May 25, 2016



OKINAWA INSTITUTE OF SCIENCE AND TECHNOLOGY GRADUATE UNIVERSITY

冲绳科学技術大学院大学

To: Board of Governors and Board of Councilors,

Okinawa Institute of Science and Technology School Corporation

From:

Kiyotaka Soma, Auditor

Tsugiyoshi Toma, Auditor

FY 2015 Audit Report

This report contains the result of our periodical independent audit of Okinawa Institute of Science and Technology School Corporation's business and financial operation for FY2015, as provisioned in Section 3, Article 15 of Okinawa Institute of Science and Technology School Corporation Bylaw.

#### 1. Methods of Audit

- (1) For the operational audit, we attended Board of Governors as well as Board of Councilors; we also audited from the President and other executives on the execution status of the business. We reviewed important kessai (decision making)-documents and coordinated with the Internal Audit Section to examine the adequacy of the business.
- (2) For the financial condition of the audit, we confirmed the accuracy of the statements with Ernst & Young Shin Nihon LLC.

#### 2. Audit Result

- (1) We did not find any significant violation of the laws and Bylaws, nor act of misconducts or frauds pertain to School Corporation's business administration and its properties.
- (2) We verified that the business report correctly reflects the condition of business operation.
- (3) We found that the financial statements match the contents of accounting records, and the School Corporation's status of assets and gain and loss are properly shown in compliance with laws and Okinawa Institute of Science and Technology Accounting Standard. Financial Closing Report was prepared according to the budget classification and properly reflected the status of closing.

FY2015 Audit Report and Auditors' Written Opinion is submitted separately as attached.

# FY2015 Audit Report

# 1 Compliance with laws and regulations

# You gods, will give us. Some faults to make us men (Antony and Cleopatra, Act 5, Scene1)

People are bound to make mistakes. Yet, we should not succumb to the idea that making mistakes is an inevitable part of human nature, so that there is not much we can do about it. On the contrary, an organization and anyone who belongs to it must ensure strict compliance with laws and ethics practiced in their societies, and needless to say, one should always make every effort not to harm others, or to conduct any unethical act that can compromise their own reputation.

On the basis of this view, we are deeply concerned about last May's arrest of an OIST researcher, who was charged with being in possession of and growing an illegal substance, and the more recent case in January this year, where an OIST employee was arrested for drunk driving. In the wake of these unfortunate events, we interviewed the President/CEO and other OIST executives, to find out what measures have been taken to prevent such incidents from occurring again in the future. As a result of the interview, we found that, after the first incident, an all-inclusive seminar was organized and implemented at OIST with a member of the local police invited as a lecturer. After the occurrence of the second incident, each executive member gave appropriate directives, and provided information to their subordinates in their respective division meetings.

We acknowledge that the appropriate measures were taken by OIST after the aforementioned incidents, to ensure that similar misconducts would not be committed by its employees. However, we would like to offer a few comments to stress the importance of understanding the effects of driving under the influence of alcohol.

Today drunk driving is increasingly seen as a serious offense in Japan. Compared with past punishments, criminal penalties for drunk driving are increasingly being stiffened, and social sanctions at workplaces also appear to be getting more severe. Given these circumstances, the President/CEO and other OIST executives are being called upon, to further strengthen the effort to prevent drunk driving by OIST employees. If and when such unfortunate incidents occur, to make sure that OIST will not be perceived as an institution that shows an over-tolerance toward drunk driving, strict actions should be taken, although proper review and study are required for each case.

## 2 Emergency response

"Disaster strikes when you least expect it" is the famous quote by Japanese physicist and writer Torahiko Terada (1878-1935). To assess emergency response readiness at OIST, we interviewed the President/CEO and other executive members regarding OIST's emergency management plan, for responding to various types of disasters and emergencies, including earthquakes, tsunami, fire, discharge of hazardous chemicals, animals, and plants, terrorist attacks, riots, and armed attacks. The President/CEO explained that 1) the procedures for communication and evacuation (Appendix 1) to respond to emergency situations and 2) the widely disseminated "OIST Graduate University Emergency, Safety, Health Procedures & Guidelines" (Appendix 2) concerning research safety are already in place. The President/CEO also informed us of 3) an ongoing discussion about defining the suitable organizational structure and responsibilities of emergency response personnel, in deciding emergency operations and recovery measures, following the initial response. The discussion is being carried out by the working group headed by Vice President for Communication and Public Relations (VPCPR) Neil Calder and under his leadership, Vice President for Gender Equality and Human Resource Development (VPGEHRD) Machi Dilworth, Vice President for Buildings and Facility Management (VPBFM) Ali Ganjhelou, and other relevant staff are working as its members. The result of discussion is compiled in a report and submitted to the President/CEO by the working group. The report was also delivered to us.

First, we welcome the vigorous discussions on effective emergency response, being continuously carried out. We also support several directions presented in the aforementioned report, especially the one that recognizes the need for assigning a special emergency response coordinator.

Many universities in Japan and abroad, generally have a coordinator, or a comparable function on their campus. If such a dedicated function was installed at OIST, it would be able to demonstrate a greater ability to coordinate the various emergency response procedures.

Here we present in the following section, what we believe as necessary actions for emergency response, that should be immediately determined or implemented.

#### (1) Major enhancement of the annual evacuation exercise/drill

The comprehensive evacuation drill at present is conducted in accordance with Article 8 of Fire Defense Law of Japan, and meets the standards required by law. Yet, we question the effectiveness of the drill, as to whether it can ensure safe evacuation and completely eliminate cases of human casualties. A famous microbiologist, Louis Pasteur once said, "Chance favors the prepared mind." This statement can serve as an admonition to all of us, that we would not be able to achieve any result, better than what we prepared or practiced.

We recommend a few strategies that could provide an adequate framework for a better

comprehensive evacuation drill. 1) Several scenarios should be developed with different evacuation areas, based on the nature and scope of the emergency drill scenarios. 2) Based on the aforementioned scenarios, prepare emergency evacuation pathways for visitors, which should be made and familiarized by relevant parties. 3) Conduct a safety confirmation exercise for individuals along, with the emergency/evacuation drill. (The employment of the SECOM Safety Confirmation Email Service might be one possible option). 4) Provide new employees with evacuation guidance, such as confirming the nearest emergency exits during their orientation. 5) Conduct an emergency/evacuation exercise/drill at the Seaside House and the Marine Facility, which is scheduled to open in the coming months. The fact that the Marine Facility is built along the coast, demands a serious consideration of the possibility of disasters caused by tsunami. 6) Conduct evacuation drill at least twice annually, so that each employee is aware of their role, and the evacuation routes immediately comes to mind in the event of a disaster.

# (2) Comprehensive review of emergency evacuation routes and exits

The beautiful architecture of the OIST facilities impress people who visit here. While this could bring OIST members a joint affinity and proudness of the University, it is also very important to ensure safety for people working inside these buildings. On the basis of this objective, we conducted an onsite inspection, to examine most of the emergency signs and exits installed on the campus. From the viewpoint of emergency evacuation, we concluded that these emergency exits would not be easily located, and that many of the ancillary evacuation pathway signs would require further review (see Appendix 3).

Our findings from the inspection conclude that 1) many of the evacuation signs are not placed adequately for people whose height is lower than the average, and 2) some of the floor maps do not indicate locations of fire extinguishers and fire hydrants. We recommend that a full review should be conducted on existing evacuation signs, and if necessary, these signs should be installed at visible places at the earliest possible timing. In addition to this, many public organizations appoint fire-safety people responsible in each room or floor, and display their names at designated places. OIST should consider the adoption of these measures as well. We also recommend that input from the local Fire Department responsible for the OIST campus area be sought, when conducting an on-campus inspection and preparing an action plan.

## (3) Emergency alerts for OIST staff in case of an emergency

In an emergency situation such as earthquake, tsunami etc., emergency alerts are sent by municipal offices and also forwarded to the cellular phones in the area. However, those messages are only in Japanese and no English messages are sent. Given that the University consists of a large number of non-Japanese speakers, we must assert that this issue is addressed immediately. We believe that

the appropriate interim solution, is for a few OIST members to alternate in translating emergency alerts into English as they receive them, and forward on to all members of the University using SECOM emergency messaging system.

# (4) Developing a comprehensive emergency response plan (Contingency Plan)

Many universities in Japan and abroad, have developed their own contingency plan. After scanning through several plans relating to emergency response prepared by different universities, we found that Duke University, the University of Texas in Austin, and Cornell University, appear to provide well-developed emergency programs.

In particular, the Duke University Emergency Management Plan (Appendix 4-1), classifies emergency levels, defines roles and responsibilities of an emergency response coordinator, and members of emergency meetings, and also assigns alternates and defines the line of succession, in emergency operations for when key personnel are not available. All of this information is provided in a concise manner.

In Japan, Chiba University also provides a remarkable plan for disaster prevention (Appendix 4-2). Chiba University defines roles and responsibilities of different emergency response teams that are convened to ensure response in areas of public relations and communications, emergency accommodation to evacuees, emergency resources, safety confirmation, and facility problems. Since OIST will likely be designated as an evacuation point for local residents in Onna Village, in the event of an emergency, the Chiba University emergency program for emergency accommodation to evacuees, could be a relevant source.

It is also required for OIST to accelerate the development of such comprehensive contingency plan. Regarding the OIST Child Development Center's Emergency Response Plan, while it is limited to emergency response peculiar to the CDC facility, we commend the adequacy of its contents.

As alluded to earlier in this chapter, the adage by Terada suggests that we do not forget disasters, but cannot predict when they may hit us. We strongly call for coordinated efforts by all sections of the University, to address this issue promptly and effectively.

# 3 Human resources management and related issues

(1) Recruiting new staff and promoting the employment of disabled people

The recruitment for the positions stipulated in the Business Plan have been conducted.

In addition, Article 43 of the Act on Promotion of Employment of the Disabled Peoples, obliges general employers to employ a certain number of people with disabilities, which should exceed what is calculated, with the total number of employees of the entire corporation, multiplied by

the employment ratio of people with disabilities. OIST is a special corporation, whose disabled people's employment ratio is set to 2.3% in accordance with the Cabinet Order. Our employment rate of people with disabilities is 3.19%, which is beyond the required rate.

# (2) Promotion management

The system for promotion management has been established, although there is some inconsistency and lack of clarity on the titles of OIST employees. VPGEHRD Machi Dilworth explained that the necessary adjustments are to be made in the HR section, to ensure consistency throughout the organization.

# (3) Management of working hours

In order to avoid damage on employees' physical and mental health due to excess working hours, those who have more than 80 hours' overtime work in a month are subject to doctors' consultation. In case an unjust acquisition of overtime work payment is identified, the subject employee will be required to refund the amount and corrective actions, such as providing guidance, and/or disciplinary measures will be taken.

# (4) Measures for maintaining mental health

The Ganjuu Wellbeing Service, which provides workplace counseling, proactively encourages those who may have concerns or problems, to pursue counseling in order to address those issues. Specifically, letters are sent to people who have taken leave for sickness for an extended period of time, to seek Ganjuu services. In regard to the self-mental checks, introduced after the revision of the Industrial Safety and Health Law, OIST's concrete plan is now under preparation, aiming for its implementation within the period stipulated in the Law.

# (5) Career and skill development of employees

HR Management Section offers voluntary training programs focusing on improvement of business skills, in addition to mandatory sessions, such as new employees' orientations and sexual harassment prevention training seminars. The attendance rate is almost 100% for the mandatory new employee orientations, and more than 90% for the sexual harassment prevention training seminars.

Management training for people in managerial positions and the executives, which has been introduced as a trial, is under consideration for fully-fledged implementation in the near future.

# (6) Relocation support

Cordial services are being provided for the relocation of OIST new employees' moving to and

settling in Okinawa. The degree of satisfaction is quite high among those who have received the services. According to the survey conducted in FY2013, the satisfaction ratio was 96%, although the data is not the most recent. It is uncertain how much of influence it had given to those who decided to work for OIST, but this could be one factor that contributes to enhance the reputation of our university.

On the other hand, while OIST continues to grow further in its full-scale expansion period, retaining the same level of services within the current system is fast approaching its limit. Accordingly, it will be necessary to consider redistributing the roles among different sections. To address this issue, VPGEHRD Machi Dilworth explains that a plan for appropriately dividing the tasks of the relocation support is underway amongst the HR Management Section, OIST Resource Center, and research administrators.

We recognize that overall appropriate operations have been conducted in regard to HR management and related items. We express our support on the direction of reform plans being considered under the leadership of VPGEHRD Machi Dilworth.

4 Internal rules and regulations and emergency procedures for non-OIST personnel

As the University expands and progresses, more people of various status (JSPS fellows, special research students, research interns, administrative interns, etc.) in addition to OIST employees and PhD students are participating, or becoming involved in various activities at OIST.

We interviewed relevant VPs to find out what kind of internal rules and regulations are in place for such personnel, and to ask about the current situation of their compensation and benefits. We also examined through the interview process, what procedures for damage recovery and compensation would be taken in emergency situations, such as natural disaster, accident, and various misconducts, including power harassment or sexual harassment.

We created a table (Appendix 5) based on OIST rules and regulations, and the results of the interviews, which are sorted by category of personnel, showing how their status and compensation are defined and what measures are in place to respond to emergency situations.

Below are the comments from relevant VPs regarding the personnel groups categorized in the table.

(1) There are three types of "interns" in administrative divisions: Interns under Training Program for Administrative Internationalization (TPAI) (VPAC), Administrative Interns (VPCPR), and Science Communication Interns (VPCPR). Interns under TPAI are those who have been assigned to OIST under an agreement with the dispatching institute, based on the guidelines for a Training Program for Administrative Internationalization. They maintain their original

employment status from the dispatching institute while at OIST, thus no concerns have been raised. Administrative Interns are university students who come to OIST to take part in vocational training, initiated by their universities. OIST has been simply selected as one of the training sites. The status of Science Communication Interns, although the name contains the word "interns", is defined as a part-time OIST employee.

(2) There are personnel categorized as "JSPS Fellows" in research units. JSPS Postdoctoral Fellowship is a fellowship program awarded by the Japan Society for the Promotion of Science (JSPS), to excellent or highly qualified researchers after a rigorous and competitive selection process. At OIST, there are two categories of JSPS Fellowship recipients: researchers (postdoctoral scholars) and students. Although they are proven as excellent, the financial award for the former, is lower than the standard salary of OIST researchers, which includes housing and allowance. There are no rules within the PRP or any subsequent policies in effect for a JSPS Fellowship.

Research units also accept visiting researchers, collaborative researchers, sabbatical researchers and other visitors, and guests who come to OIST to perform various research activities (Appendix 6). All extramural researchers are categorized by the length of their stay, and are required to conduct their activities under some type of agreement, or collaborative research contract, except short-term guests and visitors.

- (3) Rules with regard to Special Students who are not Registered OIST PhD Students, are clearly defined in the PRP, therefore there have been no major concerns for this group.
- (4) Long-term visitors categorized in Appendix 6 receive a pass/ID card and OIST basic guidance from the Registration Desk located in the Center Building, Level C.

We recognize that special students who are not registered as OIST PhD students and non-OIST employees are given reasonable status overall. Meanwhile, as mentioned above, it is necessary to discuss the appropriate status and compensation for JSPS Fellows. Once determined, they should be included in the PRP or subsequent policies.

The Registration Desk uses Appendix 6 for the management of visitor registration. However, Appendix 6 simply constitutes a guideline used to facilitate its operations, and its contents are not based on the PRP or any subsequent policies. We believe that the chart should be incorporated into the PRP or subsequent policies. In addition to this, it is imperative that anyone who is engaged in any research activities at OIST are classified according to the categories indicated in Appendix 6. In order to implement this policy properly, regular checks and reviews are required. We will continue to watch over the issue,

to ensure proper treatment of those people engaging in their respective activities at OIST.

# 5 Gender equality

Promotion of Gender Equality is a social demand nowadays, and is also important for realizing the core values of OIST.

Under the leadership of the President/CEO, VPGEHRD Machi Dilworth is making various efforts, such as providing training, holding seminars and events, and promoting diversity awareness in employing and promoting faculty and staff. These efforts are undertaken based on the discussions by the Gender Equality Committee and the working group focusing on maternity and childcare leave systems.

We commend the fact that various efforts are actively being taken. In regards to seminars, workshops and various events, we request to accurately measure the changes in participants' awareness after the events, such as conducting surveys with questionnaires that are carefully designed for this purpose.

We also recognize the positive result of the efforts in optimizing the male/female ratio in managerial positions. We expect to see the same male/female ratio for faculty positions at an early stage, and call for further efforts accordingly.

# 6 Business development and technology transfer

The achievements of Business Development and Technology Transfer are provided in Appendix 7. The Proof of Concept (POC), a project that bridges basic research to business development, is scheduled to begin its full-scale operation in FY2016. The establishment of the supporting platform, which will be the foundation of the R&D cluster, has been discussed with the Okinawa Prefectural Government.

We recognize the steady achievement of Business Development and Technology Transfer activities. We will review the POC program's FY2016 achievements at the end of fiscal year. We also request that the discussion with the Okinawa Prefectural Government be accelerated regarding the establishment of the supporting platform.

## 7 External Fundraising

External funds are largely categorized in three areas: 1) Competitive research funds (Grants-in-Aid for Scientific Research, so-called Kakenhi), 2) Business development funds, and 3) Donation from private sectors and foundations. Among these, the number of applications for and the acceptance rate of Kakenhi has been on the increase for the five years up until FY2014. Funds from business development is also steadily increasing. In addition, the total amount of donation from private sectors and foundations is likely to increase significantly since FY2014. Nonetheless, the sum of all these numbers is still far from the target amount anticipated in Framework Document II, published in July 2014. Based on this fact, OIST developed "Fundraising Promotion Measures" in November 2015 that determines key elements of required efforts to further increase the external funding.

We believe that the most effective approach for fundraising for the time being, is to steadily implement the "Fundraising Promotion Measures". Regarding Kakenhi, it is important to increase the number of applicants, through making each researcher understand that applying for grants is a competition, showing the significance of their research activities. In addition, efforts should be made in applying for grants for large scale research suitable for OIST, which aims to become the world's best science and technology research center. We would like to add, that we should not focus merely on the increased amount of obtained grants as our ultimate goal.

## 8 Faculty management

The faculty employment and tenure evaluation are conducted, based on the manual devised in FY2014 by Dr. Ken Peach, former Dean of Faculty Affairs. During the actual operation, however, it was found that some parts of the manual would require improvement, which are expected to be revised after the discussion with BOG members in May 2016.

After reviewing some documents and hearing from the Dean of Faculty Affairs, Dr. Arbuthnott, we conclude that the faculty evaluation has been conducted properly.

# 9 Support for student career development

Currently, six programs are in place to support students' career development: 1) Individual student careers advice consultations, 2) Workshops for CV/resume writing and research achievement reports, 3) Monthly Career Newsletter, 4) Compulsory courses of professional development classes, 5) Teaching opportunities, and 6) Skill Pill courses. Dr. Jeff Wickens, Dean of Graduate School, also explained that support for improving Japanese language is being considered for students who wish to apply for jobs in Japan.

We welcome that pertinent programs have been installed to support students' career development.

10 Status of research equipment usage and establishment of rules and procedures for users outside of OIST

We requested for utilization records of the research equipment, which was purchased at the price of 50 million yen and above. We did not find any research equipment identified as idle without valid justification that could lead to inappropriate budget execution. The rules and procedures for users outside OIST based on the PRP had not been established.

Though the fundamental principle of the use of research equipment is stipulated in the PRP, detailed rules and procedures are yet to be decided. We strongly urge that rules including detailed procedures for external users be developed as soon as possible.

- 11 Internal audit
- (1) Internal Audit

Internal audit for FY2015 was conducted with the focus on the following six items.

- · Contract method and contents
- · Competitive funds
- · Management of joint research projects
- · Fixed assets
- · Travel expenses of executives and faculty members
- · Procedures for modified contracts

Findings of the audit for each item will be reported to the President/CEO, and necessary measures will be provided for any issues requiring improvement. Regarding the "Travel expenses of executives and faculty members", a request for improvement has been made. Concrete measures are under development in regard to items such as mandatory submittal of travel report, approval on the entire itinerary by supervisors and travel team, and clarification of the rules for confirming safety of members in case of accident or emergency situation.

## (2) Compliance training

Participating in compliance trainings is a mandatory requirement for all OIST members to ensure that compliance is strictly observed within the University. The attendance rate was 78% in FY2015. Though the attendance rate was not low, Vice President for Administrative

Compliance (VPAC) Maki Kubo has mentioned that she will make further efforts to increase the attendance rate through the e-front system to keep attendance records, making effective reminders and reviewing the curriculum, so that trainings will not be an excess time burden for the participants.

#### (3) Contract review committee

The Contract Review Committee is comprised of external experts who arbitrarily select contracts and discuss the legitimacy and validity of purchasing contracts at OIST. We also attend the meeting as observers. To examine the operation of the Committee, we reviewed the summarized minutes and related documents, and no issues were found.

# (4) Preparation for the introduction of "My Number" system

National Identification Numbers (My Number) has been issued to all residents of Japan since October 2015, which are expected to have a great impact on the operation of our University. A briefing was given to OIST members in September, explaining the general idea of the system. So far, the new system has been properly prepared in our University. In addition, targeted training was held in December 2015 for personnel who will be directly involved in handling My Number as part of their duties.

We commend that the internal audit is functioning sufficiently. We also acknowledged that no serious issues have been raised on the introduction of the "My Number" system as a result of proper preparation.

#### 12 Personal information protection

We distributed to and collected from all sections at OIST, a survey checklist about personal information protection. We then forwarded the results of the survey to VPAC Maki Kubo who oversees the Guidelines for Personal Information Protection and sought her opinion. At the same time, we conducted a site survey to sections that are believed to retain personal information. The subject sections were: HR Management Section (personal information of faculty and staff), Conference and Workshop Section (personal information of seminar attendees), and Student Support Section (personal information of students).

Reviewing answers from all sections, opinions from VPAC Maki Kubo and site survey results, we concluded that personal information is properly protected at OIST. In addition, among universities throughout Japan, Kobe University, Otaru University of Commerce and Ehime University, prescribe

internal rules regarding the use of security cameras. We will regard this as useful information when OIST decides to make its own rules.

# 13 Refinement of words and phrases in the PRP

The current Policies, Rules and Procedures (PRP) were hastily drafted in English and Japanese by the PRP holders who administer the work related to respective chapters of the PRP's. They were then enacted with approval from the President/CEO in October 2011, when the School Corporation was established.

To examine how this issue is being addressed, we interviewed Associate Vice President of the Administrative Compliance Atsushi Kogirima who is responsible for administering the PRP library. The results of the interview are as follows:

- (1) Rules and Procedures Section and relevant members are currently undertaking an overhaul of the entire PRP document by reviewing the text in all the chapters enacted to date. Chapters 30 through 41 will be the first chapters to be reviewed, as they are most relevant to all OIST employees.
- (2) Without question, each PRP holder is in charge of drafting responsible PRP chapters. However, according to the Administrative Compliance Division (ACD) who administers the PRP library, writing proficiency levels are inconsistent among PRP holders. With this in mind, ACD strongly feels that there is a need to support PRP holders and their staff to achieve competent drafting skills. To this end, ACD is considering conducting internal seminars to call for the awareness of the importance of the PRP, and to teach basic PRP drafting skills to relevant personnel.

We suggest that a check on the quality of the current PRP text needs to be done in order to determine appropriate use of the language and accurate translation.

We support the direction described by AVPAC Atsushi Kogirima towards addressing the current issue as explained above. We also believe that issues relating to the PRP come down to whether OIST members, especially PRP holders, are aware of the significance of rules including the PRP. From such a perspective, addressing the issue would require assiduous efforts, part of which would call for making regular announcements about PRP-related matters, and for continuously implementing practical seminars designed specifically for intended personnel.

# 14 Management of budget and finance

# (1) Asset management

In regard to asset management, the corresponding PRP and the Fixed Asset Manual were developed. Prior to this, the responsibility of each research unit head was not clarified, but in the revised PRP, each unit head is stipulated as the person responsible.

As part of OIST employee awareness building and to ensure proper asset management, further explanation was provided at the explanatory session of the site inspection in December 2015. In addition, further explanation was given in regard to strict management of assets, in the training seminar of the HEART system conducted in March 2016. Vice President for Financial Management (VPFM) Keiji Takanashi mentioned that he would like to continue increasing OIST members' awareness through such training sessions.

#### (2) Procurement

In regard to procurement of expensive research equipment, especially when the equipment is purchased from an overseas manufacturer, there are many cases where a price negotiation becomes difficult, due to the trade practice of having an exclusive agent or an affiliate company. VPFM Takanashi has taken steps, such as purchasing equipment directly from overseas to a maximum extent, in order to make the price as low as possible, and he further states that various procurement method reforms shall be aggressively considered, such as forming a consortium with other universities for purchasing research equipment.

# (3) Travel expense

Travel expense is a budget item in which misuse or misconducts may occur, and inappropriate use could easily lead to strong criticism from outside of OIST. VPFM Keiji Takanashi explained that he has been preparing revisions of the Travel Expense Handbook based on the aforementioned recommendation by OIST's internal audit.

We recognize that proper asset management measures have been taken. Needless to say, such actions should not be just transient, and instead, efforts should be made continuously.

In regard to procurement, we welcome the fact that various reform approaches are being considered based on "Value For Money" concept under the supervision of VPFM Keiji Takanashi. Though the reform is not in complete shape yet, the attitude to reduce procurement prices, instead of solely following OIST's regulations, is being highly evaluated.

In regard to the travel expense, a certain reform was designated to be implemented, based on the recommendation by OIST's internal audit, but further efforts should be expected, to achieve proper and efficient use of travel expense. In addition, we would specifically like to provide the following two points

as a reminder for reference; 1) Conduct continuous checks on the PRP and Travel Expense Handbook, 2) Further considerations should be made focusing not only individual item of travel expense, but the total cost of the entire trip.

# 15 Campus construction and facility management

# (1) Campus construction

As OIST is still in the expansion phase, steady progress of campus construction shall continue to be an important agenda. The construction which started in FY2015, of the Marine Facility (Seragaki Fishing Port, Onna-son) which is planned to become the hub of marine research, and the Engineering Support Building (on campus) scheduled to conduct various works necessary for research, are still underway. Both of the facilities had been planned to open by the end of FY2015, but the former is now planned to start operation in June 2016 and the latter in October 2016. Regarding Lab 4, the construction is planned with the total budget of 11.3 billion yen, including the development of surrounding areas, and the basic design has started since FY2015.

## (2) Vehicle control

The University is located in Onna-son, a resort area remote from any cities. Accordingly, in most cases, in order to travel from OIST to any place, we need to depend on passenger cars, although public transportation, such as buses and taxis are available to some extent. On the other hand, with the expansion of OIST, securing a parking space has become a major issue. In addition, various security systems to ensure on-campus traffic safety and identify unknown vehicles are yet to be developed. Vice President for Buildings and Facility Management (VPBFM) Ali Ganjehlou is well aware of these points and explained the plan to use a consulting company to identify all the issues and to come up with solutions, so that concrete measures can be developed based on such consultation.

In regard to the construction of OIST, as of now, the construction unit cost has been hovering at a high, so it would be the main task for us to proceed without any extension of period and/or excess of budget. Especially regarding the construction of Lab 4, there isn't much leeway on the presented amount of total budget, and whether the facility could be completed within the budget, while keeping the expected quality, is an issue of interest to the people in and out of OIST. Based on the current situation, we would like to request that sufficient explanations shall be provided at each occasion, and sincere responses will be given in case of any inquiry internally or externally during the progress of construction.

We want to clarify that the owner, or the driver of a vehicle, is the responsible party for vehicle management, therefore the owner, or the driver, shall take the primary responsibility in case of any

accident. However, we also acknowledge that many discussions and decisions need to be made regarding vehicle control at OIST, including securing parking space, proactive use of public transportation considering environmental issues, use of official vehicles while conducting business activities, traffic safety within the campus, and identifying suspicious vehicles. These issues need to be responded to in an urgent manner, considering the expansion of the University, where traffic of people and vehicle will increase. In that perspective we support the measures presented by VPBFM Ali Ganjehlou, and also mention that support from other sections is necessary, i.e., HR Management Section would be involved when identifying unknown vehicles.

# 16 Communication and public relations

# (1) Publication of research

OIST is supported by government funds, and in order to fulfill accountability to the taxpayers of Japan, introducing and disseminating our state of the art research activities is important to obtain further support and trust towards our university. In FY2015, 41 research findings were presented in the form of press releases, and a total of 805 coverages through various media outlets.

Specifically, the research findings related to the DNA sequencing of the octopus generated a large response not only in Japan but also overseas, appearing in several world-renowned science magazines, as well as 138 media coverages. This reflected a high standard of research at OIST(Appendix 8). Solely distributing materials outside of OIST in a desultory manner, would not bring sufficient achievement. VPCPR Neil Calder explained that the aforementioned achievement was made through; 1) Working on each unit to publicize research findings on OIST website and SNSs, 2) Holding regular meetings with local newspaper companies, 3) Occasional press conference and meetings with reporters, 4) Building up friendly relationships with reporters' clubs and visiting major media companies, etc.

# (2) Community relations

With the aim of expanding support and understanding of OIST, the outreach activities are comprised of campus tours, science events, cultural and local events. Between April 2015 and February 2016, more than 26,000 visitors participated in campus tours. Scientific events, such as Children's School of Science, are gaining recognition and attracting more participants every year.

In regard to local events, the first trial of a summer festival for local Onna-son villagers was held in addition to several music concerts. The Council for Village Development and Council of Tancha District collaborated for planning and operating the summer festival, which was highly commended by Onna-son village officials.

VPCPR Neil Calder explained that further focus shall be given on the quality of events in the future, and further collaboration with universities and related institutions in Okinawa, such as the University of the Ryukyus, shall be promoted for planning and operating various events.

We welcome the fact that public relations and outreach activities have been carried out sufficiently in line with the missions of OIST, which contribute greatly on obtaining understanding and support towards OIST. In addition, we express our support on the future direction of community relation activities that VPCPR Neil Calder has presented.

# 17 Information security

No major issue has been recognized after checking the information security at OIST.

At present, we have not noted any major security issues including "My Number" system introduced last year. However, it is preferable to conduct a further specialized verification, an audit specialized by IT experts should be introduced at an appropriate time.

## 18 New information system (HEART)

The new information system (HEART) was launched on March 22, 2016 as planned initially.

We note that the new information system (HEART) has been operating without any major troubles to date, however HEART should be subject to the audit specialized by IT experts at an appropriate time in line with the aforementioned information security.

## 19 Child development center (CDC)

The number of children attending the CDC, on-campus childcare facility, exceeded 80 in January 2016. This number is steadily on the increase, and predicted to reach its intended capacity of 100 by June 2016.

The accounting proposal that was pointed out in the FY2015 Board of Audit inspection has been implemented in accordance with the auditors' suggestions.

Accordingly, we recognize that CDC has been operated properly.

# Overall summary

These are our findings and opinions from the FY2015 audit. While there are some areas requiring further efforts, we conclude that OIST has been operated properly in general. It will be almost five years since OIST was established in 2011 and since the launch, OIST has been steadily gaining a highly admired and respected reputation, in and outside of Japan. In light of Okinawan aphorism, "The value of yourself is determined by others, not by yourself," we can recognize that OIST has been showing a steady progress. On the other hand, however, we should sufficiently keep in mind, that once a major problem occurs, such a high esteem towards OIST today, could be gone tomorrow.

Since OIST is still in the expansion phase, various issues may arise in the future, and we expect that all OIST members will work together to face up to any issues.

Lastly, we would like to pay our deepest respect and gratitude to the BOG Chairperson Dr. Torsten Wiesel and other BOG members who provide the appropriate guidance and support, and the strong leadership presented by President/CEO Jonathan Dorfan, and Acting President/CEO Dr. Albrecht Wagner, as well as all the executives and other members of OIST for their contribution and cooperation.

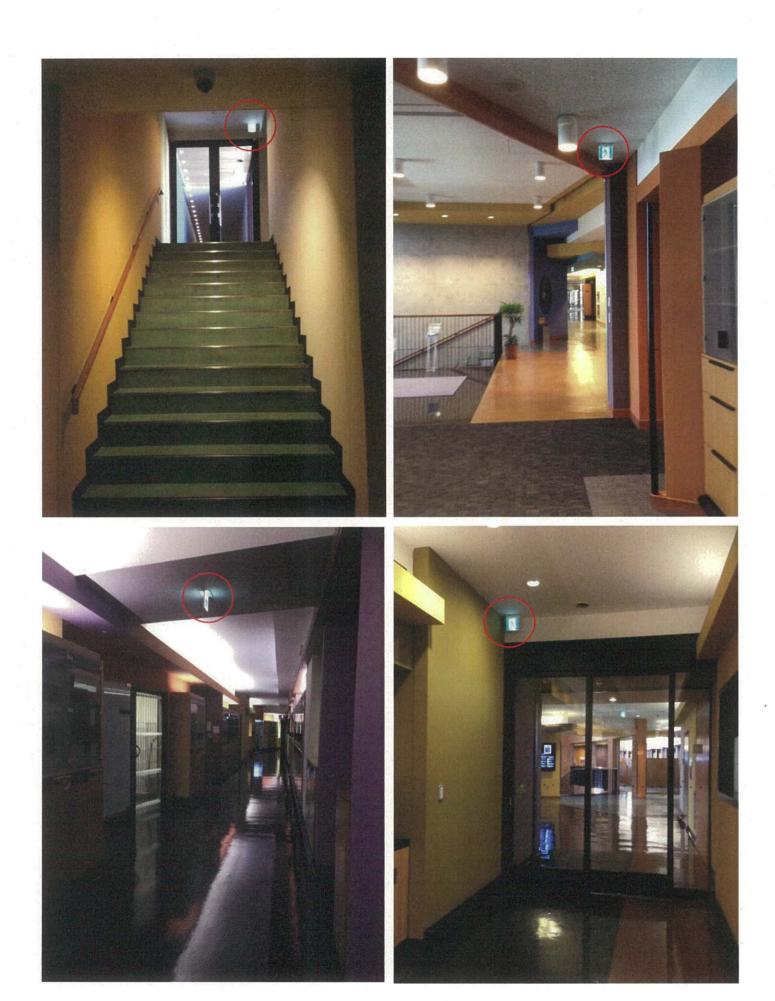
#### (Note)

As mentioned above, while the Japanese original is the official copy of the audit report, Tina Mularski from the Language Section supported it with her considerable expertise in editing the English translation. We also commend Mari Takenouchi, Taeko Endo and Risa Sato from the same section, who provided accurate and skillful translation that we were able to fully communicate our intent. We are grateful to them for their support.

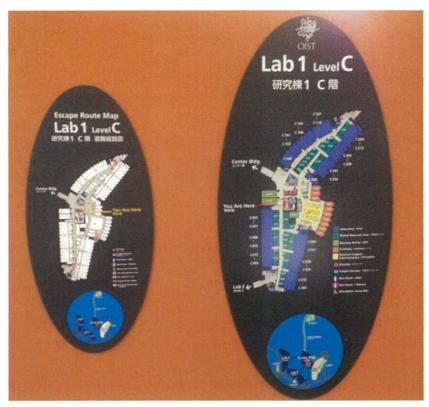
# Action in Bosai Center **OIST Help Line** (Bosai Center) YES Language difficulty? **Emergency Language Assistance** Call Facility Mgmt. Section Leader or Health Center YES Injury or Sickness? Need YES **Call** 119 Ambulan ce? THEN YES Call 119 Fire? Case1 THEN Call Health Center YES Research Activities? Case2 Call Research Safety Section Disaster, Car Accidents, Crimes Case3 Call Facility Mgmt. Section

別表 1. 緊急時の情報伝達経路 Appendix 1. Emergency Communication Flow



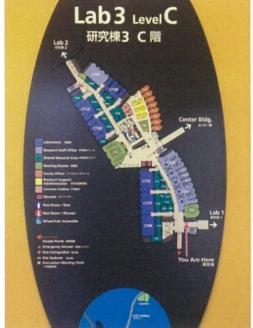


別表 3-1. 避難経路表示板。全て高い位置に設置されている Appendix 3-1. Emergency Exit Signs. All are installed at high positions



センター棟、第1研究棟では避難経路図は別図だが、 第2、第3研究棟ではフロアマップと統合されている Escape Route Map and Floor Map are displayed separately at Center building and Lab 1, but they are consolidated at Lab 2 and Lab 3.



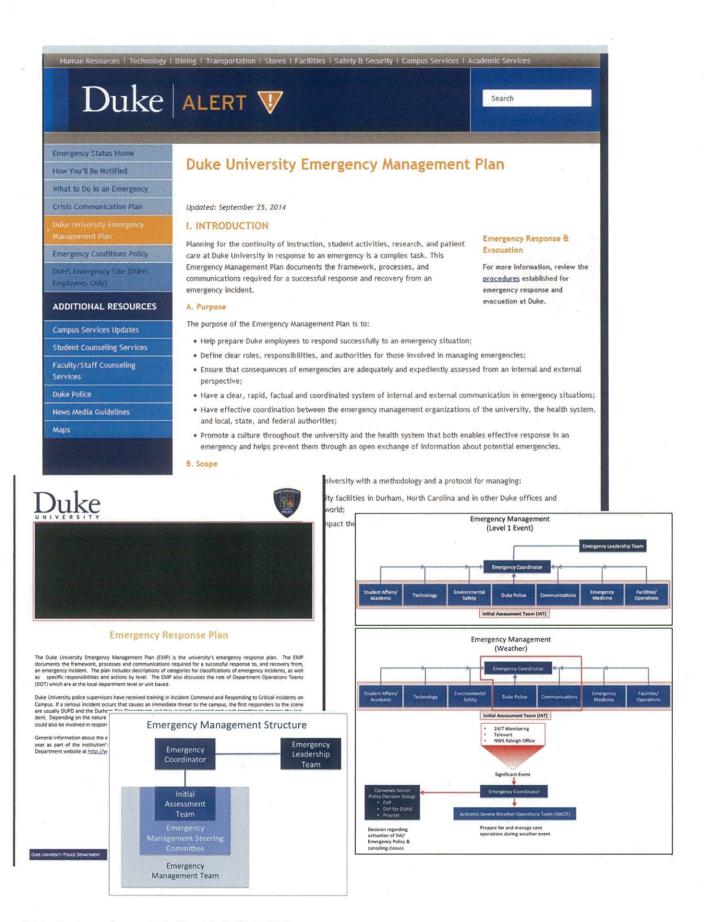








別表 3 - 2. 避難経路表示板、消火器 Appendix 3-2. Emergency Exit Signs and Fire Extinguisher



別表 4 - 1. デューク大学の緊急対応計画 Appendix 4-1. Duke University Emergency Management Plan (http://emergency.duke.edu/management/)



Management Office Website)
(http://www.chiba-u.ac.jp/bousaiweb)

	規定の有無 PRP	身分保障 身分の得喪	服務規程 職務規律	給与	福利厚生	保険	補償(f)
職員区分						勤務時間の長さによって変わ る	
1 役員	PRP 22.8.7	0	0	0	0	私学共済	0
2事務職員(常勤)	PRP 30.2.2.3.1	0	0	0	0	私学共済	0
3事務職員(非常勤)	PRP 30.2.2.3.2	0	0	0	0	私学共済	0
4事務職員(派遣)	0	雇用元	0	雇用元	雇用元	雇用元	0
5事務職員(出向者受入/県庁・沖銀)	なし	雇用元	0	雇用元	雇用元	雇用元	0
6 事務国際化研修生	OIST規定	雇用元	0	雇用元	雇用元	雇用元	0
事務インターン/ITインターン(琉大・高専学 7生)	なし	n/a	0	n/a	n/a	雇用元	0
8 サイエンスコミュニケーションインターン	PRP 30.2.2.3.2	0	0	0	0	私学共済	0
研究員区分		74637/2			E 100		REAL PROPERTY.
9 教員	PRP 4.2.1/30.2.2.3	_	0	0	0	私学共済	0
10 ポストドクトラル・スカラー	PRP 4.2.2/30.2.2.3	_	0	0	0	私学共済	0
11スタッフ・サイエンティスト	PRP 4.2.3/30.2.2.3		0	0	0	私学共済	0
12リサーチ・スペシャリスト	PRP 4.2.4/30.2.2.3		0	0	0	私学共済	0
13 技術員	PRP 4.2.5/30.2.2.3		0	0	0	私学共済	0
14 サイエンス & テクノロジー・アソシエイト	PRP 4.4.1	0	0	0	0	私学共済	0
15JSPS Fellows (研究員)	なし	JSPS	JSPS	n/a (JSPS)	JSPS	国保(海外旅行保険)+ 学研災+学研賠	0
16 客員研究員(Agreementによるもの)	0	n/a	0	n/a	n/a	n/a	0
17客員研究員(研究機関間の契約によるもの)	0	雇用元	0	雇用元	雇用元	雇用元	0
18サバティカル(外部機関所属の者)	O	雇用元	0	雇用元	雇用元	雇用元	0
19その他招聘者	0	n/a	0	n/a	n/a	n/a	0
他大学に所属し臨時で在籍する研究員に関 しては、受入ユニットや財源の所在によっ てステータスが異なる						i'	
学生区分	CARLOS VIVA	W 250	Value (pai)	SELECT 9 123	学生支援	(d)	ni. Ha
20 正規学生	PRP 5.5.1	0	0	なし(a)	0	国保+学研災+学研賠	
21 非正規学生(特別研究学生)	PRP 5.5.2.1	0	0	なし(b)	0	国保+学研災+学研賠	0
22 非正規学生(リサーチ・インターン)	PRP 5.5.2.2	0	0	なし(c)	0	国保+学研災+学研賠	0
23 非正規学生(科目等履修生)	PRP 5.5.2.3	0	0	なし	0	n/a	0
24 非正規学生(聴講生)	PRP 5.5.2.4	0	0	なし	0	n/a	0
25JSPS Fellows(学生)	なし	JSPS	JSPS	n/a (JSPS)	JSPS	国保(海外旅行保険)+ 学研災+学研賠	0
その他							
26 ワークショップ参加者・招聘者	n/a	n/a	n/a	n/a	n/a	雇用元(e)	0
27清掃業者	n/a	n/a	n/a	n/a	n/a	雇用元	0
28納入取引先	n/a	n/a	n/a	n/a	n/a	雇用元	0
29SPC職員	n/a	n/a	n/a	n/a	n/a	雇用元	0

- a.リサーチアシスタントとして経済的支援
- b.経済的支援が必要な場合、受入れ研究ユニットが提供(予算確保)
- c. 実習手当、(必要に応じて)交通費、及び学内又は近隣の宿泊施設といった経済的支援を提供
- d.正規学生、特別研究学生は国民健康保険加入は義務(PRP5.4.3.2 and 5.5.2.1.3.5)
- 全生徒に学生教育研究災害傷害保険(学研災)、学研災付帯賠償責任保険(学研賠)がつく 在留資格を保持していないリサーチインターン(招聘)は海外旅行保険に加入
- e. OISTが航空券購入時の国際線フライトのみ旅行保険が適用
- f.OIST全体で加入している保険(賠償責任保険)

#### 【対象者】

- ・OIST主催の行事参加者およびボランティアの全員
- ・OISTから業務の委託を受けた者(その業務の範囲に起因する事故の損害賠償
- のみ補償)、他
- 【保険金額】
- 1事故最大5億円まで
- ただし、対象者がOIST所有・使用・管理する国内の施設で、OISTの責任に起因する事故による怪我等にのみ補償適用。

#### 参考PRP

- 30.4.1どの職員区分に属するかに関わらず、全ての職員は、人事に関する基本方針、ルール、手続きを順守しなければなりません。
- 30.2.4法人役員:人事に関する方針は、特に明記されない限り、学園の役員には適用されません。
  - (理事長・学長、副理事長を含む理事、監事)
- 30.3.1職務規律:本学の全ての構成員は、第1章に規定された「行動規範」に基づき、本学と本学のミッションに対して職務上の忠誠を尽くす義務があるとともに、定められた職務遂行上の基準を満たす事が期待されます。

×	Rules/Definitions PRP	Status Position	Office Regulations	Salary	Welfare	Insurance	Compensati n (f)
						depend on working hours	
Employees 1 Officers	PRP 22.8.7	0	0	0	0	Shigaku-Kyosai	0
	PRP 30.2.2.3.1	0	0	0	0	Shigaku-Kyosai	0
2 Administrative Satff (full-time)	PRP 30.2.2.3.1	0	0	0	0	Shigaku-Kyosai	0
3 Administrative Satff (part-time)	PRP 30.2.2.3.2	Dispatching	0	Dispatching	0	Siligaku Kyosai	0
44.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.			0	Agency	Dispatching Agency	Dispatching Agency	0
4Administrative Staff(dispatched)	0	Agency Dispatching	0	Dispatching	Dispatching Agency	Dispatching Agency	
Administrative Staff(temporary/Pref.		Agency	0.	Agency	Dispatching Agency	Dispatching Agency	0
5 office, bank of Okinawa)	None OIST internal	Dispatching	0	Dispatching	Dispatching Agency	Dispatching Agency	
Intern under Training Program for			0	Agency	Dianatahing Aganay	Dispatching Agency	0
6 Administrative Internationalization Administrative Intern/IT Intern (Unif. Of	guideline	Agency	0	Agency	Dispatching Agency	Dispatching Agency	
7 Rvukvu, ONCT)	None	n/a	0	n/a	n/a	Dispatching Agency	0
8 Science Communication Intern	PRP 30.2.2.3.2	0	0	0	0	Shigaku-Kyosai	0
doctorice Communication Intern	111 00.2.2.0.2		Ü		0	orngana rejosar	
Researchers							property.
9 Faculty	PRP 4.2.1/30.2.2.3	0	0	0	0	Shigaku-Kyosai	0
10 Postdoctoral Scholar	PRP 4.2.2/30.2.2.3	0	0	0	0	Shigaku-Kyosai	0
11 Staff Scientist	PRP 4.2.3/30.2.2.3	0	0	0	0	Shigaku-Kyosai	0
12 Research Specialist	PRP 4.2.4/30.2.2.3	0	0	0	0	Shigaku-Kyosai	0
13Technician	PRP 4.2.5/30.2.2.3	0	0	0	0	Shigaku-Kyosai	0
14Science & Technology Associate	PRP 4.4.1	0	0	0	0	Shigaku-Kyosai	0
	s					NHI (or international travel insurance) + PAS(学研災	
15JSPS Fellows (researchers)	None	JSPS	JSPS	n/a (JSPS)	JSPS	+学研賠)	0
Visiting Researcher (under an							
16 Agreement)	0	n/a	0	n/a	n/a	n/a	0
Visiting Researcher (under Inter-		Dispatching		Dispatching			
17 Institutional Agreement)	0	Agency	0	Agency	Dispatching Agency	Dispatching Agency	0
		Dispatching		Dispatching			
18 Sabbatical Researcher	0	Agency	0	Agency	Dispatching Agency	Dispatching Agency	0
19 Other gudests	0	n/a	0	n/a	n/a	n/a	0
The status of visiting researchers/guests depends on host units and origin of fund							
Students	Short trails	E SEIVELES	THE PARTY	S. 0 2 18 6.4	Student Support	(d)	Statute.
						NHI+PAS(学研災+学研	
Registered OIST Students	PRP 5.5.1	0	0	No (a)	0	賠)	0
						NHI+PAS(学研災+学研	
Special Research Students	PRP 5.5.2.1	0	0	No (b)	0	賠)	0
	111 0.0.2.1			110 (2)		NHI+PAS(学研災+学研	
Research Intern	PRP 5.5.2.2	0	0	No (c)	0	賠)	0
23 Visiting Students	PRP 5.5.2.3	0	0	n/a	0	n/a	0
24 Course Auditors	PRP 5.5.2.4	0	0	n/a	0	n/a	0
1	1 W 0.0.2.4		3			NHI (or international travel insurance)+PAS(学研災	
25 JSPS Fellows (Students)	None	JSPS	JSPS	n/a (JSPS)	JSPS	+学研賠)	0
Others							
26 Workshop attendees/guests	n/a	n/a	n/a	n/a	n/a	Dispatching Agency (e)	0
27 Cleaning staff	n/a	n/a	n/a	n/a	n/a	Dispatching Agency	0
28 Vendors	n/a	n/a	n/a	n/a	n/a	Dispatching Agency	0
29 SPC employees	n/a	n/a	n/a	n/a	n/a	Dispatching Agency	0

- a. Provide financial support as research assistants
- b. The hosting research unit provide financial support as necessary (obtain fund)
- c. Provide internship allowance, commuting support and accomocation as necessary,
- d.Registered Students/Special Research Students are required to obtain National Health Insurance (NHI)(PRP5.4.3.2 and 5.5.2.1.3.5)
- All students are under PAS(Personal Accident Insurance for Students Pursuing Education and Research)
- Research Interns who are not residents of Japan are required to have international travel insurance e Only when OIST purchases international flights (international travel insurance)
- f. Liability Insurance (OIST)
- [Subject Person Insured]
- \*Participants and volunteers of events hosted by OIST
- \*Persons who are performing business for OIST (compensate only the range of accidents caused by performing the business)

[Limit of Liability]

Up to 500 million yen per accident

Apply only to the accident occurred within the facilities in Japan under the property/use/management of OIST, and the injury was caused by OIST responsibility

#### Rerefence PRP

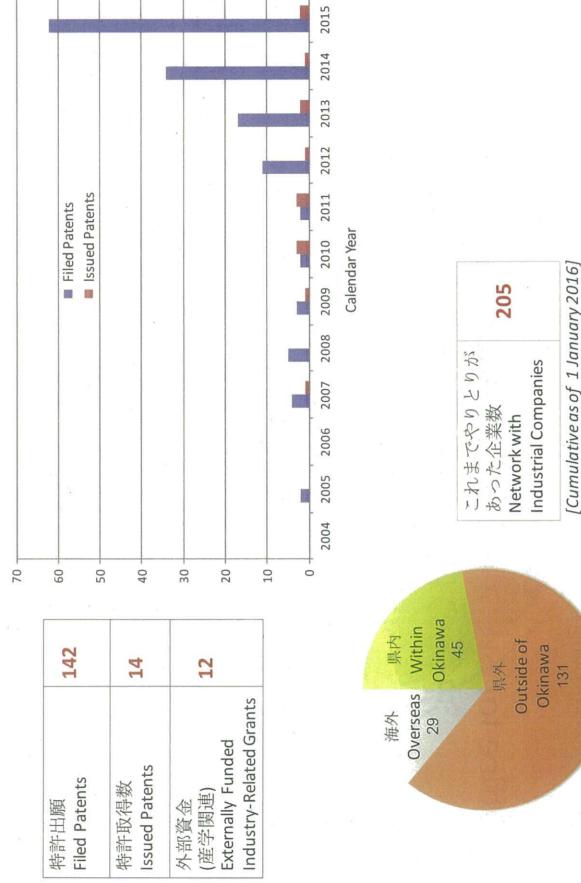
- 30.4.1 Regardless of their employment categories, all University employees must comply with HR policies.
- 30.2.4 The HR policies do not apply to the Officers of the OIST School Corporation, unless stated otherwise.

(the Governors, including the Chief Executive Officer (CEO)/President of the University and the Vice CEO of the University, and the Auditors)

30.3.1 All members of the University community are expected to owe the primary professional allegiance to the University and its mission and to behave in accord with standards for professional practice described by the University Code of Conduct as stated in the Chapter 1.

Definition of the Visitors

Type of Visitors	Definition		Duration of their visit	OIST	Visiting Researcher Agreement
<b>Guests</b> With No Visa	<ol> <li>Short term visitor / Guest Researcher who would stay at OIST less than 3 weeks, E.g. Seminar.</li> <li>Speaker</li> <li>No need for an OIST account.</li> <li>Those who can enter Japan without visa (visa waiver program).</li> </ol>	lid stay at OIST less than 3 weeks, E.g. Seminar. raiver program)	A few days ~ 3 weeks,	ON	Not required
<b>Guests</b> With Visa	<ol> <li>Short term visitor / Guest Researcher who would stay at OIST less than 3 weeks. E.g. Seminar Speaker</li> <li>No need for an OIST account</li> <li>Those who need a visa to enter Japan (incl. Tourist Visa)</li> </ol>	lid stay at OIST less than 3 weeks. E.g. Seminar inst Visa)	A few days ~ 3 weeks	ON	Not required
Visiting Researcher Short term visitors	<ol> <li>Short term Visiting Researcher who would stay at OIST under an agreement (single time visit)</li> <li>Need to access OIST facilities</li> <li>With/without visa</li> </ol>	at OIST under an agreement (single time visit)	1 ~ 90 days	YES	Required
Visiting Researchers Multiple time visitors	Short term Visiting Researcher who would stay     Need to access OIST facilities     With/without visa	Short term Visiting Researcher who would stay at OIST under an agreement (multiple time visitor) Need to access OIST facilities With/without visa	1 ~ 90 days Multiple times	YES	Required
Visiting Researchers Continuous visitors	Long term Visiting Researcher who would stay at OIST under an agreement     Need to access to OIST facility     Visa required	at OIST under an agreement	1 days ~ 364 days	YES	Required
Collaborative Researchers Short term visitors	Short term Visiting Researcher who would work OIST and their home institute (single visit)     Involves the Sponsored Research Division     With/without visa	Short term Visiting Researcher who would work under an inter-institutional agreement between OIST and their home institute (single visit) involves the Sponsored Research Division With/without visa	1 ~ 90 days	YES	Required
Collaborative Researchers Multiple time visitors	Short term Visiting Researcher who would world olist and their home institute (multiple visitor)     Involves the Sponsored Research Division     With/without visa	Short term Visiting Researcher who would work under an inter-institutional agreement between OIST and their home institute (multiple visitor) involves the Sponsored Research Division With/without visa	1 ~ 90 days Multiple times	YES	Required
Collaborative Researchers Continuous visitors	Long term Visiting Researcher who would work and their home institute     Involves the Sponsored Research Division     Visa required	Long term Visiting Researcher who would work under an inter institutional agreement between OIST and their home institute Involves the Sponsored Research Division Visa required	1 days ~ 364 days	YES	Required



別表 7. 沖縄の自立発展担当オフィス Appendix 7. Office of Sustainable Development of Okinawa

ST okinawa institute of science and technology graduate university

First Cephalopod Genome Decoded (https://www.oist.jp/ja/news-center/media-links/first-cephalopod-genome-decoded) 出典: Overseas Media 公開日: 2015-08-13 <u>英科学誌ネイチャーの表紙を飾った</u> タコのゲノム解読に関する研究論文は、OIST分子遺伝学ユニットがシカゴ大学やカリフォルニア大 学バークレー校の共同研究先ととりくんだものです。これにより、世界で初めて頭足類の全遺伝情報が明らかになりました。 OISTウェ ブサイト記事 「タコのゲノムを解読する」 にまとめられた本研究成果は内外の報道機関にとりあげれました。 The cover of the latest issue of Nature is about research by the OIST Molecular Genomics Unit and its collaborators: they have decoded and analyzed a species of octopus, making it the first cephalopod to be decoded. Read the OIST News Center article "Decoding the Genome of an Alien " and peruse the list below to see the many international media outlets covering the story. •The Economist: "Octopuses, genes and intelligence: Tentacles that think." •Science: "Octopus genome surprises and teases" •Nature News: "Octopus genome holds clues to uncanny intelligence: DNA sequence expanded in areas otherwise reserved for vertebrates." •NPR: "Octopus Genome Offers Insights Into One Of Ocean's Cleverest Oddballs." •LA Times: What the Octopus Can Teach Us •Nature Japan Digest 10月号: タコのゲノムから高知能の秘密に迫る •NHK News Web: "タコの全遺伝情報を解読生態の謎解明へ" •フジテレビ: "世界初、タコのゲノム解読に成功 沖縄科学技術大学院大学" •The Japan Times: "Japanese, U.S. universities decode octopus genome" •朝日新聞: 知能高いタコ、全ゲノム解読沖縄科学技術大学院大など •産経新聞:タコのゲノム解読特殊能力解明へ •東京新聞: "タコのカムフラージュ術解明も? 全遺伝情報を解読:社" •日刊工業新聞: "沖縄科技大など、タコのゲノム解読に成功-トランスポゾンが半分占め" •日経バイオテクONLINE: "沖縄OISTなど、タコのゲノムを解読、Nature誌の表紙に" ·ABC.es: "Descifrado el genoma del pulpo, el primer ser inteligente. •The Wall Street Journal ウォールストリートジャーナル日本版: "タコのゲノム解読=進化解明に期待-沖縄科技大な" \*Deutschlandfunk (German Public Radio) •Вести (VESTI) (Russian News Channel) •Gizmodo: "First Complete Octopus Genome Will Unlock Cephalopod Secrets." •ScienceNews: "How an octopus's cleverness may have evolved: DNA analysis shows cephalopod makes wide variety of same proteins that spur nervous system development in mammals" •Bio Impact: "タコの全遺伝情報を解読 生態の謎解明へ (NHK)" •Science Life: "Octopus genome sequenced" •Berkeley News: "Octopus genome reveals cephalopod secrets" •Phys.Org: "First cephalopod genome contains unique genes involved in nervous system, camouflage." ScienceDaily: "Octopus genome reveals cephalopod secrets" •The Baltimore Sun: "Octopus studies detail strange behavior and genetics" \*Los Angeles Times: "Octopus studies detail strange behavior and genetics" •FIS Japan: "Octopus study aids to reveal its unique trait" ・ジョルダンニュース!: "軟体動物イチの知能派 タコの遺伝情報を解読 沖縄科技" •エキサイト: "軟体動物イチの知能派タコの遺伝情報を解読沖縄科技" •Sci-News.com: "Scientists Sequence Genome of California Two-Spot Octopus" •UChicago News: "Landmark sequencing of octopus genome shows basis for intelligence, camouflage" •Genetic Engineering & Biotechnology News: "No Inky Cloud, No Camouflage Hides the Octopus Genome" •Cape Times: "Octopus 'first intelligent being on planet" •Futurity.org: "'ALIEN' GENOME REVEALS OCTOPUS SECRET" •infoZine: "Octopus Genome Sequence" \*Health Medicine Network: "Octopus genome sequence" \*International Business Times: "Octopus Genome Sequenced For First Time, Hints At Intelligence" ·Le Scienze: "Lo straordinario genoma del polp" •Zee News: "'Alien' octopus genome sheds fresh light on evolution" •CanIndia News: "'Alien' octopus genome sheds fresh light on evolution" •Health Medicine Network: "Decoding the genome of an alie" Styrk: "Octopus studies detail strange behavior and genetics" •Terra Daily: "Scientists decode octopus genome, reveal cephalopod secrets" \*OceanNews Weekly: Consortium for Ocean Leadership: "First-Ever Octopus Genome Sequence" •Yahoo! Japan ニュース: "タコのゲノム解読 = 進化解明に期待—沖縄科技大な" •ハザードラボ: "軟体動物イチの知能派タコの遺伝情報を解読 沖縄科技" •IRORIO: "「まるでエイリアン」 - タコの全遺伝情報解読で神経生物学者がコメン" •2channel News Navigator: "【遺伝学】タコのゲノム解読に成功-トランスポゾンが半分占める/沖縄科学技術大学院大な" •MSNニュース: "タコのゲノム解読=進化解明に期待-沖縄科技大な"

•Technobahn: "Octopus Genome Sequence"

•Technobahn: "Octopus Genome Reveals Cephalopod Secret"

•mixiニュース: "タコのゲノム解読=進化解明に期待-沖縄科技大な"

•時事ドットコム: "タコのゲノム解読=進化解明に期待-沖縄科技大な"

・アメーバニュース: "タコのゲノム解読 = 進化解明に期待 - 沖縄科技大な" ・ガジェット通信: "タコのゲノム解読 = 進化解明に期待 - 沖縄科技大など[時事]"

•生物通: "诺奖得主Nature发布基因组研究重要成"

ArcaMax: "Octopus studies detail strange behavior and genetics"

•People's Daily (Spanish): "Descifran el genoma del pulpo, el primer ser inteligente"

•ScienceNewsline: "Decoding the Genome of an Alie"

•ScienceNewsline: "Octopus Genome Sequence" •ScienceNewsline: "Octopus Genome Reveals Cephalopod Secret" •LiveScience: "Clever Creature: Photos of the California Two-Spot Octopus" \*Before It's News: "Natural GMOs Part 222: The octopus genome sequenced" Biology News Net: "Octopus genome reveals cephalopod secret" Gizmodo India: "First Complete Octopus Genome Will Unlock Cephalopod Secrets" •ネタりか: "「まるでエイリアン」 - タコの全遺伝情報解読で神経生物学者がコメン" •网易新闻: "研究发现章鱼有最独特基因 堪称地球最聪明动物(组图" •Congoo News: "Scientists sequence octopus genome: A better understanding of cephalopods?" •Mental Floss: "First Entire Octopus Genome Sequence" •長青網: "八爪魚聰明因有獨特基" •The Daily Galaxy: "Decoding the Genome of an Alien -- Today's Feature" Kansas City infoZine: "Octopus Genome Sequence" Pioneer News: "Scientists Map Out A Cephalopod Genom" \*Lighthouse News Daily: "OCTOPUS GENOME REVEALS MYSTERIES OF COMPLEX INTELLIGENCE" \*Rapid News Network: "First Fully Sequenced Octopus Genome Reveals Secrets Of Cephalopod Intelligence" •KRWG News 22: "Octopuses 'are aliens', scientists decide after DNA study" •Technie News: "Researchers sequence genome of 'alien' octopu" Clapway: "Octopus Genome Reveals the Roots to Its Brilliance" Bioscience Technology: "Octopus Genome Sequenced" •Sci-Tech Today: "Octopus Studies Detail Strange Behavior and Genetics" •バイオインパクト: "タコの頭の良さ証明 〇 | S | など全ゲノム解読 - 琉球新報" •Care2: "This is How Super Smart Octopuses Are" •Wildlife Extra: "Scientists discover just how surprisingly complex is an octopus' genetic code" •财经新闻滚动\_搜狐资讯: "章鱼发现最独特基因 堪称地球最聪明动物" •中搜行业中国:"章鱼发现最独特基因堪称地球最聪明动物" •网易房产博客: "地球上最聪明的动物 竟然是章鱼" • 澳華網: "章魚發現最獨特基因 堪稱地球最聰明動物" •Entorno Inteligente: "Secuencian el genoma del pulpo, el invertebrado más "inteligente" " •留园网: "章鱼被发现最独特基因 堪称地球最聪明动物(图)" \*LibertaGia News: "Genoma do polvo revelado na ponta dos seus oito tentáculos, ou dos "pés"" •El Telegrafo: "Secuencian el genoma del pulpo, el invertebrado más "inteligente"" •新闻频道\_中国青年网: "地球上最聪明的动物 竟然是章鱼" •MedIndia: "Researchers Sequence the Genome of an Octopus, First Cephalopod to be Sequenced" •中国网-海洋中国: "章鱼发现最独特基因 堪称地球最聪明动物 (图) ' Rocket News: "Scientists declare that octopuses are basically aliens" •河南要闻-大河网: "章鱼独特基因堪称最聪明动物" •Yahoo! News Canada: "Cooler Than You Think: Scientists Map Genetic Sequence of an Octopus" •微头条/微信聚合资讯: "章鱼堪称地球最聪明动物 有独特基因" •HLNtv: "The octopus is way smarter than we thought!" •The Daily Dot: "The octopus has the weirdest DNA map scientists have ever seen" •Panorama Acuicola Magazine: "Octopus study aids to reveal its unique traits" •证券之星: "地球上最聪明的动物?竟然是章鱼!" •TreeHugger: "This is how super smart octopuses are" ·IT之家: "堪称地球最聪明动物,竟是章鱼?" ·Omy: "八爪鱼聪明因基因独特" •Sputnik International: "Scientists Hail Octopus as 'First Intelligent Being on Earth'" •MSN NZ: "Armed with 10,000 more genes than humans: Scientists hail the intelligence of the octopus" •西部网: "研究发现章鱼有最独特基因 堪称地球最聪明动物" •Alaska Native News: "First-Ever Octopus Genome Sequenced" •Lab Manager Magazine: "Octopus Genome Sequenced" •天津在线: "章鱼有最独特基因: 堪称地球最聪明动物 •评校网: "研究发现章鱼有最独特基因,堪称地球最聪明动物" •天下网吧: "章鱼发现最独特基因 堪称地球最聪明动物" •新闻频道\_中国青年网: "研究发现章鱼有最独特基因,堪称地球最聪明动物"

•Asian Scientist Magazine: "Octopus Genome Sheds Light On Their Intelligence"

•Science Recorder: "Brainiacs of the deep: Octopus genome reveals alien intelligence"

\*Ciencias Médicas News: "Untangling the Octopus Genome - NIH Research Matters - National Institutes of Health (NIH)"

•Immortal News: "Aliens Among Us: Scientists Say Octopus Is E.T."
•Clapway: "Is The Octopus An Alien, Or More Like Humans?"

•National Institutes of Health: "Untangling the Octopus Genome"

•西部网: 日媒: "地球生命或起源于陨石撞击"

Current Biology: "Intelligent Life Without Bones"

\*Nature World News: <u>"Octopus Have Been Found to have Unique Genes"</u>
\*Technobahn: <u>"Octopus Have Been Found to have Unique Genes"</u>
\*中国网(日本語): <u>"タコはやっぱり"地球外生物"!?"</u>

•川北在线: "研究发现章鱼堪称最聪明动物能够改变皮肤的颜色和纹理"

•Newspapers (Paper - Ryukyu Shimpo, Mainichi, Asahi, Web - Japan Times)

•産経ニュース: "タコのゲノム解読成功 特殊能力解明へ 沖縄科技大学院大"
•Livedoor ニュース: "タコのゲノム解読成功 特殊能力解明へ 沖縄科技大学院大"
•バイオインパクト: "タコのゲノム解読成功 特殊能力解明へ 沖縄科技大学院大"