to Radioisotopes (RIs) are described in the section of Radiation and Radioisotopes [link 13.3.10].) Handling, use and storage of chemical materials at the University must comply with "OIST Graduate University Rules for the Management of Chemical Materials," the "Industrial Safety and Health Act" and any other relevant statutory and regulatory provisions. A user of chemical materials must be aware that safety requirements differ depending on each specific chemical. Other relevant laws include:

- Occupational Health and Safety WEB site [link: https://groups.oist.jp/rs]
- Chemical Hazards Control Division WEB site (MHLW) [link: http://www.mhlw.go.jp/new-info/kobetu/seikatu/kagaku/] (Japanese website)
- Chemical Management Policy WEB site (METI) [link: http://www.meti.go.jp/policy/chemical_management/] (Japanese website)
- National Institute of Technology and Evaluation (NITE) [link: http://www.bio.nite.go.jp/] (Japanese website)

13.3.12.1 Basic Chemical Safety Rules

Before working with any new chemical materials, use Chemical Risk Information Platform (CRIP) and Material Safety Data Sheet (MSDS) and diligently do the following:

(1) Wear appropriate personal protective equipment (such as lab coat, rubber gloves, safety glasses and masks);

(2) Consider a lower risk alternative, if a chemical material that you intend to work with poses a high potential risk;

(3) Before use, again review the physical and chemical properties of chemical materials that you will work with, along with information concerning hazards and disposal methods;

(4) Plan safety measures to prevent potential accidents and mitigate hazards; and

(5) Proceed thoughtfully and carefully.

13.3.12.2 Export/Import of Chemical Materials

In Japan, the “Act on the Evaluation of Chemical Substances and Regulation of Their Manufacture, etc.” has been established to evaluate whether new chemical substances to be manufactured or imported have harmful properties to human beings, and to control the manufacture, import and use of chemical substances posing the risk of impairing human health through the environment. Those who intend to import chemical materials must contact the Chemical Materials Safety Supervisor at Occupational Health and Safety, and take necessary instructions from the Supervisor. See Chemical Materials WEB site [link: https://groups.oist.jp/rs/chemical-materials] and Chemical Management WEB site (METI) [link: http://www.meti.go.jp/policy/chemical_management/index.html] (Japanese website).

13.3.12.3 Transport

Transport of chemical materials is controlled by the provisions of the Postal Act, Terms and Conditions of Domestic Postal Services, Universal Postal Convention, IATA Dangerous Goods Rules, etc., and transportable goods are specified in these stipulations. Containers and packages for transport must comply with specific requirements.

Contact the carrier or shipping company, as they may decline to handle delivery of dangerous goods or quarantine items. See 13.2.2 [link:

13.2.2] in this Chapter, and the University's Security Trade Control website [link: https://groups.oist.jp/rs/security-export-control].

13.3.12.4 Hazardous Chemical Materials

The chemical materials listed below have been deemed hazardous by regulatory agencies and are subject to stringent requirements regarding their handling, management and storage. In addition, if a non-listed chemical material is expected to pose a hazard similar to those associated with any of the below-listed chemical materials, then those safe handling requirements apply:

(a) ) Organic solvents (Ordinance on the Prevention of Organic Solvent Poisoning) [link: http://law.e-gov.go.jp/htmldata/S47/S47F04101000036.html]

(b) Specified chemical substances (Ordinance on Prevention of Hazards due to Specified Chemical Substances) [link: http://law.e-gov.go.jp/htmldata/S47/S47F04101000036.html]

(c) ) Poisonous substances[link: https://groups.oist.jp/sites/default/files/imce/u318/docs/3Poisonous-materials.pdf], Deleterious substances[link: https://groups.oist.jp/sites/default/files/imce/u318/docs/4Deleterious-materials.pdf] and Specified Poisonous Substances[link: https://groups.oist.jp/sites/default/files/imce/u318/docs/5Specified-Poisons.pdf] (Poisonous and Deleterious Substances Control Act)

(d) Dangerous materials (Fire Service Act) [link: https://groups.oist.jp/sites/default/files/imce/u318/docs/6Hazardous-materials.pdf]

(e) ) Special material gas (High Pressure Gas Safety Act) [link: https://groups.oist.jp/sites/default/files/imce/u318/docs/9High-pressure-gas.pdf]

(f) Narcotics [link : https://groups.oist.jp/sites/default/files/imce/u697/docs/Narcotics-list_en.pdf , https://groups.oist.jp/sites/default/files/imce/u697/docs/Psychotropics-list_en.pdf]（Narcotics and Psychotropics Control Act）

(g) Nuclear fuel material (*Act on the Regulation of Nuclear Source Material, Nuclear Fuel Material and Reactors)* [link: http://www.japaneselawtranslation.go.jp/law/detail/?x=33&y=18&re=01&co=1&ia=03&yo=&gn=&sy=&ht=&no=&bu=&ta=&ky=%E6%A0%B8%E5%8E%9F%E6%96%99%E7%89%A9%E8%B3%AA%E3%80%81%E6%A0%B8%E7%87%83%E6%96%99%E7%89%A9%E8%B3%AA%E5%

8F%8A%E3%81%B3%E5%8E%9F%E5%AD%90%E7%82%89%E3%81%AE%E8%A6%8F%E5%88%B6%E3%81%AB%E9%96%A2%E3%81%99%E3%82%8B%E6%B3%95%E5%BE%8B&page=1
]

See below Rules for internal provisions and procedures of chemical materials.

- OIST Graduate University Rules for the Management of Chemical Materials [link: https://groups.oist.jp/sites/default/files/imce/u318/docs/rules-on-chemicals.pdf ]
- OIST Graduate University Rules for Poisonous and Deleterious Substances Management [link: https://groups.oist.jp/sites/default/files/imce/u318/docs/rules-on-poisonous-and-deleterious-substances.pdf]
- OIST Graduate University Narcotics/Psychotropics Management Rules [link: https://groups.oist.jp/sites/default/files/imce/u318/docs/narcotics psychotropics-management-rules.pdf]
- OIST Graduate University Rules for the Management of Nuclear Fuel Materials [link: https://groups.oist.jp/sites/default/files/imce/u318/docs/Rules-for-the-Management-of-Nuclear-Fuel-Materials.pdf]
- OIST Chemical Management Manual [link: https://groups.oist.jp/sites/default/files/imce/u318/docs/chemical_manual_e.pdf]
- OIST Narcotics and Psychotropics Manual [link: ]

### 13.3.13 Field Activity

See “Rules for Field Education/Research Activities” [link: https://groups.oist.jp/sites/default/files/imce/u100087/finalized_ENG%20rules%20for%20field%20educationresearch%20activities_0623.pdf] for detail rules and procedures about the field activities of OIST.

### 13.3.14 Rules Regarding Health & Wellness

All University students and employees must pay attention to their own health and wellness in addition to complying with safety rules. In particular, each work area should be free of hazards and contain the proper equipment, should be

appropriately lighted, should provide ergonomically correct tools, equipment, and furniture, and should be properly ventilated. Students and employees should also be mindful of the need for enough sleep each day, for a modicum of daily exercise, for a nutritious diet, and for periods of relaxation and recreation.

### 13.3.15 Rules Concerning Environmental Protection

University students and employees must perform their University duties in compliance with the following:

1. Reduce energy consumption and greenhouse-gas emission by using facilities and apparatus/equipment efficiently;
2. Manage/handle hazardous materials in keeping with legal and University requirements to prevent release to the environment.
3. Participate in training sessions concerning environmental protection.
4. Actively exchange information that promotes environmental protection activities.
5. Minimize waste and reuse resources where feasible.

#### 13.3.15.1 Waste Management

Management of waste must comply with "OIST Graduate University Rules for Waste Management" [link : https://groups.oist.jp/sites/default/files/imce/u318/docs/Rules_for_the_Management_of_Waste_111101.pdf], "OIST Graduate University Manual for the Management of Waste" [link: https://groups.oist.jp/sites/default/files/imce/u318/docs/waste_manual_e.pdf], the "Waste Disposal and Public Cleansing Act" [link: http://www.env.go.jp/en/laws/recycle/01.pdf], and other relevant statutory and regulatory provisions. All training programs and procedures required for such work must be completed before commencing work. Appropriate protective gear must be worn in carrying out waste handling and disposal.

### 13.3.16 Disaster Preparedness & Emergency Response Rules

Prevention of hazardous incidents and appropriate responses under an emergency situation is possible if each person knows what an

emergency situation is like and what to do in response. Employees and students must maintain preparedness by periodically reviewing emergency response procedures, emergency contacts, evacuation routes, for the areas where they work. Employees and students must read and understand “University Emergency, Safety, Health Procedures & Guidelines” [link: https://groups.oist.jp/sites/default/files/imce/u745/ESH_procedures_and_guidelines_e_Lab1.pdf ]. Employees and students should also prepare an individual emergency response plan based on the specifics of their work. Please refer to the “Typhoon Guidelines” [link: in case of typhoon.

## 13.4 Responsibilities

### 13.4.1 All Employees and Students

Safety, health, environmental protection, and disaster preparedness program in the University are based on the premise that every member of the OIST community shares responsibility for safety, health, environmental protection and disaster preparedness.

### 13.4.2 Division & Section Leaders

Faculty members and section leaders are primarily responsible for the safety and environmental sanitation of their unit or section, and must have an understanding of the hazards associated with operation and/or research. Additionally, faculty members and section leaders have the responsibility to set and reinforce safety standards for their laboratory and/or office; making sure that their unit or section members receive proper training on general and lab-specific hazards and are using the appropriate equipment following proper procedures. Faculty members and section leaders are also required to make sure that the lab abides by relevant statutory laws and instruments, and OIST internal rules.

### 13.4.3 Fire Safety Manager

Fire Safety Manager is responsible for fire prevention management for the University. This includes preparing a fire defense plan, providing drills for fire fighting and evacuation, enabling emergency reporting and evacuation,

ensuring inspection and management of fire extinguishers and similar equipment, and other efforts to prevent fires and mitigate the effects of both man-caused and natural disasters.

### 13.4.4. Manager of Occupational Health and Safety

Manager of Occupational Health and Safety is responsible for ensuring research in the University compliance with requirements of the University's rules, and statutory and regulatory provisions.

### 13.4.5 Manager of Animal Resources Section

Manager of Animal Resources Section is responsible for ensuring safety, and health in Animal Facilities and Animal Experiments.

### 13.4.6 Manager of General Facility Management Section

Manager of General Facility Management Section is responsible for management and maintenance of facilities in a manner that will ensure the workplace safety and health, environmental protection, and disaster preparedness.

### 13.4.7 Research Personnel

In order to avoid unnecessary risk to themselves and/or other researchers, individuals engaging in research at OIST, regardless of their titles such as researcher, technician or student, are responsible for conducting experiments only when they acquire sufficient knowledge and understanding of health and safety issues associated with research activities. To this end, research personnel must actively participate in a variety of educational and training programs on safety and health, and follow appropriate instructions and advice from faculty members, section leaders and personnel associated with OIST safety management duties.

### 13.4.8 Specific Research-Related Responsible Roles

Biosafety Officer: Must ensure compliance with statutory and regulatory provisions as well as the University Rules so that the operation of

Recombinant DNA Experiment and Experiment Handling Pathogens and Toxins is appropriately performed in the University.

Human Subject Research Officer: Must ensure compliance with statutory and regulatory provisions, and guidelines as well as the University Rules so that the operation of Human Subject Research is appropriately performed in the University.

Personal Information Officer for Human Subjects Research: Must manage personal information to ensure appropriate protection of personal information related to Human Subject Research in the University.

RI Facility Director: Must manage and mitigate radiation hazards and ensure compliance with statutory and regulatory provisions as well as the University Rules so that experiments using radioisotopes are appropriately performed in the University.

Radiation Protection Supervisor: Responsible for the prevention of radiation hazards and the management of implementation of proper experiments in the University.

Chemical Materials Safety Officer: Must ensure compliance with statutory and regulatory provisions as well as the University Rules so that the handling of chemical materials is appropriately performed in the University.

Animal Experiment Coordinator: Must ensure compliance with statutory and regulatory provisions, and guidelines as well as the University Regulations so that the operation of Animal Experiment is appropriately performed in the University.

Drug Control Supervisor: Must ensure compliance with statutory and regulatory provisions as well as the University Rules so that the handling of Narcotics and Psychotropics is appropriately performed in the University.

Drug Control Supervisor for Animal Facility: Must ensure compliance with statutory and regulatory provisions as well as the University Rules so that the handling of Narcotics and Psychotropics used for animal clinical diagnosis purposes is appropriately performed in the University.

**13.5 Procedures**

The specific response and reporting procedure based on 13.2.5 are following. The other procedures of each particular item in this chapter are defined in each set of relevant rules.

a. If incidents, accidents, injuries, or sickness occurs as a result of work, the victim or the witness must immediately report to the victim's supervisor and the Central Control Room (Bosai Center) [link: 10.8.4]. When treatment for injured personnel is necessary, priority should be given to contacting the Health Center or the public emergency services.

b. Depending on the details of the incident, accident, injury or sickness, the Central Control Room (Bosai Center) shall contact the public emergency services, Occupational Health and Safety (Safety and Health Committee [link: https://groups.oist.jp/rs/safety-and-health-committee-minutes] Secretariat), Health Center, and/or other relevant sections as necessary. If a victim is a student, the Central Control Room (Bosai Center) shall also contact the Student Support Section.

c. The Occupational Health and Safety, Health Center, and relevant sections shall immediately share information on the incident, accident, injury, or sickness and take necessary action.

d. The Occupational Health and Safety Leader shall report to the General Safety and Health Manager [link:] and the Safety and Health Committee members. For serious incidents, accidents, injuries, or sickness, the Occupational Health and Safety Leader shall also report immediately to the President and to the Dean of Research

    * Details of response procedures shall be in accordance with the “OIST Graduate University Emergency, Safety, and Health Procedures and Guidelines [link: https://groups.oist.jp/sites/default/files/imce/u745/ESH_procedure

s_and_guidelines_j_Lab1.pdf]" and other rules.

* If the victim or witness is able to identify the section that should respond, then he/she may directly contact that section without following the procedure above (for example, contacting the Animal Resources Section in the case of an incident or accident during animal experiment).
* It is not necessary to follow the procedure above in the case of minor incidents or accidents. However, a report shall be sent by email or other means to the Occupational Health and Safety at a later date.
* There is a smart-phone application that may be used to send the emergency report to all relevant staff including university Senior Level Executive [link: 30.2.2].

## 13.6 Forms

### 13.6.1 Recombinant DNA Experiment

See Occupational Health and Safety WEB site [link: https://groups.oist.jp/ja/rs/narcotics-and-psychotropics]

### 13.6.2 Experiment Handling Pathogens and Toxins

See Occupational Health and Safety WEB site [link: https://groups.oist.jp/rs/pathogens-and-toxins]

### 13.6.3 Common to Recombinant DNA Experiment and Experiment Handling Pathogens and Toxins

See Occupational Health and Safety WEB site [link: https://groups.oist.jp/rs/recombinant-dna]

### 13.6.4 Animal Experiment

See Animal Resources Section WEB site [link: https://groups.oist.jp/ars]

### 13.6.5 Human Subjects Research

See Occupational Health and Safety WEB site [link: https://groups.oist.jp/rs/human-subjects-research]

### 13.6.6 Chemical Material

See Occupational Health and Safety WEB site (chemical material) [link: https://groups.oist.jp/rs/chemical-materials] and Occupational Health and

Safety WEB site (narcotics and psychotropics) [link: https://groups.oist.jp/rs/narcotics-and-psychotropics]

### 13.6.7 Radioisotopes

See Occupational Health and Safety WEB site [link: https://groups.oist.jp/rs/radioisotopes]

## 13.7 **Contacts**

Policy Owner:

Dean of Research

Vice President for Buildings & Facility Management

### 13.7.1 Other Contacts:

Section Leader, Occupational Health and Safety

Section Leader, Animal Resources

Section Leader, Imaging

Section Leader, Instrumental Analysis

Section Leader, Mechanical Engineering & Microfabrication Support

Section Leader, Facility Management